EKM Rebuttal of XCO2 Proof of Evidence 18 June 2024 and Rebuttal 2 July 2024

By Daniel Wade

In Relation to Planning Appeal July 2024:

Appeal by Ringers Road Properties Ltd

2-4 Ringers Road and 5 Ethelbert Road, Bromley BR1 1HT

Prepared: July 2024

Council refs: DC/21/05585/FULL1

PINS refs: APP/G5180/W/24/3340223

EKM ref: EKA240774

Prepared by:
Daniel Wade
EK McQuade Neighbourly Matters Ltd
26 Store Street,
London
WC1E 7BT

On Behalf of:
London Borough of Bromley
Housing, Planning and Regeneration
Planning Division
Appeals Team
Civic Centre,
Stockwell Close,
Bromley
BR1 3UH

Contents

1.0 EK McQuade - Introduction

1.1 Role on this Rebuttal

1.1.1 It was only realistically possible to begin our validation of the XCO2 updated technical daylight, sunlight and overshadowing assessment from 3 July 2024, because the results and commentary contained within the XCO2 rebuttal (that relates to the updated technical analysis) was received very late in the evening on 2 July 2024.

1.1.2 Please note, the up to date position is now contained within my EK McQuade rebuttal including my due diligence and interpretation of the XCO2 reported results contained within their rebuttal dated 2 July 2024. We are only reviewing the daylight, sunlight and overshadowing performance results presented in the XCO2 rebuttal.

1.1.3 For this EK McQuade rebuttal and simplicity, we have looked at just the cumulative baseline scenario (that includes the consented proposals of 62 High Street and 66-70 High Street) vs Proposed development to cover the worst case scenario.

1.1.4 We acknowledge that XCO2 have provided results for the existing baseline scenario (including existing 62 High Street and 66-70 High Street buildings) vs proposed development for reference within their rebuttal.

1.1.5 For this rebuttal, EK McQuade have been instructed by the London Borough of Bromley to review the appellant's Proof of Evidence regarding daylight, Sunlight and Overshadowing compiled by their Senior Sustainability Consultant, Tomas Keating of XCO2.

1.1.6 EK McQuade have reviewed the claims and views quoted within the XCO2 Proof of Evidence, many of which are now considered redundant based on the updated assessment contained within the XCO2 rebuttal.

1.1.7 Upon review of XCO2's proof, it is apparent that the majority of points and factors raised within the EK McQuade Proof of Evidence, dated 18 June 2024, Appeal ref: APP/G5180/W/24/3340223 remain valid and true.

1.1.8 It is clear that the fundamental errors identified within the 3D modelling of the baseline and proposed digital model had not been rectified. This has had a detrimental effect on the results, summary and conclusions reported in the XCO2 Proof. Therefore at proof of evidence stage, the assessment was still considered as null and void in my opinion.

1.1.9 EK McQuade made contact with XCO2 on 21 June 2024 to establish (upon receipt of EKM Proof of Evidence) if they were rectifying and updating their assessments to ensure their analysis was brought up to RICS Standards expected for daylight, sunlight and overshadowing assessments.

1.1.10 EK McQuade made further contact with XCO2 on 25 June 2024, XCO2 advised that they were in the process of updating the 3D model and results, they would be released on 28 June 2024, however this information was delayed and was received by LBB at 09:31am on 1 July 2024. This was disappointing given that I had made extensive arrangements to free myself up over the weekend of 29 & 30 June 2024 to review the updated work by XCO2 given my own workload commitments.

1.1.11 EK McQuade made additional contact with XCO2 on 1 July 2024. This was also to confirm the further errors and information that had been omitted in the release of their updated report and discussion regarding what was expected to be within the rebuttal plus SoCG arrangements.

1.1.12 Due to the delays and errors, in the interests of the inspectorate, we had taken the executive decision to wait for the XCO2 rebuttal in order to establish the extent of the their updated assessment, to review the updated digital 3D model and updated results with the main purpose of facilitating a Statement of Common Ground that irons out as many of the fundamental issues as beforementioned within our Proof of Evidence 18 June 2024.

1.1.13 EK McQuade have reviewed the claims made by XCO2 in their 2.0 Background Information, 3.0 Main Issues and, 4.0 Planning Policy And Industry Guidance sections within their proof of evidence. I have taken the relevant extracts and quotations from each of these sections and provided our own commentary regarding XCO2 claims, this can be seen in Appendix A.

1.1.14 I have reviewed XCO2's methodology and interpretation of the DSO results. Conversely, I have offered my own interpretation of the results in a systematic way in Section 3 of this report.

1.1.15 I have reviewed the XCO2 summary and conclusions in Section 6 as well as providing my own opinion on summary and conclusion in Section 7 of this rebuttal.

1.2 Scope of Assessment

1.2.1 The XCO2, 2 July 2024 updated rebuttal assessment takes into account the DSO impact on the following neighbouring properties:

- 66-70 High Street (emerging context)
- 62 High Street (emerging context)
- Henry House
- William House
- Bromley Temple
- Simpsons Place
- Ringers Court
- Harestone Court
- 35-36 Ethelbert Close
- 1-2 Ethelbert Close
- 7 Ethelbert Court
- 1 Ethelbert Court
- 2 Ethelbert Road
- 11 Ethelbert Road
- 13 Ethelbert Road
- 72-76 High Street
- 56 Ravensbourne Road
- 52-54 Ravensbourne Road
- 12 Ringers Road

1.2.2 The last three properties on the list were added upon our recommendation to give these properties a health check given the height, bulk and massing of the development that is exacerbated by the topography of the development site being located higher up the hill of Ringers Road.

1.3 Proposed Block A & B, Building Separation Distance - Hollaway Architects Drawings

1.3.1 In this section, I explain that Hollway Architects have not identified the two closest windows to each other between Blocks A and B. Hollway Architects have quoted this distance as 11.182m, whereas my calculations show the closest window distance to be 9.433m. In my opinion, Holloway Architects have used the incorrect pinch points to measure the shortest distance between Block A and B's windows. My justification is explained below.

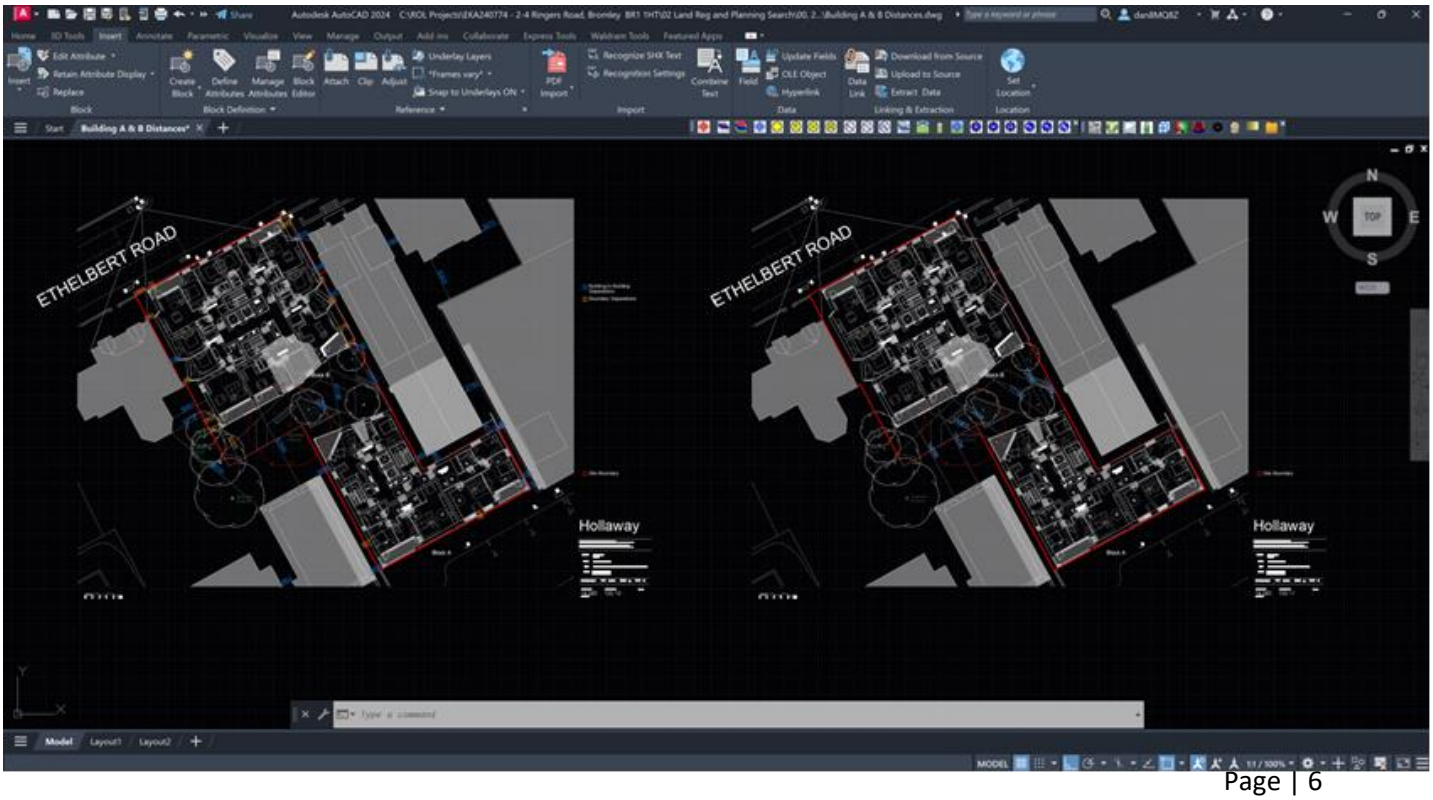
1.3.2 Hollaway Architects have produced window and building separation distance plans to show the relationship between blocks A & B, further to LBB's request to the appellant.

1.3.3 LBB have requested that I validate the window separation distances and building distances quoted by Hollaway Architects reference; - PLANNING 18.085 Drawing numbers 100.10 & 100.11. The PDF version of both drawings can be found in Appendix B of this rebuttal.

1.3.4 I have imported both Hollaway Architects PDF drawings back into AutoCAD to double check the horizontal distance dimensions quoted on their drawings. The scale of the Holloway Architect drawings are correct in terms of the distances quoted. Although I had identified two anomaly distances quoted as per my comments on the PDF drawings in Appendix B.

1.3.5 Once both PDF drawings were back into an AutoCAD format, I was able to take my own measurements from the drawings to show my check dimensions as shown in the screen capture below.

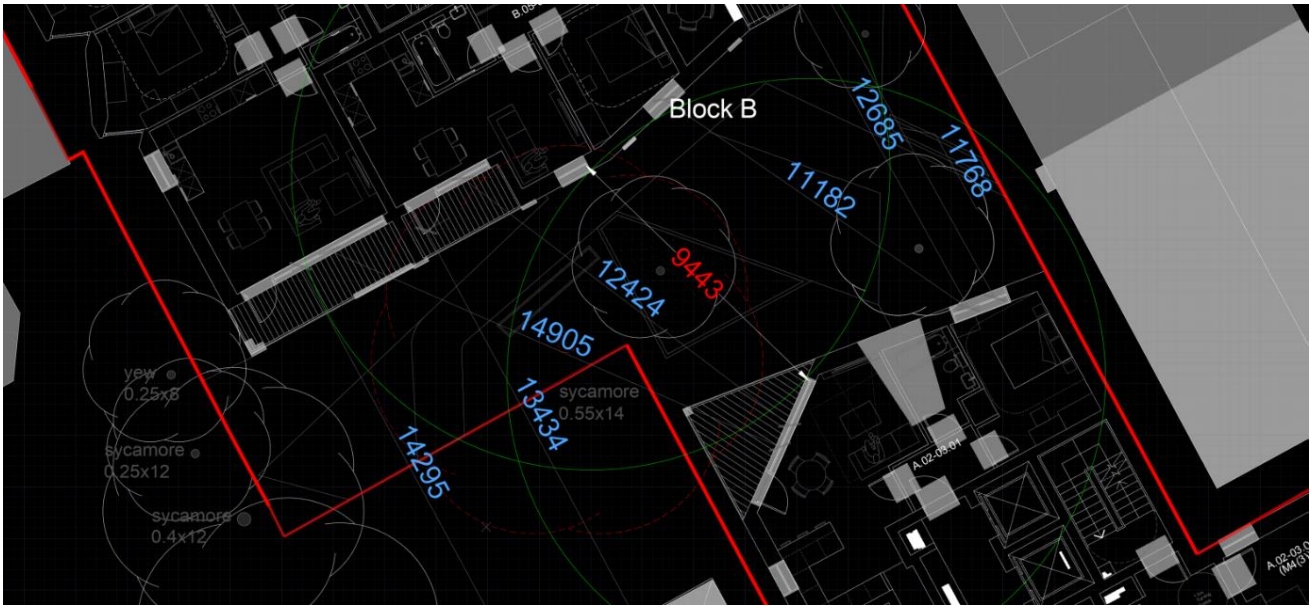
Screen Capture of AutoCAD PDF import drawing.



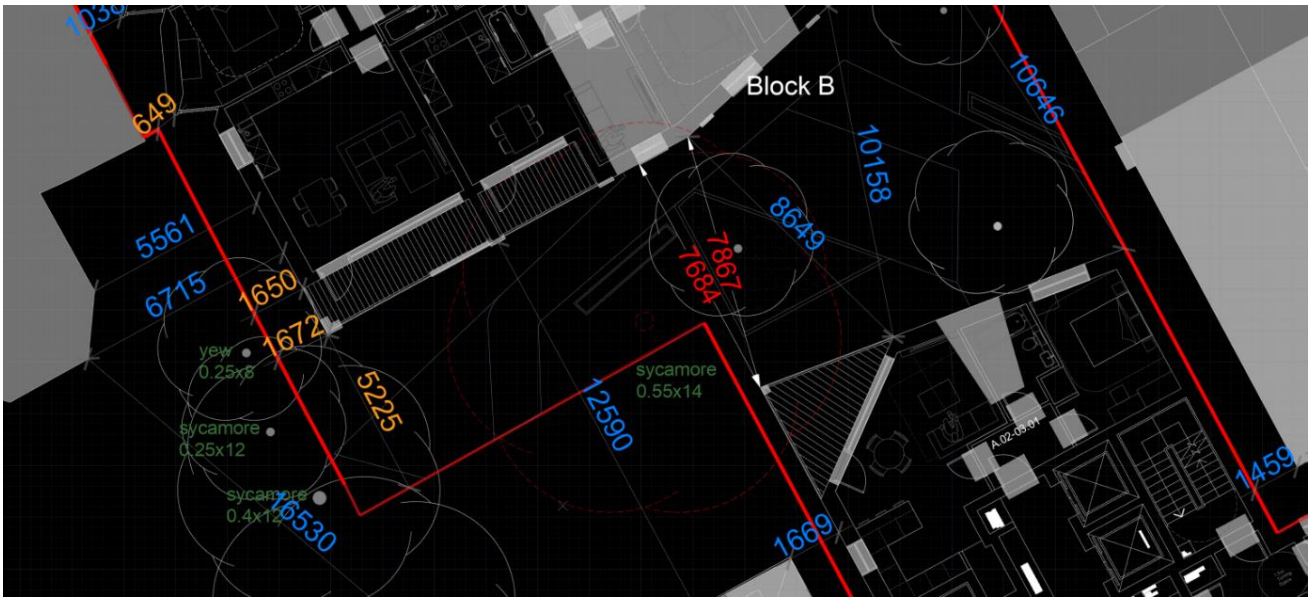
1.3.6 I am not questioning the accuracy of the Hollaway architects drawings, however I am highlighting where the measurements have not been not taken from narrowest separation pinch points.

1.3.7 My exercise overleaf demonstrates that those separation distances should have been taken from different points on the Hollaway Architects drawings. Therefore, we measure the separation distances as being shorter than those quoted by Holloway Architects.

1.3.8 The narrowest window to window separation between Block A and B is 9.443m for the two closest window points shown by the radius circles in Green. The EK McQuade added dimensions are shown in red text in the screen capture below.



1.3.9 The separation between corner balcony on block A and bedroom / LKD opposite in block B is 7.867m or 7.684m if measured perpendicular to the LKD of Unit 4, Block B as shown in screen capture below.



1.3.10 Please note, this measuring exercise has no reflection on the accuracy of XCO2's digital 3D model used within the daylight, sunlight and overshadowing assessment in either their proof of evidence or rebuttal and should be regarded as a separate matter.

2.0 Methodology

2.1 EK McQuade Review

2.1.1 In this section I have set out the principles of the methodology used by XCO2 within their assessment. I agree XCO2 have used the correct methodology within their daylight, sunlight and overshadowing assessment. I elaborate on those principles in the section below.

2.1.2 I have reviewed the methodology used by XCO2 for the rebuttal DSO assessment. I have included the following DSO methodology for ease of reference.

2.1.3 It is fair to say that EK McQuade and XCO2 are in agreement with the methodology used in the DSO assessment. Where we differ is on how the results of the DSO assessment are interpreted in the urban context and the rationale for justifying the results which is discussed in the next Section 3.0 Interpretation of DSO Results – EK McQuade review.

2.2 Daylight Assessment Methodology

2.2.1 Within the BRE 209 Paper guidance, Page 14 Section 2.2.2 , the guide outlines methodology to be applied in respect of daylight to existing buildings. Here it states:

> 2.2.2 "*The guidelines given here are intended for use for rooms in adjoining dwellings where daylight is required, including living rooms, kitchens, and bedrooms. Windows to bathrooms, toilets, storerooms, circulation areas, and garages need not be analysed. The guidelines may also be applied to any existing non-domestic building where the occupants have a reasonable expectation of daylight; this would normally include schools, hospitals, hotels and hostels, small workshops, and some offices"*.

2.2.2 When assessing impacts on daylight primarily habitable spaces should be considered; save for some special circumstances where safeguarding daylight within certain sensitive non-domestic receptors might be important.

2.2.3 The XCO2 technical analysis was undertaken using specialist daylight software which functions within AutoCAD (digital 3D modelling programme) by applying the latest BRE methodology. The assessment measures the impact on neighbouring properties' daylight and sunlight comprises a vertical sky component assessment ("VSC") for both windows and rooms, a no sky line assessment ("NSL"). We agree with this approach.

2.3 Sunlight Assessment Methodology

2.3.1 Within the BRE 209 Paper guidance, Page 24 Section 3.2.3 (Existing Buildings) covers the requirements of sunlight assessments where it states:

> 3.2.3 "*To assess loss of sunlight to an existing building, 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. Normally loss of sunlight need not be analysed to kitchens and bedrooms, except for bedrooms that also comprise a living space, for example a bed sitting room in an old people's home. In non-domestic buildings any spaces that are deemed to have a special requirement for sunlight should be checked; they will normally face within 90° of due south anyway*".

2.3.2 Sunlight assessments should principally therefore concern main living spaces such as living rooms, studios and living-kitchen-diners. All other domestic and non-domestic rooms are deemed less significant in sunlight terms. Again, a level of discretion exists for special domestic and non-domestic sunlight requirements.

2.3.3 The XCO2 technical analysis was undertaken using specialist sunlight software which functions within AutoCAD (digital 3D modelling programme) by applying the latest BRE methodology. The assessment measure the impact on neighbouring properties' sunlight comprises an annual probable sunlight hours assessment (incl. winter months only) ("APSH" and "WPSH"). We agree with this approach.

2.4 Overshadowing Assessment Methodology

2.4.1 Where access of sunlight is required to open spaces in and around a development, it might be necessary to undertake an overshadowing assessment to optimise the number of sunlit hours from within amenity areas. Page 26 Section 3.3.3 (Gardens and Open Spaces) covers the methodology to be adopted for external spaces:

> 3.3.3 "*The availability of sunlight should be checked for all open spaces where it will be required. This would normally include:*

- *gardens, such as the main back garden of a house or communal gardens including courtyards and roof terraces*
- *parks and playing fields*
- *children's playgrounds*
- *outdoor swimming pools and paddling pools, and other areas of recreational water such as marinas and boating lakes (the daylight and sunlight effects on permanent residential moorings may be assessed using the methods in sections 2.2 and 3.2)*
- *sitting out areas such as those between nondomestic buildings and in public squares*

- *nature reserves (which may have special requirements for sunlight if rare plants are growing there)".*

2.4.2 Guidelines relating to overshadowing apply to both new and existing amenity areas. Where an existing space such as those outlined above is already heavily obstructed, the guide states "any further loss should be kept to a minimum".

2.4.3 Where a proposed scheme is particularly large and burdensome, it might also be necessary to produce additional illustrations showing in footprint the extent and location of shadows and how such interferes with neighbouring buildings and open spaces at different times of the day (permanent and transient overshadowing).

2.4.4 The XCO2 technical analysis was undertaken using specialist shadow software which functions within AutoCAD (digital 3D modelling programme) by applying the latest BRE methodology. The assessment measures the impact on neighbouring properties' amenity area comprises of an overshadowing assessment for external amenity areas for permanent shadow assessment. The assessment also included a transient overshadowing assessment showing how the amenity areas would be affected over the course of the day to give a complete picture of the impact over time.

2.4.5 EK McQuade agree with the methodology applied by XCO2 in their rebuttal assessment, I confirm that it conforms to those set out within the BRE 209 Paper.

2.4.6 It is fair to say that EK Mc Quade and XCO2 are in agreement with the methodology used in the DSO assessment. Where we differ is on how the results of the DSO assessment is interpreted in the urban context and the rationale for justifying the results which is discussed in the next Section 3.0 Interpretation of DSO Results – EK McQuade review.

3.0 Interpretation of DSO Results

3.1 EK McQuade Review

3.1.1 In this section I apply a traffic light system to the data provided by the Appellant regarding sufficiency of light. Where I have applied red or orange shading, in my opinion it means that for those windows, there will be inadequate light and 'urban failure'. Where I have applied either lighter or darker green colouring, it means that adequate light for those windows and an 'urban pass'. The Appellant has not provided this level of analysis. As will be seen from the below, the colours clearly show a number of windows have too little light. 11 neighbouring properties experience failure. The failure rates differ, as some windows in any given property will have a greater loss of light than others. But the overall reading is that a significant number of windows at neighbouring properties suffer an unacceptable reduction in light.

3.1.2 I have reviewed the interpretation of results by XCO2 within the rebuttal DSO assessment. XCO2 classify the development site being located within an urban setting which I agree with.

3.1.3 When I refer to 'urban pass', it means a reduction in light of between 0.1% and 29.9% of the light available to the window that was previously provided. It is a 'pass' because such a loss of light is considered acceptable for proposed developments. When I refer to 'urban fail', it means a reduction in light of 30% or more compared to what was previously provided. It is a 'fail', because it is too great a loss of light to be acceptable. This pass / fail measure is my own assessment having applied it previously in developments in Bristol.

3.1.4 Those percentages are based on the VSC reductions explained below at [3.1.11].:

3.1.5 Essentially the results quoted in the XCO2 rebuttal are compared with the results from their previous inaccurate assessment. For me, there is no real justification for comparing the two sets of results, as only the rebuttal results are correct and reliable. Even still, there are a couple of minor issues with the accuracy of the existing model on the Ringers Road elevation and the internal layout of Salvation Army Church – Community Centre which are picked up in Section 5.

3.1.6 I appreciate that XCO2 are ultimately trying to justify the results of their DSO assessment to see where the proposed figures sit within the urban typology for the Bromley High Street vicinity. I note that numerous case precedents have been submitted within their reports which help provide a sense of the likely acceptable levels of proposed impact figures.

3.1.7 However, XCO2 have not suggested or justified exactly what those standalone proposed figures should be for the Ringers Road development

3.1.8 In terms of the impact we first need to appreciate the existing vs proposed reduction in light to see if that reduction would be noticeable to the occupants of each room / window assessed and how that would fit within the urban context.

3.1.9 Once this is established it will then allow us to focus on the proposed levels of light for those windows and rooms falling short of a permissible BRE Urban reduction factor.

3.1.10 To do this check involves the following in terms of quantifying the existing cumulative baseline vs proposed impact. I have used the XCO2 results from their "*Daylight Assessment - with consented schemes in place Date of Analysis: 26/06/2024*" vs proposed development spreadsheets within their rebuttal to complete this task.

3.1.11 It is based on the light reductions in the bands explained below and at [3.1.10 to 3.1.12]:

- VSC 27% or Higher or reduction within x0.8 former value = Negligible / Suburban Pass
  This means a reduction in light of up to 20%.

- VSC reduction within x0.7 - 0.79 former value = Minor Adverse / Urban Pass
  This means a reduction in light of between 20% and 30%.

- VSC reduction within x0.6 - 0.69 former value = Moderate Adverse Impact
  This means a reduction in light of between 30-40%, which I consider to be an urban fail.

- VSC reduction higher than x0.59 former value = Substantial Impact
  This means a reduction in light of 40% or more, which is an urban fail.

3.1.12 Similar percentage criteria apply for the NSL and APSH reductions as detailed below.

3.1.13 I have opted to class the light losses for VSC, NSL, APSH using the significance criteria scope, as one would expect to see in an environmental statement in an EIA, the proposed alternative target reduction values are as follows e.g. for VSC Daylight Assessment; -

- VSC 27% or Higher or reduction within x0.8 former value = Negligible / Suburban Pass
- VSC reduction within x0.7 - 0.79 former value = Minor Adverse / Urban Pass
- VSC reduction within x0.6 - 0.69 former value = Moderate Adverse Impact
- VSC reduction higher than x0.59 former value = Substantial Impact

3.1.14 Similarly for No Sky Line (NSL) also known as a Daylight Distribution Assessment; -

- NSL 80% or Higher or reduction within x0.8 former value = Negligible / Suburban Pass
- NSL reduction within x0.7 - 0.79 former value = Minor Adverse / Urban Pass
- NSL reduction within x0.6 - 0.69 former value = Moderate Adverse Impact
- NSL reduction higher than x0.59 former value = Substantial Impact

3.1.15 Similarly for Annual Probable Sunlight Hours (APSH), Sunlight Assessment

- APSH 25% or Higher or reduction within x0.8 former value = Negligible / Suburban Pass
- APSH reduction within x0.7 - 0.79 former value = Minor Adverse / Urban Pass
- APSH reduction within x0.6 - 0.69 former value = Moderate Adverse Impact
- APSH reduction higher than x0.59 former value = Substantial Impact

3.1.16 For the purposes of this review I have adopted this significance criteria and traffic light colour coding to establish the urban pass rates for the neighbouring properties affected by the proposed development.

3.1.17 This allows a degree of urban scenario flex, by allowing a 30% reduction in light loss which is 10% more than the sub-urban setting.

3.1.18 The spreadsheet below shows the VSC assessment significance criteria impact summary table against all windows that were assessed within the 19 properties surrounding the development site. This includes the overall impact weighting to each property in percentage terms for urban pass and urban failure.

3.1.19 VSC Neighbouring Impact Summary Table

Property	Number of Windows Tested	Windows considered to meet an Urban Pass				Windows considered to be an Urban Failure					Overall Impact Weighting
		Windows that meet BRE Guidelines		Windows that experience gains benificial impact		VSC Windows No. of Windows Experiencing Adverse Impacts					
		No.	%	No.	%	20-29.99% loss (minor adverse losses)	Urban Pass %	30-39.99% loss (moderate adverse losses)	>40% loss (substantial losses)	Urban Fail %	
Henry House	59	19	32%	0	0%	11	51%	10	19	49%	49% Moderate to Substantial 51% Negligible to Minor Adverse
William House	105	38	36%	0	0%	22	57%	23	22	43%	43% Moderate to Substantial 57% Negligible to Minor Adverse
Simpsons Place	12	0	0%	0	0%	0	0%	0	12	100%	100% Substantial
Ringers Court	12	4	33%	0	0%	8	100%	0	0	0%	100% Negligible to Minor Adverse
Harestone Court	6	6	100%	0	0%	0	100%	0	0	0%	100% Negligible
7 Ethelbert Court	11	4	36%	0	0%	4	73%	1	2	27%	27% Moderate to Substantial 73% Negligible to Minor Adverse
1 Ethelbert Court	25	24	96%	0	0%	0	96%	1	0	4%	4% Moderate to 96% Negligible
35-36 Ethelbert Close	25	14	56%	0	0%	2	64%	2	7	36%	36% Moderate to Substantial 64% Negligible to Minor Adverse
1-2 Ethelbert Close	27	16	59%	0	0%	8	89%	1	2	11%	11% Moderate to Substantial 89% Negligible to Minor Adverse
13 Ethelbert Road	16	16	100%	0	0%	0	100%	0	0	0%	100% Negligible
11 Ethelbert Road	3	3	100%	0	0%	0	100%	0	0	0%	100% Negligible
2 Ethelbert Road	13	5	38%	0	0%	0	38%	8	0	62%	62% Moderate to 38% Negligible
72-76 High Street	12	12	100%	0	0%	0	100%	0	0	0%	100% Negligible
Salvation Army	36	15	42%	1	3%	0	42%	1	20	58%	58% Moderate to Substantial 42% Negligible to Minor Adverse
62 High Street	154	141	92%	0	0%	5	95%	6	2	5%	5% Moderate to Substantial 95% Negligible to Minor Adverse
66-70 High Street	136	92	68%	0	0%	8	74%	13	23	26%	26% Moderate to Substantial 74% Negligible to Minor Adverse
56 Ravensbourne Road	9	9	100%	0	0%	0	100%	0	0	0%	100% Negligible
52-54 Ravensbourne Road	8	8	100%	0	0%	0	100%	0	0	0%	100% Negligible
12 Ringers Road	12	12	100%	0	0%	0	100%	0	0	0%	100% Negligible
Total	**681**	**438**	**64%**	**1**	**0%**	**68**	**74%**	**66**	**109**	26%	

3.1.20 The spreadsheet on the previous page highlights the significance criteria reduction in the XCO2 NSL assessment. At least 11 properties will experience some form of VSC urban failure to their windows.

3.1.21 Property Location plan below produced by XCO2.

3.1.22 The spreadsheet below shows the NSL assessment significance criteria impact summary table against all rooms that were assessed within the 19 properties surrounding the development site. This includes the and the overall impact weighting to each property in percentage terms for urban pass and urban failure percentages in the final column.

3.1.23 NSL Neighbouring Impact Summary Table

Property	Number of Windows Tested	Windows considered to meet an Urban Pass				Windows considered to be an Urban Failure					Overall Impact Weighting
		Rooms that meet BRE Guidelines		Rooms that experience gains Beneficial Impacts		NSL Rooms No. of Rooms Experiencing Adverse Impacts					
		No.	%	No.	%	20-29.99% loss (minor adverse losses)	Urban Pass %	30-39.99% loss (moderate adverse losses)	>40% loss (substantial losses)	Urban Fail %	
Henry House	45	23	51%	0	0%	4	60%	5	13	40%	40% Moderate to Substantial 60% Negligible to Minor Adverse
William House	92	60	65%	0	0%	12	78%	3	17	22%	22% Moderate to Substantial 78% Negligible to Minor Adverse
Simpsons Place	12	0	0%	0	0%	0	0%	3	9	100%	100% Moderate to Substantial
Ringers Court	12	12	100%	0	0%	0	100%	0	0	0%	100% Negligible
Harestone Court	6	6	100%	0	0%	0	100%	0	0	0%	100% Negligible
7 Ethelbert Court	11	11	100%	0	0%	0	100%	0	0	0%	100% Negligible
1 Ethelbert Court	18	18	100%	0	0%	0	100%	0	0	0%	100% Negligible
35-36 Ethelbert Close	8	8	100%	0	0%	0	100%	0	0	0%	100% Negligible
1-2 Ethelbert Close	8	7	88%	0	0%	1	100%	0	0	0%	100% Negligible to Minor Adverse
13 Ethelbert Road	7	6	86%	0	0%	1	100%	0	0	0%	100% Negligible to Minor Adverse
11 Ethelbert Road	3	3	100%	0	0%	0	100%	0	0	0%	100% Negligible
2 Ethelbert Road	2	2	100%	0	0%	0	100%	0	0	0%	100% Negligible
72-76 High Street	12	12	100%	0	0%	0	100%	0	0	0%	100% Negligible
Salvation Army	13	3	23%	2	15%	1	31%	2	7	69%	69% Moderate to Substantial 31% Negligible to Minor Adverse
62 High Street	66	58	88%	0	0%	1	89%	3	4	11%	11% Moderate to Substantial 89% Negligible to Minor Adverse
66-70 High Street	54	54	100%	0	0%	0	100%	0	0	0%	100% Negligible
56 Ravensbourne Road	4	4	100%	0	0%	0	100%	0	0	0%	100% Negligible
52-54 Ravensbourne Road	7	7	100%	0	0%	0	100%	0	0	0%	100% Negligible
12 Ringers Road	8	7	88%	0	0%	1	100%	0	0	0%	100% Negligible to Minor Adverse
Total	**388**	**301**	**78%**	**2**	1%	**21**	83%	**16**	**50**	17%	

3.1.24 The spreadsheet above highlights the significance criteria reduction in the XCO2 NSL assessment. At least 5 properties will experience some form of NSL urban failure to their rooms.

3.1.25 Overall, it is clear that the development will have a wider impact on the VSC results. The VSC results perform worse compared to the NSL results. However, as XCO2 have endeavoured to use internal room layouts within their updated assessment where possible, we shall focus on the NSL assessment results in terms of overall urban compliance. I say this as the NSL is more indicative to the realistic impact in that these light losses will be more noticeable to those affected occupants. The NSL assessment measures the light loss within the room itself, as opposed to the VSC assessment that measures light on the outside face of the window.

3.1.26 For brevity, we have taken a closer look at the impact on the 5 properties listed in the NSL summary table above that will experience some form of urban failure. Naturally, these are the properties located closest to the development site with windows that look directly onto the development. This is discussed in much greater detail within Section 5 of the report.

3.1.27 At this point that we have looked at the proposed levels of light in isolation, i.e. those with an urban reduction failure value to ascertain whether the proposed light level itself is deemed to fit within the urban typology for the Ringers Road development site in the vicinity of Bromley High Street.

3.1.28 The remaining 14 properties that are deemed to be an urban pass are discussed in detail in Appendix B. This is to evidence our full interpretation of the results.

4.0 XCO2 - Daylight and Sunlight of The Proposed Scheme (Reason For Refusal 4)

4.1 EK McQuade Review

4.1.1 Mr Keating has now acknowledged the errors in the data that he relied upon within his former proof of evidence.

4.1.2 The reported results (which were previously inaccurate) are now considered to be adequate for this planning appeal in terms of the impact on future occupants.

4.1.3 EK McQuade have reviewed Mr Keating's updated technical work and reported results provided by XCO2 on the proposed amenity for future occupants within their rebuttal 2 July 2024.

4.1.4 I am now satisfied that the 3D modelling is accurate and Blocks A & B are located in the correct X, Y and Z co-ordinates.

4.1.5 The results are summarised as follows.

4.1.6 Daylight sDA

Block A

- Pass Rate for Sub-Urban Target Rate of 50%> 77%
- Pass Rate for an Urban Target Rate of 40%> 83%

Block B

- Pass Rate for Sub-Urban Target Rate of 50%> 92%
- Pass Rate for an Urban Target Rate of 40%> 93%

Block A & B

- Pass Rate for Sub-Urban Target Rate of 50%> 86%
- Pass Rate for an Urban Target Rate of 40%> 87%

4.1.7 Sunlight ASPH

- A similar trend is quoted for the sunlight exposure assessment for those southernly aspect windows that qualify for the assessment.

4.1.8 Overshadowing

- The overshadowing assessment on the proposed amenity area (A1) located between Block A & B conforms to BRE 209 criteria at 53% just over the 50% threshold for permanent shadow analysis. We acknowledge that XCO2 have provided transient shadow assessment images at hourly intervals for both existing and proposed scenarios which is helpful for LBB to understand the shadow creep during the course of the day for the site and surrounding buildings.

4.1.9 Based on my experience, the overall XCO2 reported DLSL percentage pass levels are commensurate with similar proposed residential towers that are located within an urban environment that have received consent. I believe these results are now considered true and correct for us not to contest any further.

4.1.10 It is frustrating that it has taken XCO2 multiple attempts to produce an accurate analysis that stands up to scrutiny over the course of this Planning Appeal. I appreciate their honesty in acknowledging our part in identifying the discrepancies within the technical work along with the incorrect facts and figures quoted within their previous reports and Proof of Evidence. However, this has come at a great expense in terms of time, delay and cost to myself, LBB and the wider team.

5.0 XCO2 - Daylight Impact on Contentious Neighbouring Properties (Reason For Refusal 5)

5.1.1 This section deals with the 5 properties that experience a daylight NSL substantial impact, and one property affected by overshadowing. These are listed as Henry House, William House, Simpsons Place, Salvation Army Church – Community Centre, 62 High Street for daylight impacts and 33/36 Ethelbert Close for Overshadowing.

5.2 Review of XCO2 Updated 3D model and technical assessment 2 July 2024

5.2.1 Ringers Road is shown as 64.65m Z Co-ordinate on the survey elevations we have, the XCO2 proposed model shows this 65.56m Z Co-ordinate which is 0.91m higher than the survey suggests as shown on the screen capture of the 3D model overleaf. This discrepancy is still beyond an acceptable tolerance and will have an impact on the baseline levels of light within the lower levels of Bromley Salvation Army, Henry House and William House which could have a detrimental effect on the results.

5.2.2 Ethelbert Road is shown as 67.98m Z Co-ordinate on the survey elevations we have, the XCO2 proposed model shows this 68.02m Z Co-ordinate which is 4cm higher than the survey suggests as shown on the screen capture of the 3D model below although this difference is regarded within an acceptable accuracy tolerance.

5.2.3

5.2.4 I am happy that the proposed buildings have now been located to the correct X, Y & Z co-ordinates within the model, whilst the proposed model is missing the plant screening and overrun details on the roof, I believe that if they were included, it will make a miniscule difference at worst, to the reported results in XCO2's rebuttal.

5.2.5 XCO2 Neighbouring contextual model - This has been updated for the properties that have been assessed surrounding the neighbouring development. Overall, there is a general improvement in the accuracy of the XCO2 3D modelling that reflects the local infrastructure to simulate an accurate sky visibility for the windows and rooms assessed in the daylight and sunlight and overshadowing assessment.

5.2.6 EK McQuade have reviewed the XCO2 Proof of Evidence commentary for each neighbouring property assessed for Daylight, Sunlight and Overshadowing, this incorporates the revised results that were issued within 2 July 2024 rebuttal, for simplicity and admission from XCO2 that their neighbouring impact assessment required a complete overhaul we shall be providing our commentary only on the impacts reported in the XCO2 rebuttal 2 July 2024 and state whether a noticeable change in light will be experienced by the occupants of each property. Please note, I shall be majoring on Henry House given our own extensive work on this property to provide a litmus test of the XCO2 assessment.

5.2.7 I agree with the XCO2 statement in 4.2.1 "*For the below sections, it should be noted that when percentage changes are quoted these are absolute values rather than a proportion of the existing values. This is clarified as the VSC, NSL APSH and WPSH all use % as a unit of measurement and as such using % change may create additional uncertainty. For example, an increase from 8% VSC to 10% VSC would be called a 2% increase, rather than a 25% increase*". However, I disagree

with the comparison of any overage of the results contained in the 2 July 2024 rebuttal assessment to the Proof of Evidence 18 June 2024 assessment. The Proof of Evidence assessment is null and void in my opinion and it is misleading to compare the difference in results between the two, it clouds the issue and makes it extremely difficult for the layman to understand XCO2's justifications.

5.3 Henry House

5.3.1 Further to EK McQuade's 3 scenario daylight assessment demonstration contained within the proof of evidence 18 June 2024, XCO2 have updated their assessment based on the planning consented drawings for Henry House by Carey Jones Architects.

5.3.2 I have overlaid the EK McQuade Henry House 3D model over the latest XCO2 Henry House 3D model for comparison. Whilst these are not identical models they are very close in terms of the window fenestration on the elevations. I accept that there will be a degree of tolerance between EKM and XCO2 models as the Carey Jones Architects drawings are PDF raster file images. These versions of PDF drawings can be brought into AutoCAD but are essentially an image file which only allow us to trace over the drawings rather than grip onto physical lines for pinpoint accuracy.

5.3.3 As XCO2 have alluded to in paragraphs 4.1.8 and 4.1.9 within their rebuttal, we achieve very similar results for the daylight VSC assessment. Albeit, EK McQuade did not assess the 9th floor. My exercise was to merely demonstrate that the overall, the results would be worse than initially reported by XCO2 if they had of course conducted the assessment correctly and accurately. Henry House was chosen as an example of this.

5.3.4 In terms of the internal layout this has been interpreted in different ways by XCO2 along with the inclusion of balconies.

5.3.5 Further investigations are taken from XCO2 rebuttal section 4.2. Review of Surrounding Properties, Henry House paragraphs 4.2.2 to 4.2.13.

5.3.6 In terms of the VSC assessment we are largely satisfied that the results for both XCO2 and EKM are very similar for the assessment of the windows as currently visible from the Ringers Road elevation.

5.3.7 The VSC reported pass rates by XCO2 are summarised in the table below

Property	Number of Windows Tested	Windows that meet BRE Guidelines		Windows that experience gains beyond the consented baseline		VSC Windows No. of Windows Experiencing Adverse Impacts		
		No.	%	No.	%	20-29.99% loss (minor adverse losses)	30-39.99% loss (moderate adverse losses)	>40% loss (substantial losses)
Henry House	59	19	32%	0	0	11	10	19
Total	**59**	**19**	**32%**	**0**	**0%**	**11**	**10**	**19**

5.3.8 The results show that 40 (68%) windows do not meet BRE Criteria, this equates to 29 (49%) of all windows assessed not meeting an Urban Pass for reductions of less than 30%,

meaning that the occupants of the 29 windows assessed will experience a noticeable difference to the VSC figures.

5.3.9 The VSC reported pass rates by XCO2 that exclude the balconies on Henry House are summarised in the table below

Property	Number of Windows Tested	Windows that meet BRE Guidelines		Windows that experience gains beyond the consented baseline		VSC Windows No. of Windows Experiencing Adverse Impacts		
		No.	%	No.	%	20-29.99% loss (minor adverse losses)	30-39.99% loss (moderate adverse losses)	>40% loss (substantial losses)
Henry House	59	23	39%	0	0	8	14	14
Total	**59**	**23**	**39%**	**0**	**0%**	**8**	**14**	**14**

5.3.10 The results without balconies show that 36 (61%) windows do not meet BRE Criteria, this equates to 28 (47%) of all windows assessed not meeting an Urban Pass for reductions of less than 30%, meaning that the occupants of the 28 windows assessed will experience a noticeable difference to the VSC figures.

5.3.11 However one perceives the VSC pass rate for Henry House (with or without balconies) both scenarios deliver poor results no matter how you look at it, especially if you consider that 13 of 59 windows assessed are on the flank elevations that only have an oblique view the development.

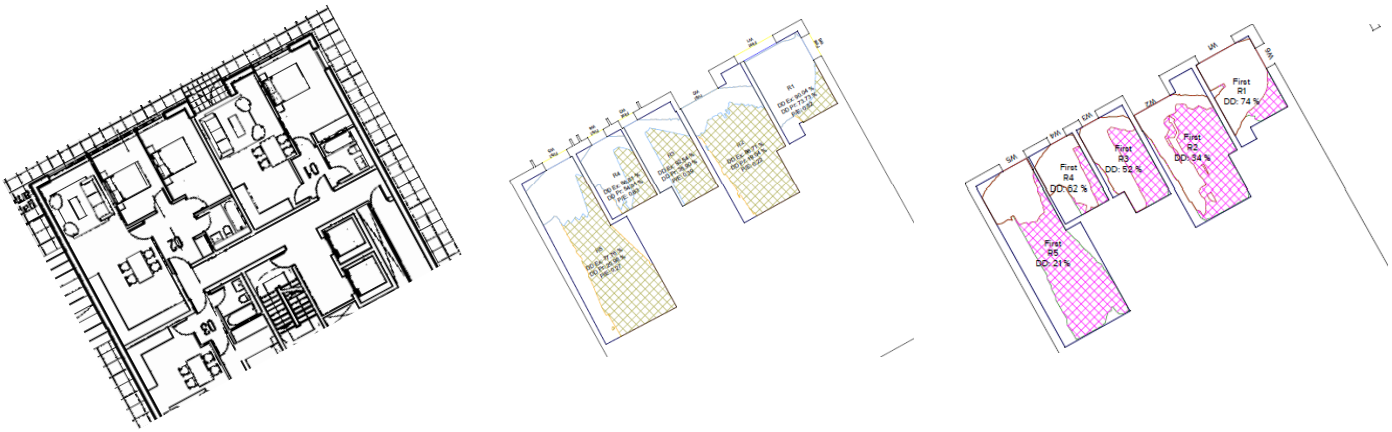
5.3.12 VSC is an assessment for the potential light to the window based on sky dome visibility. The more realistic impact is how that potential for light is distributed within the room the window serves as shown in the No Sky Line (NSL) assessment below.

5.3.13 In terms of the NSL assessment, XCO2 have tested Henry House exactly as the consented layout drawings suggest produced by Carey Jones Architects. EK McQuade tested the consented layout in the Third Scenario in their proof of evidence. The examples below show the Floor Plans from Carey Jones Architects, EK McQuade NSL Contour Plots and XCO2 NSL Contour Plots respectively.

5.3.14 Ground Floor

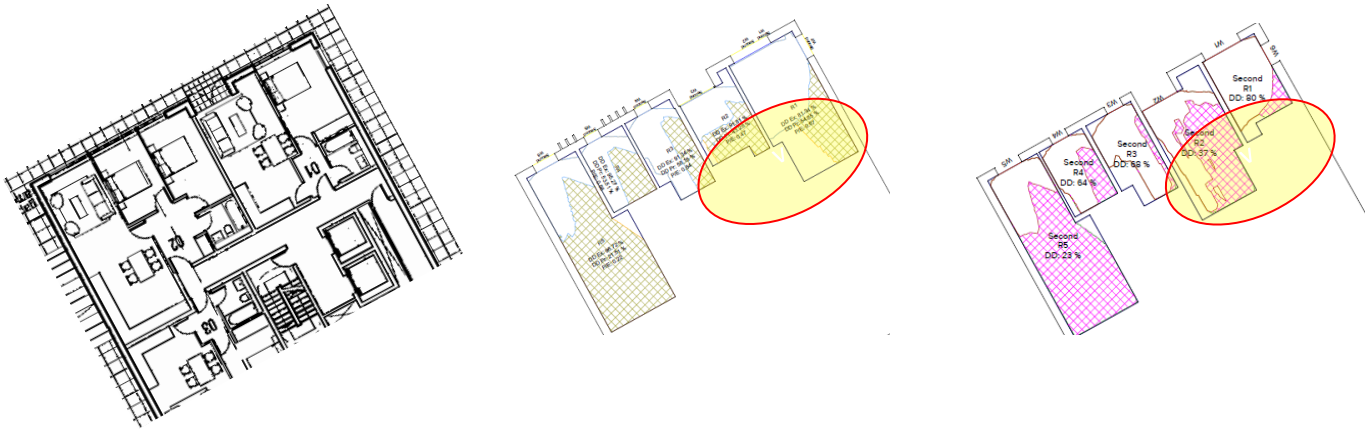
5.3.15 Room 2 sees less light in the XCO2 existing scenario compared to EKM, this is because the existing model is 0.91m too high and therefore cannot receive light to the back of the room where the kitchen area is, as shown in the EK McQuade Contour checks. The proposed contour shapes are very similar for both consultants.

5.3.16 First Floor

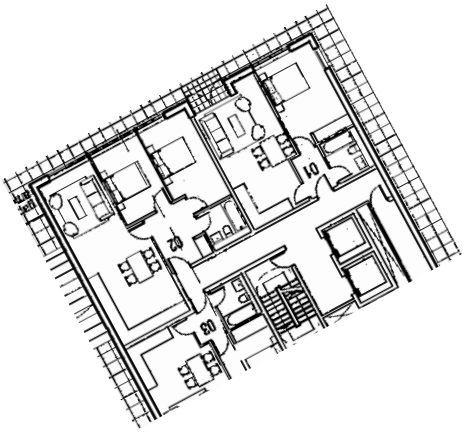
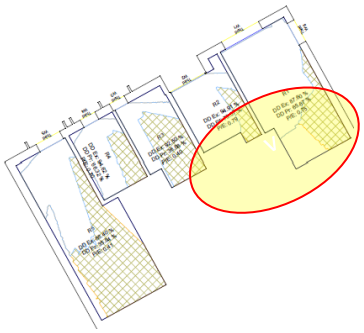
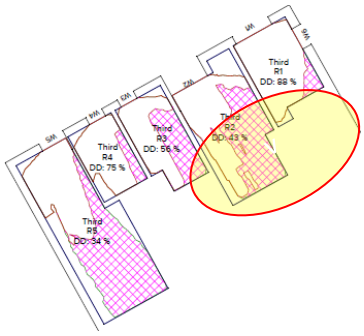


5.3.17 The existing and proposed contours are very similar between XCO2 and EKM on the First floor.

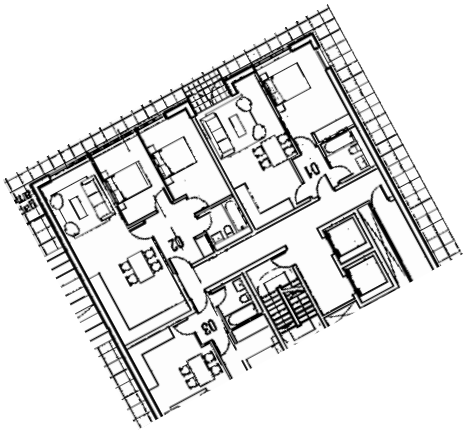
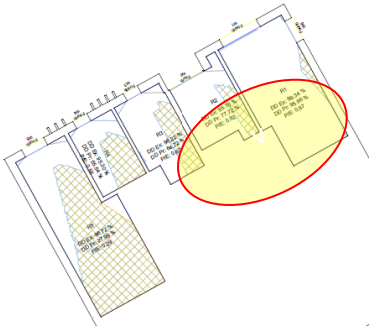
5.3.18 Second Floor



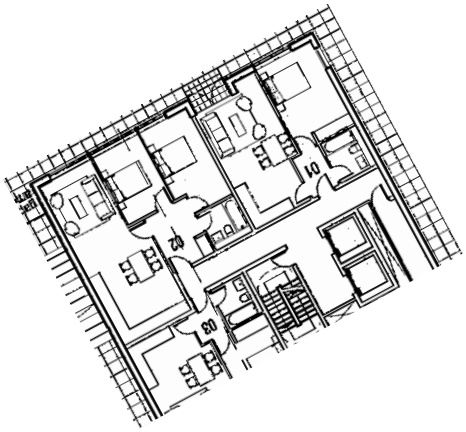
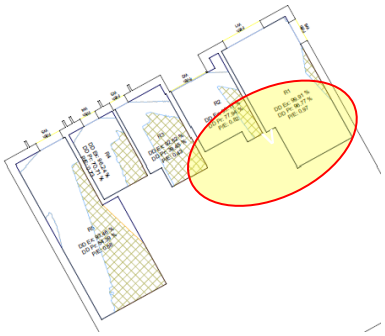
5.3.19 Third Floor

5.3.20 Fourth Floor

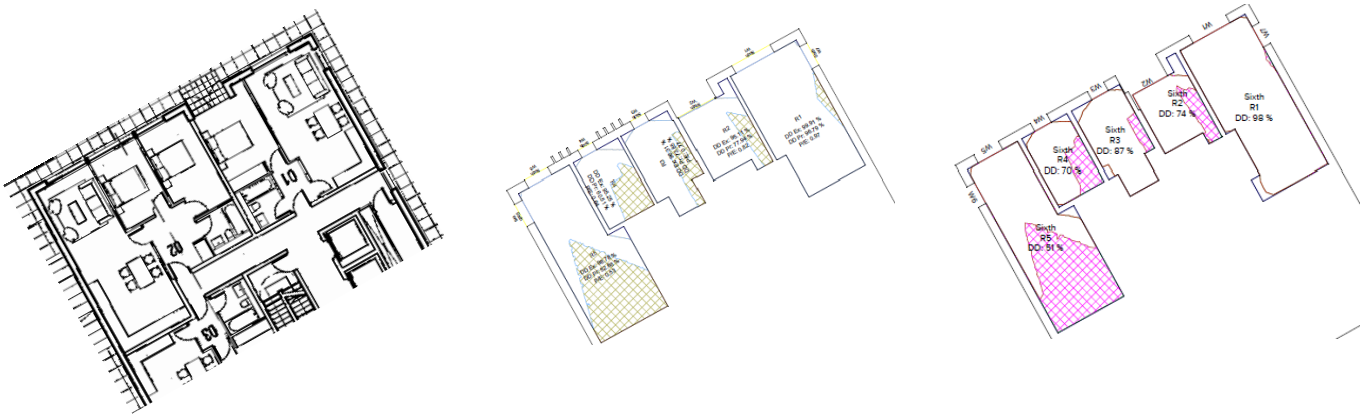




5.3.21 Fifth Floor

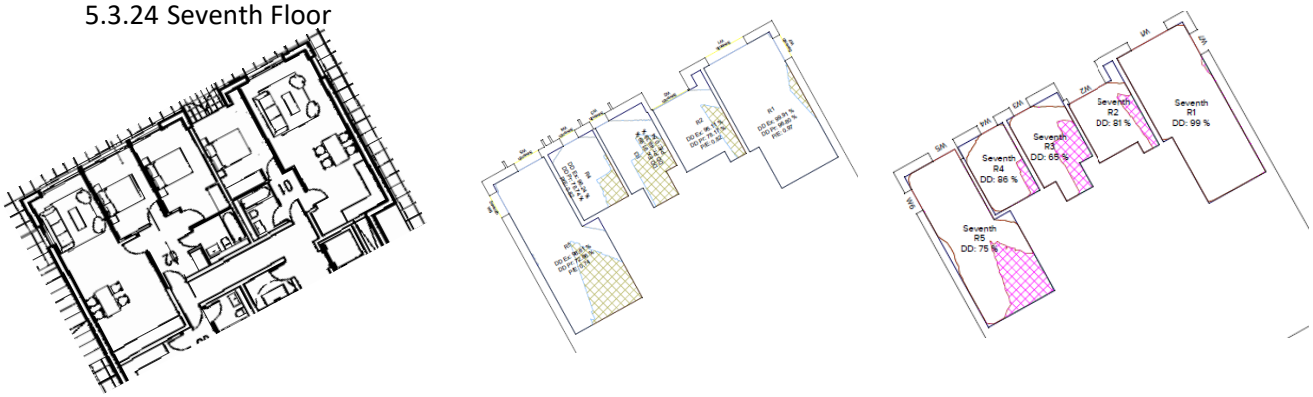




5.3.22 On the second to fifth floors, In my haste to complete and react to the due diligence of the initial XCO2 assessment I had accidentally transposed the sixth floor layout into Rooms 1 & 2 on the second to fifth floors and agree that XCO2 have the correct layout for those 10 rooms highlighted.

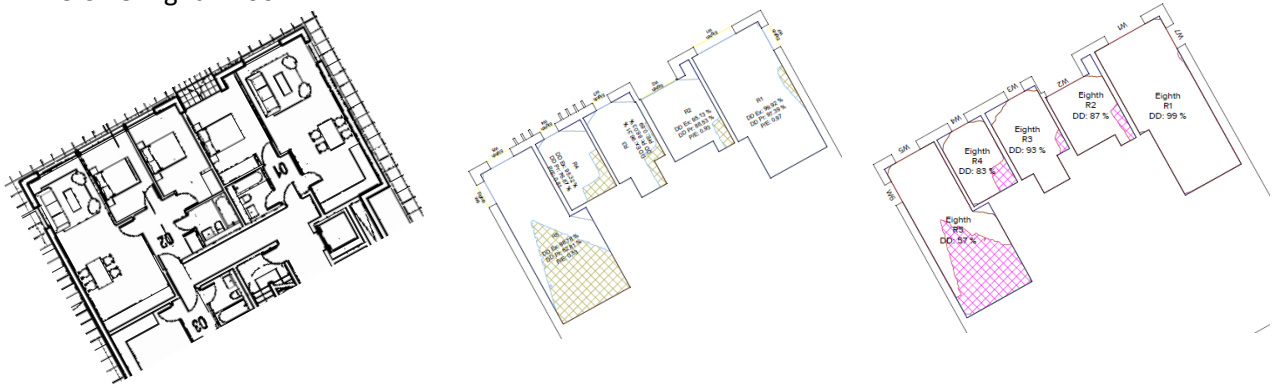
5.3.23 Sixth Floor



5.3.24 Seventh Floor



5.3.25 Eighth Floor



5.3.26 In terms of contour comparison, overall the form and shape of the contours are very similar between XCO2 and EKM assessments. Therefore, I am satisfied that XCO2 have endeavoured to produce the most accurate assessment with the information available for Henry House. In terms of the overall pass rates I can agree with the following quantum of XCO2 pass rate figures for the assessment which includes the balconies.

Property	Number of Rooms Tested	Rooms that meet BRE Guidelines		Rooms that experience gains beyond the consented baseline		DD Rooms No. of Rooms Experiencing Adverse Impacts		
		No.	%	No.	%	20-29.99% loss (minor adverse losses)	30-39.99% loss (moderate adverse losses)	>40% loss (substantial losses)
Henry House	45	22	49%	0	0	5	5	13
Total	**45**	**22**	**49%**	**0**	**0%**	**5**	**5**	**13**

5.3.27 The results show that 23 (51%) rooms do not meet BRE Criteria, this equates to 18 (40%) of all rooms assessed not meeting an Urban Pass for reductions of less than 30%, meaning that the occupants of the 18 rooms assessed will experience a noticeable difference to the NSL figures.

5.3.28 The table below shows the results if the balconies are removed from Henry House to see how many more rooms would be adequately lit.

Property	Number of Rooms Tested	Rooms that meet BRE Guidelines		Rooms that experience gains beyond the consented baseline		DD Rooms No. of Rooms Experiencing Adverse Impacts		
		No.	%	No.	%	20-29.99% loss (minor adverse losses)	30-39.99% loss (moderate adverse losses)	>40% loss (substantial losses)
Henry House	45	23	51%	0	0	4	5	13
Total	**45**	**23**	**51%**	**0**	**0%**	**4**	**5**	**13**

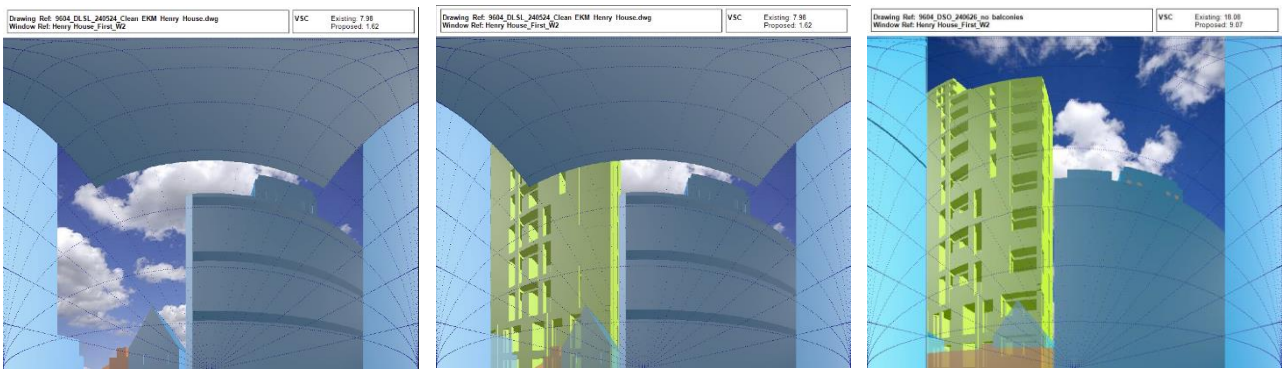
5.3.29 The results without balconies show that 23 (51%) rooms do not meet BRE Criteria, this equates to 18 (40%) of all rooms assessed not meeting an Urban Pass for reductions of less than 30%, meaning that the occupants of the 18 rooms assessed will experience a noticeable difference to the NSL figures

5.3.30 Whilst I also appreciate that the LKD rooms are quite deep, these are mainly single aspect rooms that are affected, whose only source of light will be compromised by the proposed development.

5.3.31 I accept the point that balconies play a part in reducing the sky visibility as a form of self-obstruction, however the results show that the balconies have very little effect on the overall Henry House pass rating for with or without balconies.

5.3.32I believe that the Waldram Diagrams used in Figure 12 of the XCO2 Rebuttal is also slightly misleading as it shows a hybrid Waldram Diagram with an existing and proposed overlay.

5.3.33 If the existing Waldram diagram was shown it would provide the layman with a better understanding of the change in sky visibility. As shown below, the left Waldram diagram for first floor window W2 is the existing baseline scenario which includes the consented 66-70 High Street (projecting over and above the TK Maxx Store). The middle Waldram diagram shows the proposed scenario. The right Waldram diagram shows the assessment with Henry House balconies removed.



5.3.34 I have highlighted on the XCO2 results spreadsheet the Henry House rooms that will experience a substantial loss in with red cells, moderate impacts in amber cells and negligible / urban pass in lime green and sub urban pass rates in dark green shown overleaf.

Project Name: Ringers Road Project No.: 9.604
Report Title: Daylight Assessment - with consented schemes in place Date of Analysis: 26/06/2024

Building	Floor	Room no.	Window no.	25/45 degree plane test	VSC tests: Proposed VSC 27% ?	VSC tests: Existing VSC (%)	VSC tests: Relative VSC >0.8?	NSL tests: Proposed NSL (%)	NSL tests: Existing NSL (%)	NSL tests: Relative NSL >0.8?
66-70 High Street	Eleventh	R1	W4	Further testing required	39.3%	39.6%	0.99	99.6%	99.6%	1
66-70 High Street	Eleventh	R2	W5	Further testing required	39.2%	39.6%	0.99	99.2%	99.2%	1
66-70 High Street	Eleventh	R2	W6	Further testing required	39.1%	39.6%	0.99	99.2%	99.2%	1
66-70 High Street	Eleventh	R2	W7	Pass	38.7%	39.6%	0.98	99.2%	99.2%	1
66-70 High Street	Eleventh	R2	W8	Pass	38.7%	39.6%	0.98	99.2%	99.2%	1
66-70 High Street	Eleventh	R3	W9	Pass	38.9%	39.6%	0.98	97.0%	97.0%	1
66-70 High Street	Eleventh	R4	W10	Pass	39.0%	39.6%	0.98	98.1%	98.1%	1
66-70 High Street	Eleventh	R5	W11	Pass	39.1%	39.6%	0.99	99.4%	99.4%	1
66-70 High Street	Eleventh	R5	W12	Pass	39.1%	39.6%	0.99	99.4%	99.4%	1
66-70 High Street	Eleventh	R5	W13	Pass	39.6%	39.6%	1	99.4%	99.4%	1
66-70 High Street	Eleventh	R5	W14	Pass	39.6%	39.6%	1	99.4%	99.4%	1
Henry House	Ground	R1	W1	Further testing required	14.3%	24.7%	0.58	48.0%	82.6%	0.58
Henry House	Ground	R2	W2	Further testing required	14.3%	25.5%	0.56	28.0%	65.0%	0.43
Henry House	Ground	R2	W3	Further testing required	14.3%	26.3%	0.54			
Henry House	First	R1	W1	Further testing required	17.1%	25.2%	0.68	73.7%	89.6%	0.82
Henry House	First	R1	W6	Pass	10.3%	10.3%	1			
Henry House	First	R2	W2	Further testing required	1.6%	8.1%	0.2	34.0%	85.8%	0.4
Henry House	First	R3	W3	Further testing required	14.4%	25.9%	0.56	51.9%	92.9%	0.56
Henry House	First	R4	W4	Further testing required	14.1%	26.4%	0.53	62.3%	79.6%	0.78
Henry House	First	R5	W5	Further testing required	14.8%	28.1%	0.53	21.3%	74.1%	0.29
Henry House	Second	R1	W1	Further testing required	19.3%	27.7%	0.7	80.3%	92.7%	0.87
Henry House	Second	R1	W6	Pass	12.6%	12.6%	1			
Henry House	Second	R2	W2	Further testing required	2.7%	9.8%	0.28	37.4%	86.4%	0.43
Henry House	Second	R3	W3	Further testing required	16.0%	27.6%	0.58	67.7%	76.6%	0.88
Henry House	Second	R4	W4	Further testing required	15.7%	28.8%	0.54	63.5%	92.7%	0.69
Henry House	Second	R5	W5	Further testing required	17.1%	31.4%	0.54	22.5%	96.7%	0.23
Henry House	Third	R1	W1	Further testing required	21.6%	30.1%	0.72	88.4%	97.3%	0.91
Henry House	Third	R1	W6	Pass	16.2%	16.2%	1			
Henry House	Third	R2	W2	Further testing required	3.9%	11.4%	0.34	43.3%	86.7%	0.5
Henry House	Third	R3	W3	Further testing required	18.0%	30.1%	0.6	55.6%	95.7%	0.58
Henry House	Third	R4	W4	Further testing required	17.6%	30.6%	0.57	74.7%	88.3%	0.85

Project Name: Ringers Road Project No.: 9.604
Report Title: Daylight Assessment - with consented schemes in place Date of Analysis: 26/06/2024

Building	Floor	Room no.	Window no.	25/45 degree plane test	VSC tests: Proposed VSC 27% ?	VSC tests: Existing VSC (%)	VSC tests: Relative VSC >0.8?	NSL tests: Proposed NSL (%)	NSL tests: Existing NSL (%)	NSL tests: Relative NSL >0.8?
Henry House	Third	R5	W5	Further testing required	18.1%	32.2%	0.56	34.1%	83.3%	0.41
Henry House	Fourth	R1	W1	Further testing required	24.0%	32.3%	0.74	96.5%	99.0%	0.98
Henry House	Fourth	R1	W6	Pass	21.5%	21.5%	1			
Henry House	Fourth	R2	W2	Further testing required	5.2%	12.8%	0.41	56.1%	88.8%	0.63
Henry House	Fourth	R3	W3	Further testing required	19.8%	31.1%	0.64	81.2%	89.1%	0.91
Henry House	Fourth	R4	W4	Further testing required	19.1%	32.0%	0.6	70.3%	97.4%	0.72
Henry House	Fourth	R5	W5	Further testing required	20.1%	34.3%	0.59	30.2%	97.0%	0.31
Henry House	Fifth	R1	W1	Further testing required	26.4%	34.2%	0.77	96.9%	99.6%	0.97
Henry House	Fifth	R1	W6	Pass	28.0%	28.0%	1			
Henry House	Fifth	R2	W2	Further testing required	6.4%	14.0%	0.46	79.0%	94.8%	0.83
Henry House	Fifth	R3	W3	Further testing required	21.8%	32.8%	0.66	59.8%	95.8%	0.62
Henry House	Fifth	R4	W4	Further testing required	21.1%	33.0%	0.64	80.5%	90.4%	0.89
Henry House	Fifth	R5	W5	Further testing required	21.2%	34.4%	0.62	56.9%	89.5%	0.64
Henry House	Sixth	R1	W1	Further testing required	28.6%	35.8%	0.8	97.5%	97.9%	1
Henry House	Sixth	R1	W7	Pass	35.6%	35.6%	1			
Henry House	Sixth	R2	W2	Further testing required	7.1%	15.0%	0.47	73.9%	94.0%	0.79
Henry House	Sixth	R3	W3	Further testing required	23.7%	33.5%	0.71	87.1%	94.8%	0.92
Henry House	Sixth	R4	W4	Further testing required	22.6%	34.0%	0.67	70.2%	96.2%	0.73
Henry House	Sixth	R5	W5	Further testing required	23.3%	36.0%	0.65	51.1%	98.6%	0.52
Henry House	Sixth	R5	W6	Further testing required	31.1%	34.0%	0.92			
Henry House	Seventh	R1	W1	Further testing required	30.3%	36.7%	0.83	99.2%	99.5%	1
Henry House	Seventh	R1	W7	Pass	38.5%	38.5%	1			
Henry House	Seventh	R2	W2	Further testing required	9.2%	16.5%	0.56	80.9%	94.4%	0.86
Henry House	Seventh	R3	W3	Further testing required	25.3%	34.5%	0.73	65.1%	94.9%	0.69
Henry House	Seventh	R4	W4	Further testing required	24.4%	34.4%	0.71	86.1%	94.3%	0.91
Henry House	Seventh	R5	W5	Further testing required	24.4%	35.6%	0.69	75.2%	96.5%	0.78
Henry House	Seventh	R5	W6	Further testing required	36.8%	39.5%	0.93			
Henry House	Eighth	R1	W1	Further testing required	31.8%	37.3%	0.85	99.3%	99.5%	1
Henry House	Eighth	R1	W7	Pass	38.7%	38.7%	1			
Henry House	Eighth	R2	W2	Further testing required	16.7%	23.1%	0.72	87.3%	94.5%	0.92
Henry House	Eighth	R3	W3	Further testing required	28.5%	36.1%	0.79	92.6%	95.8%	0.97

Project Name: Ringers Road Project No.: 9.604
Report Title: Daylight Assessment - with consented schemes in place Date of Analysis: 26/06/2024

Building	Floor	Room no.	Window no.	25/45 degree plane test	VSC tests: Proposed VSC 27% ?	VSC tests: Existing VSC (%)	VSC tests: Relative VSC >0.8?	NSL tests: Proposed NSL (%)	NSL tests: Existing NSL (%)	NSL tests: Relative NSL >0.8?
Henry House	Eighth	R4	W4	Further testing required	26.2%	35.1%	0.75	83.2%	96.4%	0.86
Henry House	Eighth	R5	W5	Further testing required	26.7%	36.8%	0.73	56.7%	98.4%	0.58
Henry House	Eighth	R5	W6	Further testing required	37.1%	39.5%	0.94			
Henry House	Ninth	R1	W1	Further testing required	23.2%	26.9%	0.86	99.9%	99.9%	1
Henry House	Ninth	R1	W5	Pass	28.2%	28.2%	1			
Henry House	Ninth	R2	W2	Further testing required	22.3%	26.9%	0.83	99.7%	99.7%	1
Henry House	Ninth	R3	W3	Further testing required	24.0%	29.5%	0.81	99.9%	100.0%	1
Henry House	Ninth	R3	W4	Further testing required	31.0%	32.3%	0.96			

5.3.35 I have highlighted the significance criteria effect on the results for Henry House with the balconies removed.

Project Name: Ringers Road Project No.: 9.604
Report Title: Daylight Assessment - without balconies Date of Analysis: 28/06/2024

Building	Floor	Room no.	Room use	Window no.	VSC tests			NSL tests		
					Proposed VSC (%)	Existing VSC (%)	Relative VSC	Proposed NSL (%)	Existing NSL (%)	Relative NSL
66-70 High Street	Eleventh	R5	LKD	W11	39.1%	39.6%	0.99	99.4%	99.4%	1.00
66-70 High Street	Eleventh	R5	LKD	W12	39.1%	39.6%	0.99	99.4%	99.4%	1.00
66-70 High Street	Eleventh	R5	LKD	W13	39.6%	39.6%	1.00	99.4%	99.4%	1.00
66-70 High Street	Eleventh	R5	LKD	W14	39.6%	39.6%	1.00	99.4%	99.4%	1.00
Henry House	Ground	R1	Unknown	W1	14.9%	25.2%	0.59	48.0%	82.6%	0.58
Henry House	Ground	R2	Unknown	W2	14.5%	25.6%	0.56	28.0%	65.0%	0.43
Henry House	Ground	R2	Unknown	W3	14.3%	26.3%	0.54			
Henry House	First	R1	Unknown	W1	17.5%	25.6%	0.68	73.7%	89.6%	0.82
Henry House	First	R1	Unknown	W6	10.3%	10.3%	1.00			
Henry House	First	R2	Unknown	W2	9.1%	18.1%	0.50	39.6%	86.4%	0.46
Henry House	First	R3	Unknown	W3	14.6%	26.0%	0.56	51.9%	92.9%	0.56
Henry House	First	R4	Unknown	W4	14.1%	26.4%	0.53	62.3%	79.6%	0.78
Henry House	First	R5	Unknown	W5	14.8%	28.1%	0.53	21.3%	74.1%	0.29
Henry House	Second	R1	Unknown	W1	19.6%	28.1%	0.70	80.4%	92.7%	0.87
Henry House	Second	R1	Unknown	W6	12.6%	12.6%	1.00			
Henry House	Second	R2	Unknown	W2	10.5%	19.8%	0.53	43.7%	86.9%	0.50
Henry House	Second	R3	Unknown	W3	17.6%	29.1%	0.60	68.0%	76.8%	0.88
Henry House	Second	R4	Unknown	W4	15.7%	28.8%	0.54	63.6%	92.7%	0.69
Henry House	Second	R5	Unknown	W5	17.1%	31.4%	0.55	22.5%	96.7%	0.23
Henry House	Third	R1	Unknown	W1	21.9%	30.5%	0.72	88.5%	97.3%	0.91
Henry House	Third	R1	Unknown	W6	16.2%	16.2%	1.00			
Henry House	Third	R2	Unknown	W2	12.1%	21.5%	0.56	49.5%	87.7%	0.56
Henry House	Third	R3	Unknown	W3	18.2%	30.2%	0.60	55.6%	95.7%	0.58
Henry House	Third	R4	Unknown	W4	17.6%	30.6%	0.57	74.7%	88.3%	0.85
Henry House	Third	R5	Unknown	W5	18.1%	32.2%	0.56	34.3%	83.5%	0.41
Henry House	Fourth	R1	Unknown	W1	24.3%	32.6%	0.75	96.9%	99.3%	0.98
Henry House	Fourth	R1	Unknown	W6	21.5%	21.5%	1.00			
Henry House	Fourth	R2	Unknown	W2	13.8%	22.9%	0.60	59.6%	89.6%	0.67
Henry House	Fourth	R3	Unknown	W3	21.4%	32.7%	0.65	81.6%	89.5%	0.91
Henry House	Fourth	R4	Unknown	W4	19.1%	32.0%	0.60	70.3%	97.4%	0.72
Henry House	Fourth	R5	Unknown	W5	20.1%	34.3%	0.59	30.2%	97.0%	0.31
Henry House	Fifth	R1	Unknown	W1	26.8%	34.6%	0.77	97.0%	99.7%	0.97
Henry House	Fifth	R1	Unknown	W6	28.0%	28.0%	1.00			

Project Name: Ringers Road Project No.: 9.604
Report Title: Daylight Assessment - without balconies Date of Analysis: 28/06/2024

Building	Floor	Room no.	Room use	Window no.	VSC tests			NSL tests		
					Proposed VSC (%)	Existing VSC (%)	Relative VSC	Proposed NSL (%)	Existing NSL (%)	Relative NSL
Henry House	Fifth	R2	Unknown	W2	15.6%	24.1%	0.65	81.2%	94.9%	0.86
Henry House	Fifth	R3	Unknown	W3	21.9%	32.9%	0.67	59.8%	95.8%	0.62
Henry House	Fifth	R4	Unknown	W4	21.1%	33.0%	0.64	80.5%	90.4%	0.89
Henry House	Fifth	R5	Unknown	W5	21.2%	34.4%	0.62	57.3%	89.8%	0.64
Henry House	Sixth	R1	Unknown	W1	28.9%	36.2%	0.80	97.5%	97.9%	1.00
Henry House	Sixth	R1	Unknown	W7	35.6%	35.6%	1.00			
Henry House	Sixth	R2	Unknown	W2	16.8%	25.2%	0.67	77.1%	94.0%	0.82
Henry House	Sixth	R3	Unknown	W3	25.3%	35.0%	0.72	87.2%	94.8%	0.92
Henry House	Sixth	R4	Unknown	W4	22.7%	34.0%	0.67	70.2%	96.2%	0.73
Henry House	Sixth	R5	Unknown	W5	23.3%	36.0%	0.65	51.1%	98.6%	0.52
Henry House	Sixth	R5	Unknown	W6	31.1%	34.0%	0.92			
Henry House	Seventh	R1	Unknown	W1	30.6%	37.0%	0.83	99.2%	99.5%	1.00
Henry House	Seventh	R1	Unknown	W7	38.5%	38.5%	1.00			
Henry House	Seventh	R2	Unknown	W2	19.0%	26.5%	0.72	85.0%	94.5%	0.90
Henry House	Seventh	R3	Unknown	W3	25.4%	34.5%	0.74	65.1%	94.9%	0.69
Henry House	Seventh	R4	Unknown	W4	24.5%	34.5%	0.71	86.1%	94.3%	0.91
Henry House	Seventh	R5	Unknown	W5	24.5%	35.6%	0.69	75.4%	96.6%	0.78
Henry House	Seventh	R5	Unknown	W6	36.8%	39.5%	0.93			
Henry House	Eighth	R1	Unknown	W1	31.8%	37.3%	0.85	99.3%	99.6%	1.00
Henry House	Eighth	R1	Unknown	W7	38.7%	38.7%	0.85			
Henry House	Eighth	R2	Unknown	W2	16.8%	23.3%	0.85	87.3%	94.5%	0.92
Henry House	Eighth	R3	Unknown	W3	28.5%	36.2%	0.85	92.6%	95.8%	0.97
Henry House	Eighth	R4	Unknown	W4	26.2%	35.1%	0.85	83.2%	96.4%	0.86
Henry House	Eighth	R5	Unknown	W5	26.8%	36.9%	0.85	56.7%	98.4%	0.58
Henry House	Eighth	R5	Unknown	W6	37.1%	39.5%	0.85			
Henry House	Ninth	R1	Unknown	W1	23.2%	26.9%	0.85	99.9%	99.9%	1.00
Henry House	Ninth	R1	Unknown	W5	28.2%	28.2%	0.85			
Henry House	Ninth	R2	Unknown	W2	22.3%	26.9%	0.85	99.7%	99.7%	1.00
Henry House	Ninth	R3	Unknown	W3	24.0%	29.5%	0.85	99.9%	100.0%	1.00
Henry House	Ninth	R3	Unknown	W4	31.0%	32.3%	0.85			

5.3.36 Overall, for the best case for the appellant, the reported urban scenario results that excludes the balconies for Henry House generates a pass rate for VSC 52% and NSL 60% which is a poor performance. This means that 29 (48%) Windows will experience a noticeable reduction in light and 18 (40%) rooms will experience a noticeable loss to direct sky visibility from their working plane (850mm above the finished floor level) area within the room.

5.3.37 Overall the results show a 40% Moderate to Substantial impact compared to a 60% Negligible to Minor Adverse I believe this is a high failure rate and will be an excessive and noticeable impact to those affected occupants within Henry House.

5.3.38 On review of those 18 rooms that fail NSL, the Proposed levels of remaining light in each range from 23.1% up to 65.1%. I would say that rooms left with more than 50% area lit, could be regarded as adequately lit in an alternative proposed urban scenario target rate. In this scenario that would see 9 of the 18 rooms that fail moved into an urban pass, with 9 rooms still failing the alternative proposed urban scenario target rate which in my opinion is still too high.

5.4 William House

5.4.1 The XCO2 rebuttal makes many references to overage results compared to their 18 June 2024 Proof of Evidence. This is merely clouding the reported results and summary of those. We have taken the XCO2 Spreadsheets and highlighted the significance criteria impact to the windows and rooms to get a better understanding of the results for the layman to understand.

5.4.2 I have reviewed the XCO2 William House 3D model and I am satisfied that it reflects the internal layout drawings by Carey Jones Architects.

5.4.3 In terms of the VSC assessment we are satisfied that the results reported by XCO2 in the rebuttal are true and reflective of the likely impact to William House's windows.

5.4.4 The VSC reported pass rates by XCO2 are summarised in the table below

Property	Number of Windows Tested	Windows that meet BRE Guidelines		Windows that experience gains beyond the consented baseline		VSC Windows No. of Windows Experiencing Adverse Impacts		
		No.	%	No.	%	20-29.99% loss (minor adverse losses)	30-39.99% loss (moderate adverse losses)	>40% loss (substantial losses)
William House	105	38	36%	0	0	22	23	22
Total	**105**	**38**	**36%**	**0**	**0%**	**22**	**23**	**22**

5.4.5 The results show that 67 (64%) windows do not meet BRE Criteria, this equates to 45 (43%) of all windows assessed not meeting an Urban Pass for reductions of less than 30%, meaning that the occupants of the 45 windows assessed will experience a noticeable difference to the VSC figures.

5.4.6 The VSC reported pass rates by XCO2 that exclude the balconies on William House are summarised in the table below

Property	Number of Windows Tested	Windows that meet BRE Guidelines		Windows that experience gains beyond the consented baseline		VSC Windows No. of Windows Experiencing Adverse Impacts		
		No.	%	No.	%	20-29.99% loss (minor adverse losses)	30-39.99% loss (moderate adverse losses)	>40% loss (substantial losses)
William House	105	47	45%	0	0	21	22	15
Total	**105**	**47**	**45%**	**0**	**0%**	**21**	**22**	**15**

5.4.7 The results without balconies show that 58 (55%) windows do not meet BRE Criteria, this equates to 37 (35%) of all windows assessed not meeting an Urban Pass for reductions of less than 30%, meaning that the occupants of the 37 windows assessed will experience a noticeable difference to the VSC figures.

5.4.8 In terms of the 3D modelling for the NSL assessment, XCO2 have tested William House exactly as the consented layout drawings suggest produced by Carey Jones Architects.

5.4.9 In terms of the NSL assessment we are satisfied that the results reported by XCO2 in the rebuttal are true and reflective of the likely impact to William House's rooms.

5.4.10 The NSL reported pass rates by XCO2 are summarised in the table below

Property	Number of Rooms Tested	Rooms that meet BRE Guidelines		Rooms that experience gains beyond the consented baseline		DD Rooms No. of Rooms Experiencing Adverse Impacts		
		No.	%	No.	%	20-29.99% loss (minor adverse losses)	30-39.99% loss (moderate adverse losses)	>40% loss (substantial losses)
William House	92	58	63%	0	0	12	3	19
Total	**92**	**58**	**63%**	**0**	**0%**	**12**	**3**	**19**

5.4.11 The results show that 34 (37%) rooms do not meet BRE Criteria, this equates to 22 (24%) of all rooms assessed not meeting an Urban Pass for reductions of less than 30%, meaning that the occupants of the 22 rooms assessed will experience a noticeable difference to the NSL figures.

5.4.12 The NSL reported pass rates by XCO2 that exclude the balconies on William House are summarised in the table below

Property	Number of Rooms Tested	Rooms that meet BRE Guidelines		Rooms that experience gains beyond the consented baseline		DD Rooms No. of Rooms Experiencing Adverse Impacts		
		No.	%	No.	%	20-29.99% loss (minor adverse losses)	30-39.99% loss (moderate adverse losses)	>40% loss (substantial losses)
William House	92	60	65%	0	0	12	3	17
Total	**92**	**60**	**65%**	**0**	**0%**	**12**	**3**	**17**

5.4.13 The results show that 32 (55%) rooms do not meet BRE Criteria, this equates to 20 (22%) of all rooms assessed not meeting an Urban Pass for reductions of less than 30%, meaning that the occupants of the 20 rooms assessed will experience a noticeable difference to the NSL figures

5.4.14 I have highlighted on the XCO2 results spreadsheet the William House windows and rooms that will experience a substantial loss in with red cells, moderate impacts in amber cells and negligible / urban pass in lime green and sub urban pass rates in dark green shown below.

Project Name: Ringers Road Project No.: 9.604
Report Title: Daylight Assessment - with consented schemes in place Date of Analysis: 26/06/2024

Building	Floor	Room no.	Window no.	25/45 degree plane test	VSC tests: Proposed VSC 27% ?	VSC tests: Existing VSC (%)	VSC tests: Relative VSC >0.8?	NSL tests: Proposed NSL (%)	NSL tests: Existing NSL (%)	NSL tests: Relative NSL >0.8?
Henry House	Eighth	R4	W4	Further testing required	26.2%	35.1%	0.75	83.2%	96.4%	0.86
Henry House	Eighth	R5	W5	Further testing required	26.7%	36.8%	0.73	56.7%	98.4%	0.58
Henry House	Eighth	R5	W6	Further testing required	37.1%	39.5%	0.94			
Henry House	Ninth	R1	W1	Further testing required	23.2%	26.9%	0.86	99.9%	99.9%	1
Henry House	Ninth	R1	W5	Pass	28.2%	28.2%	1			
Henry House	Ninth	R2	W2	Further testing required	22.3%	26.9%	0.83	99.7%	99.7%	1
Henry House	Ninth	R3	W3	Further testing required	24.0%	29.5%	0.81	99.9%	100.0%	1
Henry House	Ninth	R3	W4	Further testing required	31.0%	32.3%	0.96			
William House	Ground	R1	W1	Further testing required	10.9%	21.7%	0.5	36.9%	69.4%	0.53
William House	Ground	R2	W2	Further testing required	15.0%	25.0%	0.6	73.6%	94.8%	0.78
William House	Ground	R3	W3	Further testing required	15.8%	25.3%	0.62	35.9%	95.1%	0.38
William House	Ground	R4	W4	Further testing required	14.1%	22.6%	0.62	50.3%	88.1%	0.57
William House	Ground	R5	W5	Further testing required	17.9%	25.5%	0.7	76.2%	96.2%	0.79
William House	Ground	R6	W6	Further testing required	16.5%	23.2%	0.71	68.9%	80.1%	0.86
William House	Ground	R7	W7	Further testing required	20.8%	26.6%	0.78	76.2%	93.9%	0.81
William House	Ground	R8	W8	Further testing required	19.0%	24.6%	0.77	71.9%	93.7%	0.77
William House	Ground	R9	W9	Further testing required	22.8%	27.9%	0.82	75.6%	97.1%	0.78
William House	Ground	R10	W10	Further testing required	26.0%	30.4%	0.86	94.0%	95.0%	0.99
William House	Ground	R11	W11	Further testing required	27.7%	31.6%	0.88	95.8%	98.7%	0.97
William House	First	R1	W1	Further testing required	3.6%	10.4%	0.34	33.3%	95.3%	0.35
William House	First	R2	W2	Further testing required	15.2%	27.2%	0.56	48.8%	98.6%	0.49
William House	First	R3	W3	Further testing required	15.8%	27.2%	0.58	30.4%	83.4%	0.36
William House	First	R4	W4	Further testing required	5.1%	11.1%	0.46	52.3%	92.0%	0.57
William House	First	R5	W5	Further testing required	18.7%	28.0%	0.67	54.8%	95.2%	0.58
William House	First	R6	W6	Further testing required	6.8%	11.6%	0.59	79.8%	89.2%	0.89
William House	First	R7	W7	Further testing required	21.6%	29.0%	0.75	66.8%	96.9%	0.69
William House	First	R8	W8	Further testing required	8.4%	12.5%	0.67	93.3%	95.1%	0.98
William House	First	R9	W9	Further testing required	24.1%	30.3%	0.8	75.6%	97.1%	0.78
William House	First	R10	W10	Further testing required	10.7%	14.5%	0.74	94.7%	95.4%	0.99
William House	First	R11	W11	Further testing required	26.9%	32.2%	0.83	88.2%	97.6%	0.9
William House	First	R12	W12	Further testing required	30.2%	34.8%	0.87	98.7%	99.8%	0.99

Project Name: Ringers Road Project No.: 9.604
Report Title: Daylight Assessment - with consented schemes in place Date of Analysis: 26/06/2024

Building	Floor	Room no.	Window no.	25/45 degree plane test	VSC tests: Proposed VSC 27% ?	VSC tests: Existing VSC (%)	VSC tests: Relative VSC >0.8?	NSL tests: Proposed NSL (%)	NSL tests: Existing NSL (%)	NSL tests: Relative NSL >0.8?
William House	First	R12	W13	Pass	39.1%	39.1%	1			
William House	First	R12	W14	Pass	19.7%	19.7%	1			
William House	Second	R1	W1	Further testing required	4.5%	12.8%	0.35	42.7%	96.3%	0.44
William House	Second	R2	W2	Further testing required	17.7%	30.6%	0.58	73.9%	98.3%	0.75
William House	Second	R3	W3	Further testing required	18.8%	31.0%	0.61	50.3%	97.2%	0.52
William House	Second	R4	W4	Further testing required	6.4%	13.5%	0.47	67.3%	94.2%	0.71
William House	Second	R5	W5	Further testing required	21.8%	31.7%	0.69	92.9%	96.1%	0.97
William House	Second	R6	W6	Further testing required	8.3%	14.1%	0.59	89.2%	94.1%	0.95
William House	Second	R7	W7	Further testing required	24.7%	32.5%	0.76	95.7%	95.8%	1
William House	Second	R8	W8	Further testing required	9.9%	14.8%	0.67	94.7%	94.7%	1
William House	Second	R9	W9	Further testing required	26.9%	33.6%	0.8	95.2%	95.2%	1
William House	Second	R10	W10	Further testing required	12.1%	16.6%	0.73	94.8%	95.1%	1
William House	Second	R11	W11	Further testing required	29.6%	35.2%	0.84	95.5%	95.5%	1
William House	Second	R12	W12	Further testing required	31.4%	36.3%	0.86	99.2%	99.9%	0.99
William House	Second	R12	W13	Pass	39.1%	39.1%	1			
William House	Second	R12	W14	Pass	19.7%	19.7%	1			
William House	Third	R1	W1	Further testing required	5.3%	14.6%	0.36	44.3%	96.4%	0.46
William House	Third	R2	W2	Further testing required	18.6%	32.2%	0.58	52.9%	98.7%	0.54
William House	Third	R3	W3	Further testing required	19.2%	32.2%	0.6	37.8%	88.6%	0.43
William House	Third	R4	W4	Further testing required	7.5%	15.4%	0.49	71.9%	94.2%	0.76
William House	Third	R5	W5	Further testing required	22.4%	33.2%	0.68	66.2%	97.2%	0.68
William House	Third	R6	W6	Further testing required	9.5%	16.1%	0.59	90.8%	94.8%	0.96
William House	Third	R7	W7	Further testing required	25.1%	34.0%	0.74	76.8%	97.6%	0.79
William House	Third	R8	W8	Further testing required	11.0%	16.6%	0.66	94.7%	94.7%	1
William House	Third	R9	W9	Further testing required	27.5%	34.9%	0.79	87.8%	98.1%	0.89
William House	Third	R10	W10	Further testing required	13.0%	18.0%	0.73	94.8%	95.1%	1
William House	Third	R11	W11	Further testing required	29.7%	35.7%	0.83	94.6%	98.1%	0.96
William House	Third	R12	W12	Further testing required	32.2%	37.4%	0.86	99.2%	99.9%	0.99
William House	Third	R12	W13	Pass	39.1%	39.1%	1			
William House	Third	R12	W14	Pass	19.7%	19.7%	1			
William House	Fourth	R1	W1	Further testing required	6.0%	15.9%	0.38	45.1%	96.4%	0.47

Project Name: Ringers Road Project No.: 9.604
Report Title: Daylight Assessment - with consented schemes in place Date of Analysis: 26/06/2024

Building	Floor	Room no.	Window no.	25/45 degree plane test	VSC tests			NSL tests		
					Proposed VSC 27% ?	Existing VSC (%)	Relative VSC >0.8?	Proposed NSL (%)	Existing NSL (%)	Relative NSL >0.8?
William House	Fourth	R2	W2	Further testing required	20.9%	34.4%	0.61	76.2%	98.3%	0.77
William House	Fourth	R3	W3	Further testing required	22.0%	34.7%	0.63	54.9%	97.3%	0.56
William House	Fourth	R4	W4	Further testing required	8.3%	16.7%	0.5	73.1%	94.2%	0.78
William House	Fourth	R5	W5	Further testing required	24.9%	35.5%	0.7	95.6%	96.1%	1
William House	Fourth	R6	W6	Further testing required	10.1%	17.3%	0.58	91.3%	94.8%	0.96
William House	Fourth	R7	W7	Further testing required	27.2%	36.1%	0.75	95.8%	95.8%	1
William House	Fourth	R8	W8	Further testing required	11.5%	17.6%	0.65	94.7%	94.7%	1
William House	Fourth	R9	W9	Further testing required	29.2%	36.4%	0.8	95.2%	95.2%	1
William House	Fourth	R10	W10	Further testing required	13.5%	18.6%	0.73	95.0%	95.1%	1
William House	Fourth	R11	W11	Further testing required	31.5%	37.2%	0.85	95.5%	95.5%	1
William House	Fourth	R12	W12	Further testing required	32.9%	38.0%	0.87	99.6%	99.9%	1
William House	Fourth	R12	W13	Pass	39.2%	39.2%	1			
William House	Fourth	R12	W14	Pass	19.7%	19.7%	1			
William House	Fifth	R1	W1	Further testing required	6.8%	17.9%	0.38	46.0%	96.4%	0.48
William House	Fifth	R2	W2	Further testing required	21.3%	34.8%	0.61	55.0%	98.7%	0.56
William House	Fifth	R3	W3	Further testing required	21.8%	34.6%	0.63	44.3%	92.3%	0.48
William House	Fifth	R4	W4	Further testing required	9.5%	18.4%	0.52	75.8%	94.2%	0.81
William House	Fifth	R5	W5	Further testing required	24.9%	35.5%	0.7	73.1%	97.2%	0.75
William House	Fifth	R6	W6	Further testing required	11.4%	19.0%	0.6	92.7%	94.8%	0.98
William House	Fifth	R7	W7	Further testing required	27.2%	36.1%	0.75	85.2%	97.7%	0.87
William House	Fifth	R8	W8	Further testing required	12.8%	19.1%	0.67	94.7%	94.7%	1
William House	Fifth	R9	W9	Further testing required	29.4%	36.5%	0.81	95.1%	98.1%	0.97
William House	Fifth	R10	W10	Further testing required	15.1%	20.1%	0.75	95.1%	95.1%	1
William House	Fifth	R11	W11	Further testing required	31.3%	36.9%	0.85	97.8%	98.1%	1
William House	Fifth	R12	W12	Further testing required	33.5%	38.3%	0.88	99.9%	99.9%	1
William House	Fifth	R12	W13	Pass	39.2%	39.2%	1			
William House	Fifth	R12	W14	Pass	21.3%	21.3%	1			
William House	Sixth	R1	W1	Further testing required	11.1%	24.1%	0.46	43.7%	96.7%	0.45
William House	Sixth	R2	W2	Further testing required	23.3%	35.9%	0.65	78.1%	97.4%	0.8
William House	Sixth	R3	W3	Further testing required	24.3%	36.2%	0.67	62.3%	98.8%	0.63
William House	Sixth	R4	W4	Further testing required	14.5%	24.6%	0.59	80.6%	94.3%	0.85

Project Name: Ringers Road Project No.: 9.604
Report Title: Daylight Assessment - with consented schemes in place Date of Analysis: 26/06/2024

Building	Floor	Room no.	Window no.	25/45 degree plane test	VSC tests			NSL tests		
					Proposed VSC 27% ?	Existing VSC (%)	Relative VSC >0.8?	Proposed NSL (%)	Existing NSL (%)	Relative NSL >0.8?
William House	Sixth	R5	W5	Further testing required	27.3%	37.1%	0.74	96.0%	96.2%	1
William House	Sixth	R6	W6	Further testing required	16.9%	25.1%	0.67	94.9%	95.0%	1
William House	Sixth	R7	W7	Further testing required	29.4%	37.4%	0.79	95.8%	95.8%	1
William House	Sixth	R8	W8	Further testing required	18.8%	25.1%	0.75	94.9%	94.9%	1
William House	Sixth	R9	W9	Further testing required	31.3%	37.6%	0.83	95.1%	95.1%	1
William House	Sixth	R10	W10	Further testing required	21.3%	25.9%	0.82	95.0%	95.0%	1
William House	Sixth	R11	W11	Further testing required	33.0%	37.8%	0.87	95.4%	95.4%	1
William House	Sixth	R12	W12	Further testing required	34.2%	38.5%	0.89	99.9%	99.9%	1
William House	Sixth	R12	W13	Pass	39.5%	39.5%	1			
William House	Sixth	R12	W14	Pass	27.2%	27.2%	1			
William House	Seventh	R1	W1	Further testing required	16.0%	27.4%	0.58	100.0%	100.0%	1
William House	Seventh	R1	W10	Further testing required	4.5%	5.1%	0.88	100.0%	100.0%	1
William House	Seventh	R2	W2	Further testing required	17.1%	27.1%	0.63	99.2%	100.0%	0.99
William House	Seventh	R3	W3	Further testing required	19.3%	28.0%	0.69	99.9%	100.0%	1
William House	Seventh	R4	W4	Further testing required	20.3%	27.9%	0.73	100.0%	100.0%	1
William House	Seventh	R5	W5	Further testing required	21.3%	28.1%	0.76	99.7%	99.8%	1
William House	Seventh	R6	W6	Further testing required	22.8%	28.5%	0.8	99.9%	99.9%	1
William House	Seventh	R7	W7	Further testing required	23.2%	27.8%	0.83	99.8%	99.8%	1
William House	Seventh	R8	W8	Further testing required	24.6%	28.5%	0.86	99.9%	99.9%	1
William House	Seventh	R8	W9	Pass	28.0%	28.0%	1			

5.4.15 I have highlighted the significance criteria effect on the results for William House with the balconies removed shown on the tables below.

Project Name: Ringers Road Project No.: 9.604
Report Title: Daylight Assessment - without balconies Date of Analysis: 28/06/2024

Building	Floor	Room no.	Room use	Window no.	VSC tests			NSL tests		
					Proposed VSC (%)	Existing VSC (%)	Relative VSC	Proposed NSL (%)	Existing NSL (%)	Relative NSL
Henry House	Fifth	R2	Unknown	W2	15.6%	24.1%	0.65	81.2%	94.9%	0.86
Henry House	Fifth	R3	Unknown	W3	21.9%	32.9%	0.67	59.8%	95.8%	0.62
Henry House	Fifth	R4	Unknown	W4	21.1%	33.0%	0.64	80.5%	90.4%	0.89
Henry House	Fifth	R5	Unknown	W5	21.2%	34.4%	0.62	57.3%	89.8%	0.64
Henry House	Sixth	R1	Unknown	W1	28.9%	36.2%	0.80	97.5%	97.9%	1.00
Henry House	Sixth	R1	Unknown	W7	35.6%	35.6%	1.00			
Henry House	Sixth	R2	Unknown	W2	16.8%	25.2%	0.67	77.1%	94.0%	0.82
Henry House	Sixth	R3	Unknown	W3	25.3%	35.0%	0.72	87.2%	94.8%	0.92
Henry House	Sixth	R4	Unknown	W4	22.7%	34.0%	0.67	70.2%	96.2%	0.73
Henry House	Sixth	R5	Unknown	W5	23.3%	36.0%	0.65	51.1%	98.6%	0.52
Henry House	Sixth	R5	Unknown	W6	31.1%	34.0%	0.92			
Henry House	Seventh	R1	Unknown	W1	30.6%	37.0%	0.83	99.2%	99.5%	1.00
Henry House	Seventh	R1	Unknown	W7	38.5%	38.5%	1.00			
Henry House	Seventh	R2	Unknown	W2	19.0%	26.5%	0.72	85.0%	94.5%	0.90
Henry House	Seventh	R3	Unknown	W3	25.4%	34.5%	0.74	65.1%	94.9%	0.69
Henry House	Seventh	R4	Unknown	W4	24.5%	34.5%	0.71	86.1%	94.3%	0.91
Henry House	Seventh	R5	Unknown	W5	24.5%	35.6%	0.69	75.4%	96.6%	0.78
Henry House	Seventh	R5	Unknown	W6	36.8%	39.5%	0.93			
Henry House	Eighth	R1	Unknown	W1	31.8%	37.3%	0.85	99.3%	99.6%	1.00
Henry House	Eighth	R1	Unknown	W7	38.7%	38.7%	0.85			
Henry House	Eighth	R2	Unknown	W2	16.8%	23.3%	0.85	87.3%	94.5%	0.92
Henry House	Eighth	R3	Unknown	W3	28.5%	36.2%	0.85	92.6%	95.8%	0.97
Henry House	Eighth	R4	Unknown	W4	26.2%	35.1%	0.85	83.2%	96.4%	0.86
Henry House	Eighth	R5	Unknown	W5	26.8%	36.9%	0.85	56.7%	98.4%	0.58
Henry House	Eighth	R5	Unknown	W6	37.1%	39.5%	0.85			
Henry House	Ninth	R1	Unknown	W1	23.2%	26.9%	0.85	99.9%	99.9%	1.00
Henry House	Ninth	R1	Unknown	W5	28.2%	28.2%	0.85			
Henry House	Ninth	R2	Unknown	W2	22.3%	26.9%	0.85	99.7%	99.7%	1.00
Henry House	Ninth	R3	Unknown	W3	24.0%	29.5%	0.85	99.9%	100.0%	1.00
Henry House	Ninth	R3	Unknown	W4	31.0%	32.3%	0.85			
William House	Ground	R1	Unknown	W1	14.5%	25.3%	0.85	37.8%	69.4%	0.54
William House	Ground	R2	Unknown	W2	15.3%	25.4%	0.85	73.6%	94.8%	0.78
William House	Ground	R3	Unknown	W3	16.1%	25.6%	0.85	35.9%	95.1%	0.38

Project Name: Ringers Road Project No.: 9.604
Report Title: Daylight Assessment - without balconies Date of Analysis: 28/06/2024

Building	Floor	Room no.	Room use	Window no.	VSC tests			NSL tests		
					Proposed VSC (%)	Existing VSC (%)	Relative VSC	Proposed NSL (%)	Existing NSL (%)	Relative NSL
William House	Ground	R4	Unknown	W4	17.6%	26.2%	0.67	50.5%	88.1%	0.57
William House	Ground	R5	Unknown	W5	18.6%	26.2%	0.71	76.2%	96.2%	0.79
William House	Ground	R6	Unknown	W6	20.0%	26.6%	0.75	69.0%	80.1%	0.86
William House	Ground	R7	Unknown	W7	21.4%	27.3%	0.78	76.2%	93.9%	0.81
William House	Ground	R8	Unknown	W8	22.4%	28.0%	0.80	72.3%	93.8%	0.77
William House	Ground	R9	Unknown	W9	23.5%	28.6%	0.82	75.6%	97.2%	0.78
William House	Ground	R10	Unknown	W10	26.2%	30.6%	0.86	94.0%	95.0%	0.99
William House	Ground	R11	Unknown	W11	27.7%	31.6%	0.88	95.8%	98.7%	0.97
William House	First	R1	Unknown	W1	9.6%	21.7%	0.44	41.7%	96.1%	0.43
William House	First	R2	Unknown	W2	16.3%	28.3%	0.58	48.9%	98.7%	0.50
William House	First	R3	Unknown	W3	15.8%	27.2%	0.58	30.4%	83.7%	0.36
William House	First	R4	Unknown	W4	12.7%	22.5%	0.57	66.5%	94.6%	0.70
William House	First	R5	Unknown	W5	19.8%	29.1%	0.68	57.7%	95.6%	0.60
William House	First	R6	Unknown	W6	15.5%	23.0%	0.67	86.6%	91.7%	0.94
William House	First	R7	Unknown	W7	22.6%	30.0%	0.75	68.4%	97.1%	0.70
William House	First	R8	Unknown	W8	17.9%	23.7%	0.75	95.1%	95.1%	1.00
William House	First	R9	Unknown	W9	25.0%	31.2%	0.80	76.5%	97.4%	0.79
William House	First	R10	Unknown	W10	21.0%	25.6%	0.82	95.4%	95.4%	1.00
William House	First	R11	Unknown	W11	27.6%	32.9%	0.84	88.5%	97.8%	0.90
William House	First	R12	Unknown	W12	30.3%	34.8%	0.87	98.7%	99.8%	0.99
William House	First	R12	Unknown	W13	39.4%	39.4%	1.00			
William House	First	R12	Unknown	W14	30.8%	30.8%	1.00			
William House	Second	R1	Unknown	W1	10.8%	24.1%	0.45	45.5%	96.5%	0.47
William House	Second	R2	Unknown	W2	17.8%	30.7%	0.58	73.9%	98.3%	0.75
William House	Second	R3	Unknown	W3	19.0%	31.2%	0.61	50.3%	97.2%	0.52
William House	Second	R4	Unknown	W4	14.2%	24.9%	0.57	74.7%	94.2%	0.79
William House	Second	R5	Unknown	W5	22.3%	32.2%	0.69	93.0%	96.2%	0.97
William House	Second	R6	Unknown	W6	17.2%	25.6%	0.67	92.1%	94.8%	0.97
William House	Second	R7	Unknown	W7	25.1%	33.0%	0.76	95.8%	95.9%	1.00
William House	Second	R8	Unknown	W8	19.6%	26.1%	0.75	94.7%	94.7%	1.00
William House	Second	R9	Unknown	W9	27.5%	34.2%	0.80	95.3%	95.4%	1.00
William House	Second	R10	Unknown	W10	22.5%	27.6%	0.81	95.2%	95.2%	1.00
William House	Second	R11	Unknown	W11	29.7%	35.2%	0.84	95.5%	95.5%	1.00

Project Name: Ringers Road Project No.: 9.604
Report Title: Daylight Assessment - without balconies Date of Analysis: 28/06/2024

Building	Floor	Room no.	Room use	Window no.	VSC tests			NSL tests		
					Proposed VSC (%)	Existing VSC (%)	Relative VSC	Proposed NSL (%)	Existing NSL (%)	Relative NSL
William House	Second	R12	Unknown	W12	31.4%	36.4%	0.86	99.2%	99.9%	0.99
William House	Second	R12	Unknown	W13	39.5%	39.5%	1.00			
William House	Second	R12	Unknown	W14	30.7%	30.7%	1.00			
William House	Third	R1	Unknown	W1	12.0%	25.8%	0.47	46.1%	96.5%	0.48
William House	Third	R2	Unknown	W2	19.7%	33.4%	0.59	53.0%	98.7%	0.54
William House	Third	R3	Unknown	W3	19.2%	32.2%	0.60	37.8%	88.9%	0.43
William House	Third	R4	Unknown	W4	15.7%	26.7%	0.59	76.7%	94.2%	0.81
William House	Third	R5	Unknown	W5	23.5%	34.3%	0.69	66.8%	97.3%	0.69
William House	Third	R6	Unknown	W6	18.6%	27.6%	0.68	92.7%	94.8%	0.98
William House	Third	R7	Unknown	W7	26.1%	35.0%	0.75	77.5%	97.7%	0.79
William House	Third	R8	Unknown	W8	20.8%	27.8%	0.75	94.7%	94.7%	1.00
William House	Third	R9	Unknown	W9	28.4%	35.8%	0.79	87.9%	98.2%	0.90
William House	Third	R10	Unknown	W10	23.6%	29.0%	0.81	95.2%	95.2%	1.00
William House	Third	R11	Unknown	W11	30.4%	36.4%	0.83	94.8%	98.1%	0.97
William House	Third	R12	Unknown	W12	32.2%	37.5%	0.86	99.2%	99.9%	0.99
William House	Third	R12	Unknown	W13	39.5%	39.5%	1.00			
William House	Third	R12	Unknown	W14	30.7%	30.7%	1.00			
William House	Fourth	R1	Unknown	W1	13.2%	27.1%	0.49	46.3%	96.5%	0.48
William House	Fourth	R2	Unknown	W2	21.0%	34.4%	0.61	76.2%	98.3%	0.77
William House	Fourth	R3	Unknown	W3	22.1%	34.9%	0.63	54.9%	97.3%	0.56
William House	Fourth	R4	Unknown	W4	16.9%	28.0%	0.60	78.4%	94.2%	0.83
William House	Fourth	R5	Unknown	W5	25.3%	36.0%	0.70	95.7%	96.2%	1.00
William House	Fourth	R6	Unknown	W6	19.6%	28.8%	0.68	93.2%	94.8%	0.98
William House	Fourth	R7	Unknown	W7	27.6%	36.5%	0.76	95.9%	95.9%	1.00
William House	Fourth	R8	Unknown	W8	21.6%	28.8%	0.75	94.7%	94.7%	1.00
William House	Fourth	R9	Unknown	W9	29.7%	36.9%	0.80	95.4%	95.4%	1.00
William House	Fourth	R10	Unknown	W10	24.2%	29.7%	0.82	95.2%	95.2%	1.00
William House	Fourth	R11	Unknown	W11	31.5%	37.2%	0.85	95.5%	95.5%	1.00
William House	Fourth	R12	Unknown	W12	32.9%	38.0%	0.87	99.6%	99.9%	1.00
William House	Fourth	R12	Unknown	W13	39.5%	39.5%	1.00			
William House	Fourth	R12	Unknown	W14	30.7%	30.7%	1.00			
William House	Fifth	R1	Unknown	W1	14.0%	27.6%	0.51	46.8%	96.5%	0.48
William House	Fifth	R2	Unknown	W2	22.2%	35.8%	0.62	55.1%	98.7%	0.56

Project Name: Ringers Road Project No.: 9.604
Report Title: Daylight Assessment - without balconies Date of Analysis: 28/06/2024

Building	Floor	Room no.	Room use	Window no.	VSC tests			NSL tests		
					Proposed VSC (%)	Existing VSC (%)	Relative VSC	Proposed NSL (%)	Existing NSL (%)	Relative NSL
William House	Fifth	R3	Unknown	W3	21.8%	34.6%	0.63	44.3%	92.3%	0.48
William House	Fifth	R4	Unknown	W4	17.5%	28.2%	0.62	81.7%	94.2%	0.87
William House	Fifth	R5	Unknown	W5	25.8%	36.5%	0.71	73.2%	97.3%	0.75
William House	Fifth	R6	Unknown	W6	20.1%	28.9%	0.69	94.3%	94.8%	0.99
William House	Fifth	R7	Unknown	W7	28.0%	36.9%	0.76	85.3%	97.7%	0.87
William House	Fifth	R8	Unknown	W8	22.0%	28.8%	0.76	94.7%	94.7%	1.00
William House	Fifth	R9	Unknown	W9	30.1%	37.2%	0.81	95.4%	98.2%	0.97
William House	Fifth	R10	Unknown	W10	24.6%	29.7%	0.83	95.2%	95.2%	1.00
William House	Fifth	R11	Unknown	W11	31.9%	37.5%	0.85	97.9%	98.1%	1.00
William House	Fifth	R12	Unknown	W12	33.5%	38.3%	0.88	99.9%	99.9%	1.00
William House	Fifth	R12	Unknown	W13	39.5%	39.5%	1.00			
William House	Fifth	R12	Unknown	W14	30.6%	30.6%	1.00			
William House	Sixth	R1	Unknown	W1	11.1%	24.2%	0.46	43.7%	96.7%	0.45
William House	Sixth	R2	Unknown	W2	23.3%	35.9%	0.65	78.1%	97.4%	0.80
William House	Sixth	R3	Unknown	W3	24.3%	36.2%	0.67	62.3%	98.8%	0.63
William House	Sixth	R4	Unknown	W4	14.5%	24.6%	0.59	80.6%	94.3%	0.85
William House	Sixth	R5	Unknown	W5	27.3%	37.1%	0.74	96.0%	96.2%	1.00
William House	Sixth	R6	Unknown	W6	16.9%	25.1%	0.67	94.9%	95.0%	1.00
William House	Sixth	R7	Unknown	W7	29.4%	37.4%	0.79	95.8%	95.8%	1.00
William House	Sixth	R8	Unknown	W8	18.8%	25.1%	0.75	94.9%	94.9%	1.00
William House	Sixth	R9	Unknown	W9	31.3%	37.6%	0.83	95.1%	95.1%	1.00
William House	Sixth	R10	Unknown	W10	21.3%	25.9%	0.82	95.0%	95.0%	1.00
William House	Sixth	R11	Unknown	W11	33.0%	37.8%	0.87	95.4%	95.4%	1.00
William House	Sixth	R12	Unknown	W12	34.2%	38.5%	0.89	99.9%	99.9%	1.00
William House	Sixth	R12	Unknown	W13	39.5%	39.5%	1.00			
William House	Sixth	R12	Unknown	W14	27.2%	27.2%	1.00			
William House	Seventh	R1	Unknown	W1	16.0%	27.4%	0.58	100.0%	100.0%	1.00
William House	Seventh	R1	Unknown	W10	4.5%	5.1%	0.88	100.0%	100.0%	1.00
William House	Seventh	R2	Unknown	W2	17.1%	27.2%	0.63	99.2%	100.0%	0.99
William House	Seventh	R3	Unknown	W3	19.3%	28.1%	0.69	99.9%	100.0%	1.00
William House	Seventh	R4	Unknown	W4	20.3%	27.9%	0.73	100.0%	100.0%	1.00
William House	Seventh	R5	Unknown	W5	21.3%	28.1%	0.76	99.7%	99.8%	1.00
William House	Seventh	R6	Unknown	W6	22.8%	28.5%	0.80	99.9%	99.9%	1.00

Project Name: Ringers Road Project No.: 9.604
Report Title: Daylight Assessment - without balconies Date of Analysis: 28/06/2024

Building	Floor	Room no.	Room use	Window no.	VSC tests			NSL tests		
					Proposed VSC (%)	Existing VSC (%)	Relative VSC	Proposed NSL (%)	Existing NSL (%)	Relative NSL
William House	Seventh	R7	Unknown	W7	23.2%	27.8%	0.83	99.8%	99.8%	1.00
William House	Seventh	R8	Unknown	W8	24.6%	28.5%	0.86	99.9%	99.9%	1.00
William House	Seventh	R8	Unknown	W9	28.0%	28.0%	1.00			

5.4.16 Overall, for the best case for the appellant, the reported urban scenario results that excludes the balconies for William House generates a pass rate for VSC 65% and NSL 78%. This means that 37 (35%) Windows will experience a noticeable reduction in light and 20 (22%) rooms will experience a noticeable loss to direct sky visibility from their working plane (850mm above the finished floor level) area within the room. I believe this is a high failure rate in comparison to Henry House and this will be an excessive impact to those affected occupants within William House.

5.4.17 Whilst the impacts reported are localised to the rooms opposite the development, more rooms in William House (20 Rooms) will experience an moderate to substantial impact than in Henry House (18 Rooms) without balconies included.

5.4.18 Overall the results show a 22% Moderate to Substantial impact compared to a 78% Negligible to Minor Adverse impact. I believe this is a high failure rate and will be an excessive and noticeable impact to those affected occupants within William House.

5.4.19 On review of those 20 rooms that fail NSL, the Proposed levels of remaining light in each range from 30.4% up to 66.8%. I would say that rooms left with more than 50% area lit, could be regarded as adequately lit in an alternative proposed urban scenario target rate. In this scenario that would see 8 of the 18 rooms that fail moved into an urban pass, with 10 rooms still failing the alternative proposed urban scenario target rate which in my opinion is still too high.

5.5 Simpsons Place

5.5.1 I have reviewed the XCO2 Simpsons Place 3D model and I am satisfied that it is now accurate enough for the DSO assessment.

5.5.2 In terms of the VSC assessment we are satisfied that the results reported by XCO2 in the rebuttal are true and reflective of the likely impact to Simpsons Place windows.

5.5.3 The VSC reported pass rates by XCO2 are summarised in the table below

Property	Number of Windows Tested	Windows that meet BRE Guidelines		Windows that experience gains beyond the consented baseline		VSC Windows No. of Windows Experiencing Adverse Impacts		
		No.	%	No.	%	20-29.99% loss (minor adverse losses)	30-39.99% loss (moderate adverse losses)	>40% loss (substantial losses)
Simpsons Place	12	0	0%	0	0	0	0	12
Total	**12**	**0**	**0%**	**0**	**0%**	**0**	**0**	**12**

5.5.4 The results show that 12 (100%) windows do not meet BRE Criteria, this equates to 0 (0%) of all windows assessed not meeting an Urban Pass for reductions of less than 30%, meaning that the occupants of the 12 windows assessed will experience a noticeable difference to the VSC figures.

5.5.5 In terms of the 3D modelling for the NSL assessment, XCO2 have tested Simpsons Place exactly as per the layout drawings sourced from the LBB planning portal shown in their Proof of Evidence 18 June 2024.

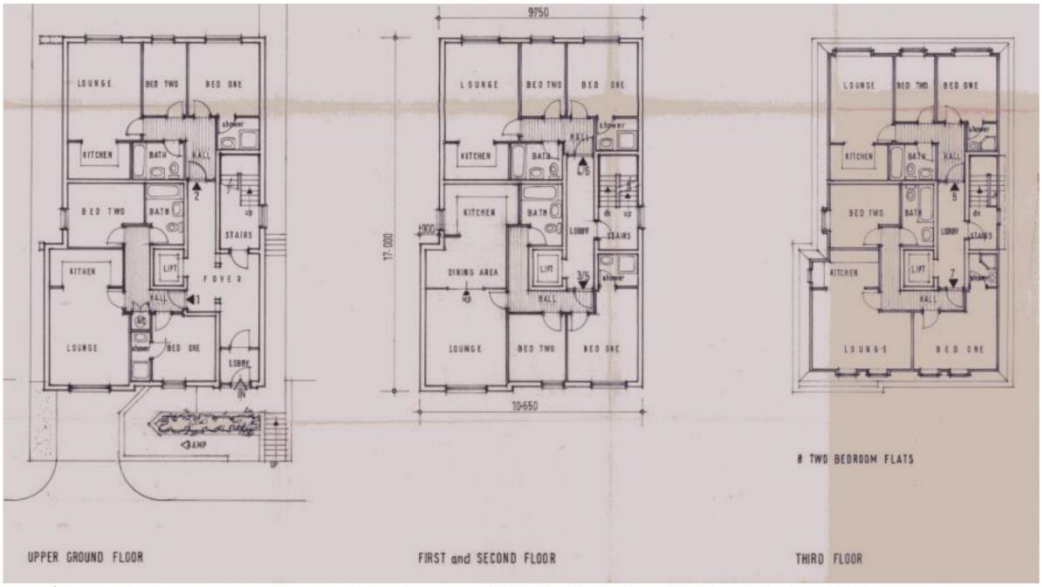


Figure 38: Plans from the Bromley Planning Portal for Simpsons Place, 6 Ringers road (Ref: 99/00350/FULL1)

5.5.6 In terms of the NSL assessment we are satisfied that the results reported by XCO2 in the rebuttal are true and reflective of the likely impact to Simpsons Place rooms.

5.5.7 The NSL reported pass rates by XCO2 are summarised in the table below

Property	Number of Rooms Tested	Rooms that meet BRE Guidelines		Rooms that experience gains beyond the consented baseline		DD Rooms No. of Rooms Experiencing Adverse Impacts		
		No.	%	No.	%	20-29.99% loss (minor adverse losses)	30-39.99% loss (moderate adverse losses)	>40% loss (substantial losses)
Simpsons Place	12	0	0%	0	0	0	3	9
Total	**12**	**0**	**0%**	**0**	**0%**	**0**	**3**	**9**

5.5.8 The results show that 12 (100%) rooms do not meet BRE Criteria, this equates to 0 (0%) of all rooms assessed not meeting an Urban Pass for reductions of less than 30%, meaning that the occupants of the 12 rooms assessed will experience a noticeable difference to the NSL figures.

5.5.9 I have highlighted on the XCO2 results spreadsheet the Simpsons Place windows and rooms that will experience a substantial loss in with red cells, moderate impacts in amber cells and negligible / urban pass in lime green and sub urban pass rates in dark green shown below.

Simpsons Place	Ground	R1	W1	Further testing required	9.5%	23.5%	0.41	53.3%	83.4%	0.64
Simpsons Place	Ground	R2	W2	Further testing required	12.5%	27.6%	0.45	39.1%	98.0%	0.4
Simpsons Place	Ground	R3	W3	Further testing required	15.7%	28.7%	0.55	48.5%	70.7%	0.69
Simpsons Place	First	R1	W1	Further testing required	10.4%	29.3%	0.35	48.5%	94.1%	0.52
Simpsons Place	First	R2	W2	Further testing required	13.8%	32.0%	0.43	39.5%	98.1%	0.4
Simpsons Place	First	R3	W3	Further testing required	17.9%	33.1%	0.54	57.4%	98.6%	0.58
Simpsons Place	Second	R1	W1	Further testing required	11.0%	34.4%	0.32	57.6%	97.9%	0.59
Simpsons Place	Second	R2	W2	Further testing required	14.5%	35.3%	0.41	39.8%	98.3%	0.4
Simpsons Place	Second	R3	W3	Further testing required	18.8%	35.8%	0.53	59.2%	98.9%	0.6
Simpsons Place	Third	R1	W1	Further testing required	12.3%	36.7%	0.33	24.3%	89.1%	0.27
Simpsons Place	Third	R2	W2	Further testing required	15.3%	37.0%	0.41	24.6%	92.2%	0.27

Project Name: Ringers Road Project No.: 9.604
Report Title: Daylight Assessment - with consented schemes in place Date of Analysis: 26/06/2024

Building	Floor	Room no.	Window no.	25/45 degree plane test	VSC tests			NSL tests		
					Proposed VSC 27% ?	Existing VSC (%)	Relative VSC >0.8?	Proposed NSL (%)	Existing NSL (%)	Relative NSL >0.8?
Simpsons Place	Third	R3	W3	Further testing required	19.5%	37.3%	0.52	54.5%	92.7%	0.59

5.5.10 It is clear from the table above that all of the rooms within Simpsons Place will experience an unacceptable light loss for both daylight VSC and NSL assessments regardless of any attempt at justifying such losses in an urban setting.

5.5.11 Overall the results show a 100% Moderate to Substantial impact. I believe this is a high failure rate and will be an excessive and noticeable impact to those affected occupants within Simpsons Place.

5.5.12 On review of those 12 rooms that fail NSL, the Proposed levels of remaining light in each range from 24.3% up to 59.2%. I would say that rooms left with more than 50% area lit, could be regarded as adequately lit in an alternative proposed urban scenario target rate. In this scenario that would see 5 of the 12 rooms that fail moved into an urban pass, with 7 rooms still failing the alternative proposed urban scenario target rate which in my opinion is still too high.

5.6 Bromley Salvation Army Church and Community Centre

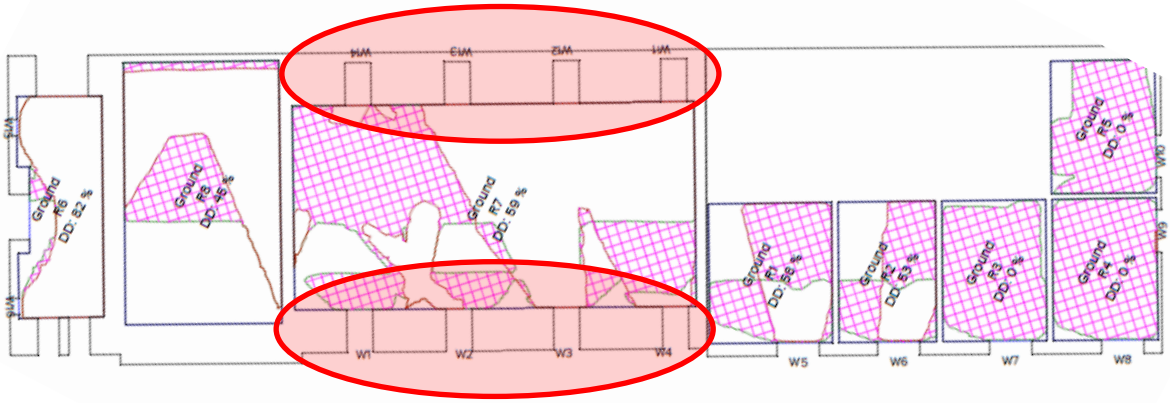
5.6.1 XCO2 refer to this property as 'Bromley Temple' within their Proof of Evidence and rebuttal.

5.6.2 Quote from XCO2 Proof 6.5.58. "*It should be noted for this property that it is non-residential in use and therefore would have a reduced expectation for natural illumination, and also for the majority of the windows assessed would have an existing VSC below 10% therefore meaning even small absolute losses in VSC would result in large relative losses despite the overall loss of daylight being small*".

5.6.3 This is a property of the community and deemed as a sensitive receptor, therefore it must be included in the assessment. Especially considering the proximity of Blocks A & B that effectively envelop and wrap around the building.

5.6.4 I have reviewed the XCO2 Salvation Army Church and Community Centre 3D model and I am not satisfied that it is accurate as it could be in certain areas and note that assumed room layouts were used in this assessment for NSL.

5.6.5 The issue I have identified is the interpretation of the internal layout and the wall thickness of the main hall in the 3D model. Using XCO2's contour drawing for the ground floor of Salvation Army Church and Community Centre, the thickness of the wall in the east elevation is shown as 1.609m thick, the west elevation wall is measured from the 3D model as 1.296m thick. These are highlighted in the red ovals below.



5.6.6 The 8 Velux windows in the mansard roof at first floor level are located directly above the 8 ground floor windows shown above. They too have excessive wall thicknesses of 1.637m on the east elevation and 1.354m on the west elevation.

5.6.7 Using XCO2's Figure 43 image from their Proof of Evidence, the thickness of the wall looks approximately 400mm as seen the reveal of the windows circled in red at ground and first floor level. This shows that there is a modelling error in the XCO2 assessment of Salvation Army Church and Community Centre. This will have an effect on the light contour patterns within this room for the NSL assessment.

5.6.8 In terms of the VSC assessment we are satisfied that the results reported by XCO2 in the rebuttal are true and reflective of the likely impact to Salvation Army Church and Community Centre windows.

5.6.9 The VSC reported pass rates by XCO2 are summarised in the table below

Property	Number of Windows Tested	Windows that meet BRE Guidelines		Windows that experience gains beyond the consented baseline		VSC Windows No. of Windows Experiencing Adverse Impacts		
		No.	%	No.	%	20-29.99% loss (minor adverse losses)	30-39.99% loss (moderate adverse losses)	>40% loss (substantial losses)
Bromley Temple	36	15	42%	1	0	0	1	20
Total	**36**	**15**	**42%**	**1**	**3%**	**0**	**1**	**20**

5.6.10 The results show that 21 (58%) windows do not meet BRE Criteria, this equates to 21 (58%) of all windows assessed not meeting an Urban Pass for reductions of less than 30%, meaning that the occupants of the 21 windows assessed will experience a noticeable difference to the VSC figures.

5.6.11 The NSL reported pass rates by XCO2 are summarised in the table below

Property	Number of Rooms Tested	Rooms that meet BRE Guidelines		Rooms that experience gains beyond the consented baseline		DD Rooms No. of Rooms Experiencing Adverse Impacts		
		No.	%	No.	%	20-29.99% loss (minor adverse losses)	30-39.99% loss (moderate adverse losses)	>40% loss (substantial losses)
Bromley Temple	13	3	23%	2	0	1	2	7
Total	**13**	**3**	**23%**	**2**	**15%**	**1**	**2**	**7**

5.6.12 The results show that 10 (77%) rooms do not meet BRE Criteria, this equates to 9 (69%) of all rooms assessed not meeting an Urban Pass for reductions of less than 30%, meaning that the occupants of the 9 rooms assessed will experience a noticeable difference to the NSL figures.

5.6.13 Please note that the urban pass room is the Main Room, ground floor identified as Room R7. There is much debate to the accuracy of this room so should be declassified to an urban fail. This means that 10 rooms will experience light losses well beyond the recommendations of BRE 209 guidelines.

5.6.14 I have highlighted on the XCO2 results spreadsheet the Salvation Army Church and Community Centre windows and rooms that will experience a substantial loss in with red cells, moderate impacts in amber cells and negligible / urban pass in lime green and sub urban pass rates in dark green shown below. Blue cells denote a gain in light.

Bromley Temple	Ground	R1	W5	Further testing required	8.2%	10.1%	0.81	58.4%	40.9%	1.43
Bromley Temple	Ground	R2	W6	Further testing required	5.6%	10.2%	0.55	52.8%	42.9%	1.23

Project Name: Ringers Road Project No.: 9.604
Report Title: Daylight Assessment - with consented schemes in place Date of Analysis: 26/06/2024

Building	Floor	Room no.	Window no.	25/45 degree plane test	VSC tests			NSL tests		
					Proposed VSC 27% ?	Existing VSC (%)	Relative VSC >0.8?	Proposed NSL (%)	Existing NSL (%)	Relative NSL >0.8?
Bromley Temple	Ground	R3	W7	Further testing required	0.2%	16.7%	0.01	0.0%	92.7%	0
Bromley Temple	Ground	R4	W8	Further testing required	0.2%	26.9%	0.01	0.0%	97.4%	0
Bromley Temple	Ground	R4	W9	Further testing required	0.1%	18.8%	0.01	0.0%	97.4%	
Bromley Temple	Ground	R5	W10	Further testing required	0.1%	16.9%	0	0.0%	86.4%	0
Bromley Temple	Ground	R6	W15	Further testing required	34.0%	35.2%	0.96	82.3%	87.6%	0.94
Bromley Temple	Ground	R6	W16	Further testing required	31.0%	35.5%	0.87	82.3%	87.6%	
Bromley Temple	Ground	R6	W1	Further testing required	2.9%	20.8%	0.14	82.3%	87.6%	
Bromley Temple	Ground	R6	W2	Further testing required	2.1%	18.2%	0.12	82.3%	87.6%	
Bromley Temple	Ground	R6	W19	Further testing required	17.8%	17.8%	1	82.3%	87.6%	
Bromley Temple	Ground	R6	W20	Further testing required	34.8%	37.0%	0.94	82.3%	87.6%	
Bromley Temple	Ground	R7	W1	Further testing required	0.1%	12.9%	0.01	59.3%	80.3%	0.74
Bromley Temple	Ground	R7	W2	Further testing required	0.4%	14.7%	0.03	59.3%	80.3%	
Bromley Temple	Ground	R7	W3	Further testing required	8.8%	12.8%	0.69	59.3%	80.3%	
Bromley Temple	Ground	R7	W4	Further testing required	9.7%	6.8%	1.42	59.3%	80.3%	
Bromley Temple	Ground	R7	W11	Further testing required	3.0%	3.1%	0.99	59.3%	80.3%	
Bromley Temple	Ground	R7	W12	Further testing required	4.7%	4.7%	0.99	59.3%	80.3%	
Bromley Temple	Ground	R7	W13	Further testing required	6.0%	6.0%	1	59.3%	80.3%	
Bromley Temple	Ground	R7	W14	Further testing required	5.6%	5.6%	1	59.3%	80.3%	
Bromley Temple	Ground	R7	W4	Further testing required	2.8%	39.9%	0.07	59.3%	80.3%	
Bromley Temple	Ground	R7	W5	Further testing required	4.5%	42.1%	0.11	59.3%	80.3%	
Bromley Temple	Ground	R7	W6	Further testing required	14.2%	37.8%	0.38	59.3%	80.3%	
Bromley Temple	Ground	R7	W7	Further testing required	14.4%	38.9%	0.37	59.3%	80.3%	
Bromley Temple	Ground	R7	W14	Further testing required	9.1%	9.1%	1	59.3%	80.3%	
Bromley Temple	Ground	R7	W15	Further testing required	13.9%	14.3%	0.97	59.3%	80.3%	
Bromley Temple	Ground	R7	W16	Further testing required	17.2%	17.6%	0.98	59.3%	80.3%	
Bromley Temple	Ground	R7	W17	Further testing required	19.7%	20.0%	0.99	59.3%	80.3%	
Bromley Temple	Ground	R8	W3	Further testing required	0.8%	23.5%	0.03	45.1%	65.1%	0.69
Bromley Temple	Ground	R8	W18	Further testing required	14.7%	14.8%	1	45.1%	65.1%	
Bromley Temple	First	R1	W8	Further testing required	8.4%	34.8%	0.24	57.8%	94.8%	0.61
Bromley Temple	First	R2	W9	Further testing required	4.3%	35.3%	0.12	45.2%	96.8%	0.47
Bromley Temple	First	R3	W10	Further testing required	0.2%	35.1%	0.01	0.0%	96.5%	0

Project Name: Ringers Road Project No.: 9.604
Report Title: Daylight Assessment - with consented schemes in place Date of Analysis: 26/06/2024

Building	Floor	Room no.	Window no.	25/45 degree plane test	VSC tests			NSL tests		
					Proposed VSC 27% ?	Existing VSC (%)	Relative VSC >0.8?	Proposed NSL (%)	Existing NSL (%)	Relative NSL >0.8?
Bromley Temple	First	R4	W11	Further testing required	0.2%	34.3%	0.01	0.2%	95.2%	0
Bromley Temple	First	R4	W12	Further testing required	0.1%	21.5%	0.01	0.2%	95.2%	

5.6.15 It is clear from the table above that most of the windows and rooms within Salvation Army Church and Community Centre will experience daylight VSC and NSL reductions well below those expected in an alternative target value in an urban environment. These results remain contentious and further work is required in order to establish the true impact of the NSL assessment.

5.6.16 Overall the results show a 69% Moderate to Substantial impact to 31% Negligible to Minor Adverse impact. I believe this is a high failure rate and will be an excessive and noticeable impact to those affected occupants within Salvation Army Church – Community Centre.

5.6.17 On review of those 10 rooms that fail NSL, the Proposed levels of remaining light in each range from 0% up to 57.8%. I would say that rooms left with more than 50% area lit, could be regarded as adequately lit in an alternative proposed urban scenario target rate. In this scenario that would see 1 of the 10 rooms that fail moved into an urban pass, with 9 rooms still failing the alternative proposed urban scenario target rate which in my opinion is still too high.

5.7 62 HIGH STREET (PLANNING REF 21/04667/FULL1)

5.7.1 I have reviewed the XCO2 62 High Street 3D model and I am satisfied that it reflects the internal layout drawings.

5.7.2 In terms of the VSC assessment we are satisfied that the results reported by XCO2 in the rebuttal are true and reflective of the likely impact to 62 High Street windows.

5.7.3 The VSC reported pass rates by XCO2 are summarised in the table below

Property	Number of Windows Tested	Windows that meet BRE Guidelines		Windows that experience gains beyond the consented baseline		VSC Windows No. of Windows Experiencing Adverse Impacts		
		No.	%	No.	%	20-29.99% loss (minor adverse losses)	30-39.99% loss (moderate adverse losses)	>40% loss (substantial losses)
62 High Street	154	141	92%	0	0	5	6	2
Total	**154**	**141**	**92%**	**0**	**0%**	**5**	**6**	**2**

5.7.4 The results show that 13 (8%) windows do not meet BRE Criteria, this equates to 8 (5%) of all windows assessed not meeting an Urban Pass for reductions of less than 30%, meaning that the occupants of the 8 windows assessed will experience a noticeable difference to the VSC figures.

5.7.5 In terms of the 3D modelling for the NSL assessment, XCO2 have tested 62 High Street exactly as per the consented layout drawings.

5.7.6 In terms of the NSL assessment we are satisfied that the results reported by XCO2 in the rebuttal are true and reflective of the likely impact to 62 High Street rooms.

5.7.7 The NSL reported pass rates by XCO2 are summarised in the table below

Property	Number of Rooms Tested	Rooms that meet BRE Guidelines		Rooms that experience gains beyond the consented baseline		DD Rooms No. of Rooms Experiencing Adverse Impacts		
		No.	%	No.	%	20-29.99% loss (minor adverse losses)	30-39.99% loss (moderate adverse losses)	>40% loss (substantial losses)
62 High Street	66	58	88%	0	0	1	3	4
Total	**66**	**58**	**88%**	**0**	**0%**	**1**	**3**	**4**

5.7.8 The results show that 8 (12%) rooms do not meet BRE Criteria, this equates to 7 (11%) of all rooms assessed not meeting an Urban Pass for reductions of less than 30%, meaning that the occupants of the 7 rooms assessed will experience a noticeable difference to the NSL figures.

5.7.9 I have highlighted on the XCO2 results spreadsheet the 62 High Street windows and rooms that will experience a substantial loss in with red cells, moderate impacts in amber cells and negligible / urban pass in lime green and sub urban pass rates in dark green shown overleaf.

Project Name: Ringers Road Project No.: 9.604
Report Title: Daylight Assessment - with consented schemes in place Date of Analysis: 26/06/2024

Building	Floor	Room no.	Window no.	25/45 degree plane test	VSC tests			NSL tests		
					Proposed VSC 27% ?	Existing VSC (%)	Relative VSC >0.8?	Proposed NSL (%)	Existing NSL (%)	Relative NSL >0.8?
62 High Street	First	R1	W1	Further testing required	23.5%	25.2%	0.93	71.6%	72.5%	0.99
62 High Street	First	R2	W2	Further testing required	21.4%	24.1%	0.89	37.2%	65.7%	0.57
62 High Street	First	R2	W3	Further testing required	20.7%	24.2%	0.86	37.2%	65.7%	
62 High Street	First	R3	W4	Further testing required	19.9%	24.4%	0.82	84.2%	97.6%	0.86
62 High Street	First	R3	W5	Further testing required	8.7%	13.9%	0.62	84.2%	97.6%	
62 High Street	First	R3	W6	Further testing required	3.4%	7.0%	0.48	84.2%	97.6%	
62 High Street	First	R4	W7	Further testing required	2.6%	4.0%	0.65	10.7%	59.2%	0.18
62 High Street	First	R4	W8	Further testing required	2.2%	2.6%	0.86	10.7%	59.2%	
62 High Street	First	R5	W9	Further testing required	2.0%	2.1%	0.97	1.2%	1.6%	0.78
62 High Street	First	R6	W10	Further testing required	1.9%	1.9%	1	39.8%	39.8%	1
62 High Street	First	R6	W11	Further testing required	1.7%	1.7%	1	39.8%	39.8%	
62 High Street	First	R6	W12	Pass	15.8%	15.8%	1	39.8%	39.8%	
62 High Street	First	R6	W13	Pass	6.7%	6.7%	1	39.8%	39.8%	
62 High Street	First	R7	W14	Pass	32.5%	32.5%	1	84.1%	84.1%	1
62 High Street	First	R7	W15	Pass	32.5%	32.5%	1	84.1%	84.1%	
62 High Street	First	R7	W16	Pass	32.4%	32.4%	1	84.1%	84.1%	
62 High Street	First	R8	W17	Pass	32.4%	32.4%	1	85.6%	85.6%	1
62 High Street	First	R9	W18	Pass	32.4%	32.4%	1	98.9%	98.9%	1
62 High Street	First	R10	W19	Further testing required	30.3%	30.3%	1	89.2%	89.2%	1
62 High Street	Second	R1	W1	Further testing required	26.6%	28.5%	0.93	78.8%	79.5%	0.99
62 High Street	Second	R2	W2	Further testing required	24.8%	27.6%	0.9	45.0%	66.2%	0.68
62 High Street	Second	R2	W3	Further testing required	24.1%	27.7%	0.87	45.0%	66.2%	
62 High Street	Second	R3	W4	Further testing required	23.2%	27.8%	0.84	85.5%	98.1%	0.87
62 High Street	Second	R3	W5	Further testing required	9.8%	15.0%	0.65	85.5%	98.1%	
62 High Street	Second	R3	W6	Further testing required	4.3%	7.9%	0.55	85.5%	98.1%	
62 High Street	Second	R4	W7	Further testing required	3.4%	4.8%	0.7	17.9%	63.8%	0.28
62 High Street	Second	R4	W8	Further testing required	3.1%	3.5%	0.89	17.9%	63.8%	
62 High Street	Second	R5	W9	Further testing required	3.0%	3.1%	0.97	8.7%	8.8%	1
62 High Street	Second	R6	W10	Further testing required	2.9%	2.9%	1	72.1%	72.1%	1
62 High Street	Second	R6	W11	Further testing required	2.9%	2.9%	1	72.1%	72.1%	
62 High Street	Second	R6	W12	Pass	23.3%	23.3%	1	72.1%	72.1%	

Project Name: Ringers Road Project No.: 9.604
Report Title: Daylight Assessment - with consented schemes in place Date of Analysis: 26/06/2024

Building	Floor	Room no.	Window no.	25/45 degree plane test	VSC tests			NSL tests		
					Proposed VSC 27% ?	Existing VSC (%)	Relative VSC >0.8?	Proposed NSL (%)	Existing NSL (%)	Relative NSL >0.8?
62 High Street	Second	R6	W13	Pass	9.9%	9.9%	1	72.1%	72.1%	
62 High Street	Second	R7	W14	Pass	18.2%	18.2%	1	87.0%	87.0%	1
62 High Street	Second	R8	W15	Further testing required	12.2%	12.2%	1	74.5%	74.5%	1
62 High Street	Second	R9	W16	Further testing required	15.2%	15.2%	1	27.1%	27.1%	1
62 High Street	Second	R9	W17	Further testing required	14.2%	14.2%	1	27.1%	27.1%	
62 High Street	Second	R10	W18	Pass	35.6%	35.6%	1	91.2%	91.2%	1
62 High Street	Second	R10	W19	Pass	35.6%	35.6%	1	91.2%	91.2%	
62 High Street	Second	R11	W20	Pass	35.6%	35.6%	1	99.9%	99.9%	1
62 High Street	Second	R11	W21	Pass	35.5%	35.5%	1	99.9%	99.9%	
62 High Street	Second	R12	W22	Pass	35.5%	35.5%	1	99.1%	99.1%	1
62 High Street	Second	R13	W23	Pass	35.4%	35.4%	1	99.5%	99.5%	1
62 High Street	Second	R13	W24	Pass	35.4%	35.4%	1	99.5%	99.5%	
62 High Street	Second	R13	W25	Pass	35.3%	35.3%	1	99.5%	99.5%	
62 High Street	Second	R14	W26	Pass	35.3%	35.3%	1	99.5%	99.1%	1
62 High Street	Second	R15	W27	Pass	35.3%	35.3%	1	99.5%	97.6%	1
62 High Street	Second	R16	W28	Further testing required	32.8%	32.8%	1	99.5%	91.4%	1
62 High Street	Third	R1	W1	Further testing required	29.6%	31.6%	0.94	99.5%	99.7%	1
62 High Street	Third	R1	W35	Pass	15.3%	15.3%	1	99.5%	99.7%	
62 High Street	Third	R1	W36	Pass	37.0%	37.0%	1	99.5%	99.7%	
62 High Street	Third	R1	W37	Pass	36.6%	36.6%	1	99.5%	99.7%	
62 High Street	Third	R1	W38	Further testing required	34.5%	34.5%	1	99.5%	99.7%	1
62 High Street	Third	R2	W2	Further testing required	29.0%	31.3%	0.93	99.5%	94.3%	1
62 High Street	Third	R3	W3	Further testing required	18.2%	19.5%	0.93	99.5%	80.5%	1
62 High Street	Third	R4	W4	Further testing required	11.0%	13.9%	0.79	99.5%	95.9%	1
62 High Street	Third	R4	W5	Further testing required	15.4%	15.5%	0.99	99.5%	95.9%	
62 High Street	Third	R5	W6	Pass	12.5%	12.5%	1	99.5%	96.7%	0.68
62 High Street	Third	R5	W7	Further testing required	20.7%	25.2%	0.82	99.5%	96.7%	
62 High Street	Third	R5	W8	Further testing required	10.3%	15.3%	0.67	99.5%	96.7%	
62 High Street	Third	R5	W9	Further testing required	5.3%	8.5%	0.62	99.5%	96.7%	
62 High Street	Third	R5	W10	Further testing required	4.4%	5.7%	0.77	99.5%	96.7%	
62 High Street	Third	R6	W11	Further testing required	4.4%	4.8%	0.91	99.5%	12.1%	0.95

Project Name: Ringers Road Project No.: 9.604
Report Title: Daylight Assessment - with consented schemes in place Date of Analysis: 26/06/2024

Building	Floor	Room no.	Window no.	25/45 degree plane test	VSC tests			NSL tests		
					Proposed VSC 27% ?	Existing VSC (%)	Relative VSC >0.8?	Proposed NSL (%)	Existing NSL (%)	Relative NSL >0.8?
62 High Street	Third	R7	W12	Further testing required	5.3%	5.3%	1	95.8%	95.8%	1
62 High Street	Third	R7	W13	Further testing required	5.5%	5.5%	1	95.8%	95.8%	
62 High Street	Third	R7	W14	Pass	28.5%	28.5%	1	95.8%	95.8%	
62 High Street	Third	R7	W15	Pass	14.7%	14.7%	1	95.8%	95.8%	
62 High Street	Third	R8	W16	Pass	26.3%	26.3%	1	12.2%	12.2%	1
62 High Street	Third	R8	W17	Pass	21.7%	21.7%	1	12.2%	12.2%	
62 High Street	Third	R9	W18	Further testing required	18.2%	18.2%	1	94.0%	94.0%	1
62 High Street	Third	R9	W19	Further testing required	21.2%	21.2%	1	94.0%	94.0%	
62 High Street	Third	R9	W20	Further testing required	20.4%	20.4%	1	94.0%	94.0%	
62 High Street	Third	R10	W21	Pass	37.2%	37.2%	1	96.4%	96.4%	1
62 High Street	Third	R10	W22	Further testing required	14.9%	14.9%	1	96.4%	96.4%	
62 High Street	Third	R10	W23	Pass	20.2%	20.2%	1	96.4%	96.4%	
62 High Street	Third	R11	W24	Pass	29.5%	29.5%	1	99.5%	99.5%	1
62 High Street	Third	R11	W25	Pass	20.6%	20.6%	1	99.5%	99.5%	
62 High Street	Third	R12	W26	Pass	20.0%	20.0%	1	99.3%	99.3%	1
62 High Street	Third	R12	W27	Pass	29.2%	29.2%	1	99.3%	99.3%	
62 High Street	Third	R13	W28	Pass	20.6%	20.6%	1	99.8%	99.8%	1
62 High Street	Third	R13	W29	Pass	15.2%	15.2%	1	99.8%	99.8%	
62 High Street	Third	R13	W30	Pass	37.2%	37.2%	1	99.8%	99.8%	
62 High Street	Third	R13	W31	Pass	37.2%	37.2%	1	99.8%	99.8%	
62 High Street	Third	R14	W32	Pass	21.4%	21.4%	1	98.3%	98.3%	1
62 High Street	Third	R14	W33	Pass	29.2%	29.2%	1	98.3%	98.3%	
62 High Street	Third	R14	W34	Pass	21.7%	21.7%	1	98.3%	98.3%	
62 High Street	Fourth	R1	W1	Further testing required	31.6%	33.7%	0.94	99.5%	99.8%	1
62 High Street	Fourth	R1	W35	Pass	17.0%	17.0%	1	99.5%	99.8%	
62 High Street	Fourth	R1	W36	Pass	37.9%	37.9%	1	99.5%	99.8%	
62 High Street	Fourth	R1	W37	Pass	37.9%	37.9%	1	99.5%	99.8%	
62 High Street	Fourth	R1	W38	Further testing required	35.7%	35.7%	1	99.5%	99.8%	
62 High Street	Fourth	R2	W2	Further testing required	31.1%	33.5%	0.93	79.3%	79.3%	1
62 High Street	Fourth	R3	W3	Further testing required	16.0%	18.5%	0.86	97.2%	97.3%	1
62 High Street	Fourth	R3	W4	Further testing required	20.2%	20.5%	0.98	97.2%	97.3%	

Project Name: Ringers Road Project No.: 9.604
Report Title: Daylight Assessment - with consented schemes in place Date of Analysis: 26/06/2024

Building	Floor	Room no.	Window no.	25/45 degree plane test	VSC tests			NSL tests		
					Proposed VSC 27% ?	Existing VSC (%)	Relative VSC >0.8?	Proposed NSL (%)	Existing NSL (%)	Relative NSL >0.8?
62 High Street	Fourth	R4	W5	Further testing required	17.6%	18.9%	0.93	96.2%	96.8%	0.99
62 High Street	Fourth	R4	W6	Pass	11.0%	11.0%	1	96.2%	96.8%	
62 High Street	Fourth	R4	W7	Further testing required	29.3%	33.4%	0.88	96.2%	96.8%	
62 High Street	Fourth	R4	W8	Further testing required	9.9%	14.3%	0.69	96.2%	96.8%	
62 High Street	Fourth	R5	W9	Further testing required	7.5%	9.8%	0.76	49.8%	80.1%	0.62
62 High Street	Fourth	R5	W10	Further testing required	7.5%	8.7%	0.87	49.8%	80.1%	
62 High Street	Fourth	R6	W11	Further testing required	8.8%	9.3%	0.95	19.5%	19.8%	0.98
62 High Street	Fourth	R7	W12	Further testing required	13.9%	13.9%	1	97.9%	97.9%	1
62 High Street	Fourth	R7	W13	Pass	22.3%	22.3%	1	97.9%	97.9%	
62 High Street	Fourth	R7	W14	Pass	22.4%	22.4%	1	97.9%	97.9%	
62 High Street	Fourth	R8	W15	Pass	33.7%	33.7%	1	97.2%	97.2%	1
62 High Street	Fourth	R8	W16	Pass	27.7%	27.7%	1	97.2%	97.2%	
62 High Street	Fourth	R9	W17	Further testing required	26.5%	26.5%	1	99.6%	99.6%	1
62 High Street	Fourth	R9	W18	Further testing required	24.0%	24.0%	1	99.6%	99.6%	
62 High Street	Fourth	R9	W19	Pass	38.2%	38.2%	1	99.6%	99.6%	
62 High Street	Fourth	R10	W20	Pass	38.5%	38.5%	1	99.3%	99.3%	1
62 High Street	Fourth	R10	W21	Pass	38.6%	38.6%	1	99.3%	99.3%	
62 High Street	Fourth	R10	W22	Pass	36.9%	36.9%	1	99.3%	99.3%	
62 High Street	Fourth	R10	W23	Further testing required	17.0%	17.0%	1	99.3%	99.3%	
62 High Street	Fourth	R10	W24	Pass	22.5%	22.5%	1	99.3%	99.3%	
62 High Street	Fourth	R10	W25	Pass	31.5%	31.5%	1	99.3%	99.3%	
62 High Street	Fourth	R10	W26	Pass	21.1%	21.1%	1	99.3%	99.3%	
62 High Street	Fourth	R11	W27	Pass	20.4%	20.4%	1	98.6%	98.6%	1
62 High Street	Fourth	R11	W28	Pass	30.3%	30.3%	1	98.6%	98.6%	
62 High Street	Fourth	R12	W29	Pass	16.2%	16.2%	1	98.6%	98.6%	1
62 High Street	Fourth	R12	W30	Pass	38.1%	38.1%	1	98.6%	98.6%	
62 High Street	Fourth	R12	W31	Pass	38.1%	38.1%	1	98.6%	98.6%	
62 High Street	Fourth	R13	W32	Pass	22.2%	22.2%	1	95.6%	95.6%	1
62 High Street	Fourth	R13	W33	Pass	31.2%	31.2%	1	95.6%	95.6%	
62 High Street	Fourth	R13	W34	Pass	23.2%	23.2%	1	95.6%	95.6%	
62 High Street	Fifth	R1	W1	Further testing required	33.6%	35.8%	0.94	99.6%	99.6%	1

Project Name: Ringers Road Project No.: 9.604
Report Title: Daylight Assessment - with consented schemes in place Date of Analysis: 26/06/2024

Building	Floor	Room no.	Window no.	25/45 degree plane test	VSC tests			NSL tests		
					Proposed VSC 27% ?	Existing VSC (%)	Relative VSC >0.8?	Proposed NSL (%)	Existing NSL (%)	Relative NSL >0.8?
62 High Street	Fifth	R1	W28	Pass	20.5%	20.5%	1	99.6%	99.6%	1
62 High Street	Fifth	R1	W29	Pass	21.0%	21.0%	1	99.6%	99.6%	
62 High Street	Fifth	R1	W30	Pass	38.5%	38.5%	1	99.6%	99.6%	
62 High Street	Fifth	R1	W31	Further testing required	36.6%	36.7%	1	99.6%	99.6%	
62 High Street	Fifth	R2	W2	Further testing required	12.9%	15.4%	0.84	95.9%	96.0%	1
62 High Street	Fifth	R2	W3	Further testing required	16.5%	17.0%	0.97	95.9%	96.0%	
62 High Street	Fifth	R3	W4	Further testing required	32.3%	35.6%	0.91	98.1%	98.1%	1
62 High Street	Fifth	R3	W5	Further testing required	32.0%	35.7%	0.9	98.1%	98.1%	
62 High Street	Fifth	R3	W6	Further testing required	31.7%	35.7%	0.89	98.1%	98.1%	
62 High Street	Fifth	R3	W7	Further testing required	11.8%	15.9%	0.74	98.1%	98.1%	
62 High Street	Fifth	R4	W8	Further testing required	9.4%	11.4%	0.82	21.3%	44.7%	0.48
62 High Street	Fifth	R4	W9	Further testing required	9.7%	10.8%	0.89	21.3%	44.7%	
62 High Street	Fifth	R5	W10	Further testing required	12.9%	13.3%	0.97	99.5%	99.5%	1
62 High Street	Fifth	R5	W11	Further testing required	17.6%	17.7%	0.99	99.5%	99.5%	
62 High Street	Fifth	R5	W12	Further testing required	23.2%	23.2%	1	99.5%	99.5%	
62 High Street	Fifth	R5	W13	Pass	29.7%	29.7%	1	99.5%	99.5%	
62 High Street	Fifth	R5	W14	Pass	28.6%	28.6%	1	99.5%	99.5%	
62 High Street	Fifth	R6	W15	Pass	39.2%	39.2%	1	99.1%	99.1%	1
62 High Street	Fifth	R6	W16	Pass	39.2%	39.2%	1	99.1%	99.1%	
62 High Street	Fifth	R6	W17	Pass	39.2%	39.2%	1	99.1%	99.1%	
62 High Street	Fifth	R7	W18	Pass	39.2%	39.2%	1	97.0%	97.0%	1
62 High Street	Fifth	R8	W19	Pass	39.3%	39.3%	1	99.8%	99.8%	1
62 High Street	Fifth	R8	W20	Pass	39.3%	39.3%	1	99.8%	99.8%	
62 High Street	Fifth	R8	W21	Pass	38.7%	38.7%	1	99.8%	99.8%	
62 High Street	Fifth	R8	W22	Pass	38.7%	38.7%	1	99.8%	99.8%	
62 High Street	Fifth	R9	W23	Pass	38.7%	38.7%	1	96.4%	96.4%	1
62 High Street	Fifth	R10	W24	Pass	38.7%	38.7%	1	99.1%	99.1%	1
62 High Street	Fifth	R10	W25	Pass	38.6%	38.6%	1	99.1%	99.1%	
62 High Street	Fifth	R11	W26	Pass	21.8%	21.8%	1	99.7%	99.7%	1
62 High Street	Fifth	R11	W27	Pass	31.8%	31.8%	1	99.7%	99.7%	

5.7.10 Overall, for the best case for the appellant, the reported urban scenario results for 62 High Street generates a pass rate for VSC 95% and NSL 89%, this means that 8 (5%) Windows will experience a noticeable reduction in light and 7 (11%) rooms will experience a noticeable loss to direct sky visibility from their working plane (850mm above the finished floor level) area within the room. I believe that on balance the overall pass rate for 62 High Street is commensurate with those of an urban setting given the volume of rooms and windows assessed on this property.

5.7.11 Overall the results show a 11% Moderate to Substantial impact to 89% Negligible to Minor Adverse impact. I believe this is a moderate failure rate and will be an excessive and noticeable impact to those affected occupants within 62 High Street.

5.7.12 On review of those 7 rooms that fail NSL, the Proposed levels of remaining light in each range from 10.7% up to 49.8%. I would say that rooms left with more than 50% area lit, could be regarded as adequately lit in an alternative proposed urban scenario target rate. In this scenario that would see 7 rooms still failing the alternative proposed urban scenario target rate which in my opinion is still too high.

5.8 Amenity and Overshadowing

5.8.1 XCO2 have assessed nine of the neighbouring property's amenity areas for additional overshadowing as a result of the Ringers Road proposal in the existing context as shown in their Figure 24 below.

Figure 24: Overshadowing results for existing and proposed cases in amenity spaces in the existing context.

Table 39: Detailed overshadowing results for proposed development in the exisitng context

Amenity	Area (m²)	Existing lit area (m²)	Proposed lit area (m²)	Proposed lit area (%)	Pr/Ex	BRE result
A1	64.6	34.4	31.0	48%	0.90	Pass
A2	81.4	52.9	40.3	50%	0.76	Pass
A3	64.9	54.3	52.7	81%	0.97	Pass
A4	75.5	66.2	64.7	86%	0.98	Pass
A5	104.7	84.9	84.9	81%	1.00	Pass
A6	113.8	97.5	97.5	86%	1.00	Pass
A7	248.9	145.5	145.5	58%	1.00	Pass
A8	212.0	176.6	176.6	83%	1.00	Pass
A9	117.4	72.4	72.3	62%	1.00	Pass

5.8.2 XCO2 have also assessed nine of the neighbouring property's amenity areas for additional overshadowing as a result of the Ringers Road proposal in the cumulative context as shown in their Figure 24 below.

Figure 23: Overshadowing results for existing and proposed cases in amenity spaces in the cumulative context.

Table 38: Detailed overshadowing results for proposed development in the cumulative context

Amenity	Area (m²)	Existing lit area (m²)	Proposed lit area (m²)	Proposed lit area (%)	Pr/Ex	BRE result
A1	64.6	30.9	19.7	30%	0.64	Below BRE target
A2	81.4	45.0	12.2	15%	0.27	Below BRE target
A3	64.9	54.3	52.7	81%	0.97	Pass
A4	75.5	66.2	64.7	86%	0.98	Pass
A5	104.7	84.9	84.9	81%	1.00	Pass
A6	113.8	97.5	97.5	86%	1.00	Pass
A7	248.9	145.5	145.5	58%	1.00	Pass
A8	212.0	176.6	176.6	83%	1.00	Pass
A9	117.4	72.4	72.3	62%	1.00	Pass

5.8.3 The results of the existing context show that all nine neighbouring amenity areas will be left with adequate direct sunlight levels to their amenity areas. However when the results are perceived in the cumulative context scenario i.e. the inclusion of the consented 66-70 High Street. The results are less favourable for amenity areas A1 & A2 which belong to 33/34 and 35/36 Ethelbert Close respectively.

5.8.4 35/36 Ethelbert Road (A2) existing cumulative level of light is below 50% and will experience and reduction of 27% in the proposed scenario which is short of BRE criteria but considered an urban pass as less the a 30% reduction for existing compared to proposed figures. Whilst this is technically a pass looking at the contour loss zone in the amenity area, the light loss is likely to be noticeable to the occupants who enjoy the main garden space to the rear of the building.

5.8.5 33/34 Ethelbert Road (A1) existing cumulative level of light is below 50% and will experience and reduction of 64% in the proposed scenario which is short of BRE criteria. This would place this light loss in the moderate adverse impact and would be noticeable to the occupants who enjoy the garden space and therefore an impact too excessive to ignore.

6.0 XCO2 - Conclusions

6.1 EK McQuade Review

6.1.1 Below is a quote from the XCO2 Conclusions paragraphs 5.6 to 5.10

"5.6 The daylight analysis of surrounding properties has been revised based on a model with an accurate baseline and surrounding context as well as revisions to details in the proposed scheme, with the changes summarised in this rebuttal. Overall the changes were generally minor, however within Henry House, William House, Simpsons Place and Bromley Temple there were some significant increases in the level of daylight impact.

5.7 Whilst these increases were significant in some instances, the levels of retained daylight are still considered to be adequate based on a flexible and holistic view of the BRE targets and their application within a London based planning framework.

5.8 The same was true for surrounding levels of sunlight to neighbouring windows, with the greatest increase in potential sunlight impacts occurring to Bromley Temple, a non-residential property, whereby reasonable levels of sunlight can still be considered to be maintained.

5.9 The reassessment of the overshadowing impacts to neighbouring amenity spaces found two spaces to be below the BRE targets in the revised model, however an assessment of the proposed scheme without the surrounding context found them to be within the guidelines which suggests the consented scheme at 66-70 High Street plays a significant role in this impact as opposed to the proposed scheme in isolation.

5.10 Overall, I am appreciative of the comments raised in the EK McQuade proof as it is important to ensure a robust and accurate assessment is used to inform a planning decisions, however I now believe this status has been reached and the revised results demonstrate than acceptable living conditions would be maintained in the surrounding properties of the proposed scheme and within the proposed scheme itself and therefore fully support a permission be granted in this appeal".

6.1.2 XCO2 are maintaining that their assessment remains consistent with the results affirmed within their Proof of Evidence quoted in paragraphs 7.4 to 7.6 save for significant increased impacts reported for Henry House, William House, Simpsons Place and Salvation Army Church – Community Centre for daylight and 35/36 Ethelbert Close for overshadowing.

"*7.4 With regards to daylight and sunlight impacts on neighbouring properties, it is observed that the appeal scheme generally results in a high proportion of surrounding windows and rooms meeting the BRE targets*".

7.5 "*There are a number of properties with transgressions beyond the BRE targets however comparisons have been drawn against schemes of similar scale and urban context which have been appealed successfully as well as have been granted permission outright in Bromley and other London Boroughs demonstrating an inconsistency with the approach taken for the current appeal scheme*".

7.6 "*These shortfalls have been explained in detail within this proof where it was shown they can be placed in similar levels observed throughout London and beyond for which reason it would be unreasonable to consider them unacceptable with regards to this planning application and appeal*".

6.1.3 I still seriously question the validity of all the three statements above. This because of the reasons set out in my proof of evidence and XCO2's limited justification of a credible alternative target value that is typical of the typology for this site.

6.1.4 This is reiterated in light of my own Proof of Evidence 18 June 2024 submission and information and justification presented within my rebuttal of XCO2's Daylight, Sunlight and Overshadowing work. 6 neighbouring properties are experiencing light reduction impacts well beyond those that could be conceivably acceptable in an urban context.

7.0 EK McQuade - Summary and Conclusions

7.1 Summary

7.1.1 The daylight assessments for VSC and NSL have highlighted that the following properties will experience an unacceptable impact on a large percentage of their windows / rooms / amenity areas beyond those reasonable expectations of urban target setting: -

- Henry House
- William House
- Simpsons Place
- Bromley Salvation Army Church and Community Centre.
- 62 High Street
- 33-36 Ethelbert Close (Overshadowing)

7.1.2 All other properties assessed will experience a daylight VSC and NSL reduction, however those light losses will remain within an urban target rating of less than 30% reduction from the baseline level of light have been removed from the contentious bracket. The detailed results for the non-contentious bracket are shown in Appendix B.

7.1.3 Below is a summary table of the neighbouring properties that will experience a moderate to substantial impact for VSC reductions their windows.

Property	Number of Windows Tested	Windows considered to meet an Urban Pass				Windows considered to be an Urban Failure					Overall Impact Weighting
		Windows that meet BRE Guidelines		Windows that experience gains benificial impact		VSC Windows No. of Windows Experiencing Adverse Impacts					
		No.	%	No.	%	20-29.99% loss (minor adverse losses)	Urban Pass %	30-39.99% loss (moderate adverse losses)	>40% loss (substantial losses)	Urban Fail %	
Henry House	59	19	32%	0	0%	11	51%	10	19	49%	49% Moderate to Substantial 51% Negligible to Minor Adverse
William House	105	38	36%	0	0%	22	57%	23	22	43%	43% Moderate to Substantial 57% Negligible to Minor Adverse
Simpsons Place	12	0	0%	0	0%	0	0%	0	12	100%	100% Substantial
7 Ethelbert Court	11	4	36%	0	0%	4	73%	1	2	27%	27% Moderate to Substantial 73% Negligible to Minor Adverse
1 Ethelbert Court	25	24	96%	0	0%	0	96%	1	0	4%	4% Moderate to 96% Negligible
35-36 Ethelbert Close	25	14	56%	0	0%	2	64%	2	7	36%	36% Moderate to Substantial 64% Negligible to Minor Adverse
1-2 Ethelbert Close	27	16	59%	0	0%	8	89%	1	2	11%	11% Moderate to Substantial 89% Negligible to Minor Adverse
2 Ethelbert Road	13	5	38%	0	0%	0	38%	8	0	62%	62% Moderate to 38% Negligible
Salvation Army	36	15	42%	1	3%	0	42%	1	20	58%	58% Moderate to Substantial 42% Negligible to Minor Adverse
62 High Street	154	141	92%	0	0%	5	95%	6	2	5%	5% Moderate to Substantial 95% Negligible to Minor Adverse
66-70 High Street	136	92	68%	0	0%	8	74%	13	23	26%	26% Moderate to Substantial 74% Negligible to Minor Adverse
Total	**603**	**368**	**61%**	**1**	**0%**	**60**	**71%**	**66**	**109**	29%	

7.1.4 Below is a summary table of the neighbouring properties that will experience a moderate to substantial impact for NSL reductions their rooms.

Property	Number of Windows Tested	Windows considered to meet an Urban Pass				Windows considered to be an Urban Failure					Overall Impact Weighting
		Windows that meet BRE Guidelines		Windows that experience gains benificial impact		VSC Windows No. of Windows Experiencing Adverse Impacts					
		No.	%	No.	%	20-29.99% loss (minor adverse losses)	Urban Pass %	30-39.99% loss (moderate adverse losses)	>40% loss (substantial losses)	Urban Fail %	
Henry House	45	23	51%	0	0%	4	60%	5	13	40%	40% Moderate to Substantial 60% Negligible to Minor Adverse
William House	92	60	65%	0	0%	12	78%	3	17	22%	22% Moderate to Substantial 78% Negligible to Minor Adverse
Simpsons Place	12	0	0%	0	0%	0	0%	3	9	100%	100% Moderate to Substantial
Salvation Army	13	3	23%	2	15%	1	31%	2	7	69%	69% Moderate to Substantial 31% Negligible to Minor Adverse
62 High Street	66	58	88%	0	0%	1	89%	3	4	11%	11% Moderate to Substantial 89% Negligible to Minor Adverse
Total	**228**	**144**	**63%**	**2**	1%	**18**	71%	**16**	**50**	29%	

7.1.5 Overall 11 Properties will experience some form of moderate to substantial impact for VSC, 5 Properties will experience some form of moderate to substantial impact for NSL.

7.1.6 I accept that the NSL results are a more realistic way of assessing and evaluating the light losses, therefore we have concentrated on the main impact to daylight NSL effects as this will most noticeable to those occupants affected, whose internal light levels will be diminished by the proposed development.

7.1.7 For the 4 properties experiencing a moderate to substantial NSL impact, Henry House, William Houe, Simpsons Place and Salvation Army, these will remain at a moderate to substantial impact however one perceives the proposed light levels. Therefore in my opinion the impacts on these 4 properties is unacceptable in the urban context.

7.1.8 The overshadowing assessment revealed that 33-36 Ethelbert Close amenity area will experience light losses beyond an acceptable urban criteria.

7.2 Conclusions

7.2.1 Further to results summarised in section 7.1 it is clear that the proposed 2-4 Ringers Road development will cause an unacceptable impact to neighbouring amenity in terms of light loss for daylight and overshadowing to 6 properties surround the development.

7.2.2 It has been demonstrated by EK McQuade's interpretation of XCO2's results of their technical assessment, many of the occupants within the following properties will experience unacceptable levels of light loss in the urban context regardless of how one perceives the results.

- Henry House
- William House

- Simpsons Place
- Bromley Salvation Army Church and Community Centre.
- 62 High Street33-36 Ethelbert Close (Overshadowing)

7.2.3 The NSL daylight results for the 45 rooms assessed in Henry House show an overall 40% Moderate to Substantial reduction impact to 18 rooms, this compared to a 60% Negligible to Minor Adverse impact to 27 rooms. I believe this is a high failure rate and will be an unacceptable, excessive and a noticeable impact to those affected residential occupants within Henry House.

7.2.4 The NSL daylight results for the 92 rooms assessed in William House show an overall 22% Moderate to Substantial reduction impact to 20 rooms, this compared to a 78% Negligible to Minor Adverse impact to 72 rooms. William House has a larger volume of windows and rooms (92) facing in the direction of the development site compared to Henry House 45, However there are 20 localised impacts which is higher than reported for Henry House in total. Therefore, I believe this is a high failure rate and will be an unacceptable, excessive and a noticeable impact to those affected residential occupants within William House.

7.2.5 The NSL daylight results for the 12 rooms assessed in Simpson Place show an overall 100% Moderate to Substantial reduction impact to all 12 rooms. I believe this is a very high failure rate and will be an unacceptable, excessive and a noticeable impact to those affected residential occupants within Simpsons Place.

7.2.6 The NSL daylight results for the 11 rooms assessed in the Salvation Army Church – Community Centre show an overall 69% Moderate to Substantial reduction impact to 9 rooms this compared to a 31% Negligible to Minor Adverse impact to 4 rooms. This could be a failure rating of up to 10 rooms if the XCO2 modelling errors for the ground floor Main Hall room identified in section 5.5 are amended. I believe this is a high failure rate and will be an unacceptable, excessive and noticeable impact to those affected community occupants within Salvation Army Church – Community Centre.

7.2.7 The overshadowing results for the amenity area (A2) assessed in 33/36 Ethelbert Close show an overall 64% Moderate reduction impact to the garden area. I believe this is a high failure rate and will be an unacceptable, excessive and a noticeable impact to those affected residential occupants using the garden of 33/36 Ethelbert Close.

7.2.8 Overall, It should be regarded that the rooms which have been demonstrated to be moderately and substantially affected are homes to 5 of the 6 impacted properties. In many instances these properties enjoy light into rooms that only have a single aspect towards the development site. This is the only source of light to the affected windows and such drastic losses could have a detrimental effect on the occupants' mental health and the human body's circadian rhythm, due to the lack of natural daylight as a result of the reductions caused by the proposed development.

8.0 Appendix

8.1 Appendix A

8.1.1 Proposed Block A & B, Building Separation Distance - Hollaway Architects Drawings

8.2 Appendix B

8.2.1 Daylight Impact on Non-Contentious Neighbouring Properties

8.3 Appendix C

8.3.1 XCO2 Proof, 2.0 Background Information and 3.0 Main Issues, EK McQuade Review and Response to matters

8.1 Appendix A

Proposed Block A & B, Building Separation Distance - Hollaway Architects Drawings

ELBERT ROAD

Block B

Block A

- Building to Building Separations
- Boundary Separations
- Site Boundary

0 1 2 3 4 5M

Hollaway

London | 10a Acton Street | London | WC1X 9NG
T +44 (0) 20 7096 5425 | E london@hollawaystudio.co.uk | W www.hollawaystudio.co.uk

Kent | The Tramway Stables | Rampart Road | Hythe | Kent | CT21 5BG
T +44 (0)1303 260 515 | E kent@hollawaystudio.co.uk | W www.hollawaystudio.co.uk

Project | Ringers Road
Bromley

Client | The Substantia Group

Title | Proposed Site Plan - Building and Boundary Separation Distances

Status | PLANNING

Scale@A1 | 1:100 **Date** | 12.10.20 **Drawn** | GG **Chk'd** | LC

Project Number 18.085
Drawing Number 100.10
Revision -
Bim Number

ELBERT ROAD

sv
tic
tp
rs
lp
yew 0.25x8
sycamore 0.25x12
sycamore 0.4x12
sycamore 0.35x12
sycamore 0.55x14
12685
11768
11182
12424
14905
13434
14295
B.05-09.01
B.05-09.02
B.05-09.03
B.05-09.04
B.05-09.05
A.0.V 1.5kWh
Block B
A.02-03.01
A.02-03.02 (M4(3))
A.02-03.03 (M4(3))
Block A

0 1 2 3 4 5M

Site Boundary

Hollaway

London | 10a Acton Street | London | WC1X 9NG
T +44 (0) 20 7096 5425 | E london@hollawaystudio.co.uk | W www.hollawaystudio.co.uk

Kent | The Tramway Stables | Rampart Road | Hythe | Kent | CT21 5BG
T +44 (0)1303 260 515 | E kent@hollawaystudio.co.uk | W www.hollawaystudio.co.uk

Project	Ringers Road Bromley
Client	The Substantia Group
Title	Proposed Site Plan - Window Separation Distances
Status	PLANNING

Scale@A1	1:100	Date	12.10.20	Drawn	GG	Chk'd	LC

Project Number	Drawing Number	Revision
18.085	100.11	-

Birn Number

8.2 Appendix B

Daylight and Sunlight Impact on Non-Contentious Neighbouring Properties

8.4 Ringers Court

8.4.1 I have reviewed the XCO2 Ringers Court 3D model and I am satisfied that it is accurate as possible and note that assumed room layouts were used in this assessment for NSL.

8.4.2 In terms of the VSC assessment we are satisfied that the results reported by XCO2 in the rebuttal are true and reflective of the likely impact to Ringers Court windows.

8.4.3 The VSC reported pass rates by XCO2 are summarised in the table below

Property	Number of Windows Tested	Windows that meet BRE Guidelines		Windows that experience gains beyond the consented baseline		VSC Windows No. of Windows Experiencing Adverse Impacts		
		No.	%	No.	%	20-29.99% loss (minor adverse losses)	30-39.99% loss (moderate adverse losses)	>40% loss (substantial losses)
Ringers Court	12	4	33%	0	0	8	0	0
Total	**12**	**4**	**33%**	**0**	**0%**	**8**	**0**	**0**

8.4.4 The results show that 8 (66%) windows do not meet BRE Criteria, this equates to 0 (0%) of all windows assessed not meeting an Urban Pass for reductions of less than 30%, meaning all windows will meet an urban criteria.

8.4.5 The NSL reported pass rates by XCO2 are summarised in the table below

Property	Number of Rooms Tested	Rooms that meet BRE Guidelines		Rooms that experience gains beyond the consented baseline		DD Rooms No. of Rooms Experiencing Adverse Impacts		
		No.	%	No.	%	20-29.99% loss (minor adverse losses)	30-39.99% loss (moderate adverse losses)	>40% loss (substantial losses)
Ringers Court	12	12	100%	0	0	0	0	0
Total	**12**	**12**	**100%**	**0**	**0%**	**0**	**0**	**0**

8.4.6 The results show that all rooms meet NSL BRE Criteria.

8.4.7 I have highlighted on the XCO2 results spreadsheet the Ringers Court windows and rooms that will experience a substantial loss in with red cells, moderate impacts in amber cells and negligible / urban pass in lime green and sub urban pass rates in dark green shown below.

Project Name: Ringers Road Project No.: 9.604
Report Title: Daylight Assessment - with consented schemes in place Date of Analysis: 26/06/2024

Building	Floor	Room no.	Window no.	25/45 degree plane test	VSC tests: Proposed VSC 27% ?	Existing VSC (%)	Relative VSC >0.8?	NSL tests: Proposed NSL (%)	Existing NSL (%)	Relative NSL >0.8?
Simpsons Place	Third	R3	W3	Further testing required	19.5%	37.3%	0.52	54.5%	92.7%	0.59
Ringers Court	Ground	R1	W1	Further testing required	21.4%	26.4%	0.81	85.0%	96.4%	0.88
Ringers Court	Ground	R2	W2	Further testing required	23.9%	31.3%	0.76	95.3%	97.5%	0.98
Ringers Court	Ground	R3	W3	Further testing required	25.7%	32.5%	0.79	97.2%	97.3%	1
Ringers Court	Ground	R4	W4	Further testing required	26.6%	32.7%	0.81	96.0%	99.0%	0.97
Ringers Court	First	R1	W1	Further testing required	23.7%	29.9%	0.79	86.9%	97.1%	0.89
Ringers Court	First	R2	W2	Further testing required	26.1%	34.6%	0.75	96.6%	97.7%	0.99
Ringers Court	First	R3	W3	Further testing required	28.0%	35.5%	0.79	97.2%	97.4%	1
Ringers Court	First	R4	W4	Further testing required	29.3%	35.9%	0.82	96.8%	99.1%	0.98
Ringers Court	Second	R1	W1	Further testing required	25.5%	35.6%	0.72	89.4%	98.5%	0.91
Ringers Court	Second	R2	W2	Further testing required	27.3%	36.7%	0.74	96.5%	97.7%	0.99
Ringers Court	Second	R3	W3	Further testing required	29.1%	37.1%	0.79	97.2%	97.4%	1
Ringers Court	Second	R4	W4	Further testing required	30.4%	37.4%	0.81	97.2%	99.1%	0.98

8.4.8 It is clear from the table above that all of the windows and rooms within Ringers Court will remain adequately lit for both daylight VSC and NSL. Therefore at this point I am happy to discount this property from contention going forward.

8.5 Harestone Court

8.5.1 I have reviewed the XCO2 Harestone Court 3D model and I am satisfied that it is accurate as possible and note that assumed room layouts were used in this assessment for NSL.

8.5.2 In terms of the VSC assessment we are satisfied that the results reported by XCO2 in the rebuttal are true and reflective of the likely impact to Harestone Court windows.

8.5.3 The VSC reported pass rates by XCO2 are summarised in the table below

Property	Number of Windows Tested	Windows that meet BRE Guidelines		Windows that experience gains beyond the consented baseline		VSC Windows No. of Windows Experiencing Adverse Impacts		
		No.	%	No.	%	20-29.99% loss (minor adverse losses)	30-39.99% loss (moderate adverse losses)	>40% loss (substantial losses)
Harestone Court	6	6	100%	0	0	0	0	0
Total	**6**	**6**	**100%**	**0**	**0%**	**0**	**0**	**0**

8.5.4 The results show that all windows meet VSC BRE Criteria.

8.5.5 The NSL reported pass rates by XCO2 are summarised in the table below

Property	Number of Rooms Tested	Rooms that meet BRE Guidelines		Rooms that experience gains beyond the consented baseline		DD Rooms No. of Rooms Experiencing Adverse Impacts		
		No.	%	No.	%	20-29.99% loss (minor adverse losses)	30-39.99% loss (moderate adverse losses)	>40% loss (substantial losses)
Harestone Court	6	6	100%	0	0	0	0	0
Total	**6**	**6**	**100%**	**0**	**0%**	**0**	**0**	**0**

8.5.6 The results show that all rooms meet NSL BRE Criteria.

8.5.7 I have highlighted on the XCO2 results spreadsheet the Harestone Court windows and rooms that will experience a substantial loss in with red cells, moderate impacts in amber cells and negligible / urban pass in lime green and sub urban pass rates in dark green shown below.

Project Name: Ringers Road Project No.: 9.604
Report Title: Daylight Assessment - with consented schemes in place Date of Analysis: 26/06/2024

Building	Floor	Room no.	Window no.	25/45 degree plane test	VSC tests			NSL tests		
					Proposed VSC 27% ?	Existing VSC (%)	Relative VSC >0.8?	Proposed NSL (%)	Existing NSL (%)	Relative NSL >0.8?
Simpsons Place	Third	R3	W3	Further testing required	19.5%	37.3%	0.52	54.5%	92.7%	0.59
Ringers Court	Ground	R1	W1	Further testing required	21.4%	26.4%	0.81	85.0%	96.4%	0.88
Ringers Court	Ground	R2	W2	Further testing required	23.9%	31.3%	0.76	95.3%	97.5%	0.98
Ringers Court	Ground	R3	W3	Further testing required	25.7%	32.5%	0.79	97.2%	97.3%	1
Ringers Court	Ground	R4	W4	Further testing required	26.6%	32.7%	0.81	96.0%	99.0%	0.97
Ringers Court	First	R1	W1	Further testing required	23.7%	29.9%	0.79	86.9%	97.1%	0.89
Ringers Court	First	R2	W2	Further testing required	26.1%	34.6%	0.75	96.6%	97.7%	0.99
Ringers Court	First	R3	W3	Further testing required	28.0%	35.5%	0.79	97.2%	97.4%	1
Ringers Court	First	R4	W4	Further testing required	29.3%	35.9%	0.82	96.8%	99.1%	0.98
Ringers Court	Second	R1	W1	Further testing required	25.5%	35.6%	0.72	89.4%	98.5%	0.91
Ringers Court	Second	R2	W2	Further testing required	27.3%	36.7%	0.74	96.5%	97.7%	0.99
Ringers Court	Second	R3	W3	Further testing required	29.1%	37.1%	0.79	97.2%	97.4%	1
Ringers Court	Second	R4	W4	Further testing required	30.4%	37.4%	0.81	97.2%	99.1%	0.98
Harestone Court	Ground	R1	W1	Further testing required	26.9%	29.1%	0.92	97.5%	97.6%	1
Harestone Court	Ground	R2	W2	Further testing required	28.2%	30.6%	0.92	96.4%	97.9%	0.98
Harestone Court	First	R1	W1	Further testing required	29.9%	33.3%	0.9	97.6%	97.7%	1
Harestone Court	First	R2	W2	Further testing required	30.9%	33.9%	0.91	96.5%	97.8%	0.99
Harestone Court	Second	R1	W1	Further testing required	31.5%	35.0%	0.9	97.2%	97.3%	1
Harestone Court	Second	R2	W2	Further testing required	32.5%	35.5%	0.92	97.5%	97.9%	1

8.5.8 It is clear from the table above that all of the windows and rooms within Harestone Court will remain adequately lit for both daylight VSC and NSL. Therefore at this point I am happy to discount this property from contention going forward.

8.6 7 Ethelbert Court

8.6.1 Quote from XCO2 Proof 6.5.30. "*Notwithstanding all the above, it should also be noted that during a site visit it was observed this property was in a deep state of disrepair with very evident signs of neglect (overgrown shrubs, broken windows, excessive litter etc). Therefore it is expected that significant impacts to existing residents should be considered unlikely*".

8.6.2 However the future use and amenity needs to be considered. The fact the property is in a dilapidated state does not discount it or provide special measures from the assessment.

8.6.3 I have reviewed the XCO2 7 Ethelbert Court 3D model and I am satisfied that it is accurate as possible and note that assumed room layouts were used in this assessment for NSL.

8.6.4 In terms of the VSC assessment we are satisfied that the results reported by XCO2 in the rebuttal are true and reflective of the likely impact to 7 Ethelbert Court windows.

8.6.5 The VSC reported pass rates by XCO2 are summarised in the table below

Property	Number of Windows Tested	Windows that meet BRE Guidelines		Windows that experience gains beyond the consented baseline		VSC Windows No. of Windows Experiencing Adverse Impacts		
		No.	%	No.	%	20-29.99% loss (minor adverse losses)	30-39.99% loss (moderate adverse losses)	>40% loss (substantial losses)
7 Ethelbert Court	11	4	36%	0	0	4	1	2
Total	**11**	**4**	**36%**	**0**	**0%**	**4**	**1**	**2**

8.6.6 The results show that 7 (64%) windows do not meet BRE Criteria, this equates to 3 (27%) of all windows assessed not meeting an Urban Pass for reductions of less than 30%, meaning

that the occupants of the 3 windows assessed will experience a noticeable difference to the VSC figures.

8.6.7 The NSL reported pass rates by XCO2 are summarised in the table below

Property	Number of Rooms Tested	Rooms that meet BRE Guidelines		Rooms that experience gains beyond the consented baseline		DD Rooms No. of Rooms Experiencing Adverse Impacts		
		No.	%	No.	%	20-29.99% loss (minor adverse losses)	30-39.99% loss (moderate adverse losses)	>40% loss (substantial losses)
7 Ethelbert Court	11	11	100%	0	0	0	0	0
Total	**11**	**11**	**100%**	**0**	**0%**	**0**	**0**	**0**

8.6.8 The results show that all rooms meet NSL BRE Criteria.

8.6.9 I have highlighted on the XCO2 results spreadsheet the 7 Ethelbert Court windows and rooms that will experience a substantial loss in with red cells, moderate impacts in amber cells and negligible / urban pass in lime green and sub urban pass rates in dark green shown below.

Project Name: Ringers Road Project No.: 9.604
Report Title: Daylight Assessment - with consented schemes in place Date of Analysis: 26/06/2024

Building	Floor	Room no.	Window no.	25/45 degree plane test	VSC tests			NSL tests		
					Proposed VSC 27% ?	Existing VSC (%)	Relative VSC >0.8?	Proposed NSL (%)	Existing NSL (%)	Relative NSL >0.8?
Simpsons Place	Third	R3	W3	Further testing required	19.5%	37.3%	0.52	54.5%	92.7%	0.59
Ringers Court	Ground	R1	W1	Further testing required	21.4%	26.4%	0.81	85.0%	96.4%	0.88
Ringers Court	Ground	R2	W2	Further testing required	23.9%	31.3%	0.76	95.3%	97.5%	0.98
Ringers Court	Ground	R3	W3	Further testing required	25.7%	32.5%	0.79	97.2%	97.3%	1
Ringers Court	Ground	R4	W4	Further testing required	26.6%	32.7%	0.81	96.0%	99.0%	0.97
Ringers Court	First	R1	W1	Further testing required	23.7%	29.9%	0.79	86.9%	97.1%	0.89
Ringers Court	First	R2	W2	Further testing required	26.1%	34.6%	0.75	96.6%	97.7%	0.99
Ringers Court	First	R3	W3	Further testing required	28.0%	35.5%	0.79	97.2%	97.4%	1
Ringers Court	First	R4	W4	Further testing required	29.3%	35.9%	0.82	96.8%	99.1%	0.98
Ringers Court	Second	R1	W1	Further testing required	25.5%	35.6%	0.72	89.4%	98.5%	0.91
Ringers Court	Second	R2	W2	Further testing required	27.3%	36.7%	0.74	96.5%	97.7%	0.99
Ringers Court	Second	R3	W3	Further testing required	29.1%	37.1%	0.79	97.2%	97.4%	1
Ringers Court	Second	R4	W4	Further testing required	30.4%	37.4%	0.81	97.2%	99.1%	0.98
Harestone Court	Ground	R1	W1	Further testing required	26.9%	29.1%	0.92	97.5%	97.6%	1
Harestone Court	Ground	R2	W2	Further testing required	28.2%	30.6%	0.92	96.4%	97.9%	0.98
Harestone Court	First	R1	W1	Further testing required	29.9%	33.3%	0.9	97.6%	97.7%	1
Harestone Court	First	R2	W2	Further testing required	30.9%	33.9%	0.91	96.5%	97.8%	0.99
Harestone Court	Second	R1	W1	Further testing required	31.5%	35.0%	0.9	97.2%	97.3%	1
Harestone Court	Second	R2	W2	Further testing required	32.5%	35.5%	0.92	97.5%	97.9%	1
7 Ethelbert Court	Ground	R1	W1	Pass	31.6%	31.6%	1	100.0%	100.0%	1
7 Ethelbert Court	Ground	R1	W2	Further testing required	32.4%	32.6%	0.99	100.0%	100.0%	1
7 Ethelbert Court	Ground	R1	W3	Further testing required	24.1%	27.9%	0.86	100.0%	100.0%	1
7 Ethelbert Court	Ground	R1	W4	Further testing required	9.4%	22.2%	0.42	100.0%	100.0%	1
7 Ethelbert Court	Ground	R1	W5	Further testing required	1.7%	13.8%	0.13	100.0%	100.0%	1
7 Ethelbert Court	Ground	R2	W6	Further testing required	19.0%	25.8%	0.74	86.1%	97.1%	0.89
7 Ethelbert Court	First	R1	W1	Further testing required	26.3%	32.2%	0.82	94.1%	98.7%	0.95
7 Ethelbert Court	First	R2	W2	Further testing required	23.4%	30.9%	0.76	98.6%	99.9%	0.99
7 Ethelbert Court	Second	R1	W1	Further testing required	51.6%	73.6%	0.7	87.8%	90.5%	0.97
7 Ethelbert Court	Second	R1	W2	Further testing required	23.4%	30.8%	0.76	87.8%	90.5%	0.97
7 Ethelbert Court	Second	R1	W3	Further testing required	44.9%	70.1%	0.64	87.8%	90.5%	0.97

8.6.10 It is clear from the table above that while some of the windows will experience an adverse impact for VSC, the rooms within 7 Ethelbert Court will remain adequately lit for daylight NSL. Despite notional room layouts being used in this property the contours show the rooms fully lit and are generous in size that they cover a worst case scenario. Therefore, at this point I am happy to discount this property from contention going forward.

8.7 1 Ethelbert Court

8.7.1 I have reviewed the XCO2 1 Ethelbert Court 3D model and I am satisfied that it is accurate as possible and note that floor plans from the planning portal were used in this assessment for NSL.

8.7.2 In terms of the VSC assessment we are satisfied that the results reported by XCO2 in the rebuttal are true and reflective of the likely impact to 1 Ethelbert Court windows.

8.7.3 The VSC reported pass rates by XCO2 are summarised in the table below

Property	Number of Windows Tested	Windows that meet BRE Guidelines		Windows that experience gains beyond the consented baseline		VSC Windows No. of Windows Experiencing Adverse Impacts		
		No.	%	No.	%	20-29.99% loss (minor adverse losses)	30-39.99% loss (moderate adverse losses)	>40% loss (substantial losses)
1 Ethelbert Court	25	24	96%	0	0	0	1	0
Total	**25**	**24**	**96%**	**0**	**0%**	**0**	**1**	**0**

8.7.4 The results show that 1 (4%) windows do not meet BRE Criteria, this equates to 1 (4%) of all windows assessed not meeting an Urban Pass for reductions of less than 30%, meaning that the occupant of the 1 window assessed will experience a noticeable difference to the VSC figures.

8.7.5 The NSL reported pass rates by XCO2 are summarised in the table below

Property	Number of Rooms Tested	Rooms that meet BRE Guidelines		Rooms that experience gains beyond the consented baseline		DD Rooms No. of Rooms Experiencing Adverse Impacts		
		No.	%	No.	%	20-29.99% loss (minor adverse losses)	30-39.99% loss (moderate adverse losses)	>40% loss (substantial losses)
1 Ethelbert Court	18	18	100%	0	0	0	0	0
Total	**18**	**18**	**100%**	**0**	**0%**	**0**	**0**	**0**

8.7.6 The results show that all rooms meet NSL BRE Criteria.

8.7.7 I have highlighted on the XCO2 results spreadsheet the 1 Ethelbert Court windows and rooms that will experience a substantial loss in with red cells, moderate impacts in amber cells and negligible / urban pass in lime green and sub urban pass rates in dark green shown below.

1 Ethelbert Court	Ground	R1	W1	Further testing required	29.3%	30.3%	0.97	93.0%	95.2%	0.98

Project Name: Ringers Road Project No.: 9.604
Report Title: Daylight Assessment - with consented schemes in place Date of Analysis: 26/06/2024

Building	Floor	Room no.	Window no.	25/45 degree plane test	VSC tests			NSL tests		
					Proposed VSC 27% ?	Existing VSC (%)	Relative VSC >0.8?	Proposed NSL (%)	Existing NSL (%)	Relative NSL >0.8?
1 Ethelbert Court	Ground	R2	W2	Further testing required	20.5%	21.0%	0.97	99.2%	99.3%	1
1 Ethelbert Court	Ground	R2	W3	Further testing required	17.5%	18.1%	0.97	99.2%	99.3%	
1 Ethelbert Court	Ground	R2	W4	Further testing required	17.0%	17.6%	0.97	99.2%	99.3%	
1 Ethelbert Court	Ground	R3	W5	Further testing required	16.6%	17.2%	0.96	98.4%	98.5%	1
1 Ethelbert Court	Ground	R3	W6	Further testing required	16.3%	17.2%	0.95	98.4%	98.5%	
1 Ethelbert Court	Ground	R3	W7	Further testing required	17.7%	19.7%	0.9	98.4%	98.5%	
1 Ethelbert Court	Ground	R4	W8	Further testing required	26.8%	27.9%	0.96	95.5%	96.1%	0.99
1 Ethelbert Court	First	R1	W1	Further testing required	31.9%	33.6%	0.95	97.3%	98.3%	0.99
1 Ethelbert Court	First	R2	W2	Further testing required	31.7%	33.5%	0.95	99.2%	99.2%	1
1 Ethelbert Court	First	R2	W3	Further testing required	31.3%	33.2%	0.94	99.2%	99.2%	
1 Ethelbert Court	First	R2	W4	Further testing required	31.3%	33.3%	0.94	99.2%	99.2%	
1 Ethelbert Court	First	R3	W5	Further testing required	30.8%	33.0%	0.93	99.1%	99.1%	1
1 Ethelbert Court	First	R3	W6	Further testing required	30.4%	32.7%	0.93	99.1%	99.1%	
1 Ethelbert Court	First	R3	W7	Further testing required	30.3%	32.7%	0.93	99.1%	99.1%	
1 Ethelbert Court	First	R4	W8	Further testing required	29.8%	32.4%	0.92	98.1%	98.4%	1
1 Ethelbert Court	First	R5	W9	Further testing required	17.6%	25.5%	0.69	98.8%	99.1%	1
1 Ethelbert Court	First	R5	W10	Further testing required	35.0%	35.2%	1	98.8%	99.1%	
1 Ethelbert Court	First	R5	W11	Further testing required	24.3%	27.1%	0.89	98.8%	99.1%	
1 Ethelbert Court	First	R5	W12	Pass	36.4%	36.5%	1	98.8%	99.1%	
1 Ethelbert Court	First	R5	W13	Further testing required	27.3%	27.3%	1	98.8%	99.1%	
1 Ethelbert Court	Second	R1	W1	Further testing required	33.1%	34.9%	0.95	99.8%	99.9%	1
1 Ethelbert Court	Second	R1	W2	Further testing required	32.6%	34.6%	0.94	99.8%	99.9%	
1 Ethelbert Court	Second	R2	W3	Further testing required	32.1%	34.4%	0.93	99.8%	99.9%	1
1 Ethelbert Court	Second	R2	W4	Further testing required	31.5%	34.2%	0.92	99.8%	99.9%	

8.7.8 It is clear from the table above that while one of the windows will experience an adverse impact for VSC, the rooms within 1 Ethelbert Court will remain adequately lit for daylight NSL. Therefore, at this point I am happy to discount this property from contention going forward.

8.8 35-36 Ethelbert Close

8.8.1 I have reviewed the XCO2 35-36 Ethelbert Close 3D model and I am satisfied that it is accurate as possible and note that assumed room layouts were used in this assessment for NSL.

8.8.2 In terms of the VSC assessment we are satisfied that the results reported by XCO2 in the rebuttal are true and reflective of the likely impact to 35-36 Ethelbert Close windows.

8.8.3 The VSC reported pass rates by XCO2 are summarised in the table below

Property	Number of Windows Tested	Windows that meet BRE Guidelines		Windows that experience gains beyond the consented baseline		VSC Windows No. of Windows Experiencing Adverse Impacts		
		No.	%	No.	%	20-29.99% loss (minor adverse losses)	30-39.99% loss (moderate adverse losses)	>40% loss (substantial losses)
35-36 Ethelbert Close	25	14	56%	0	0	2	2	7
Total	**25**	**14**	**56%**	**0**	**0%**	**2**	**2**	**7**

8.8.4 The results show that 11 (44%) windows do not meet BRE Criteria, this equates to 9 (36%) of all windows assessed not meeting an Urban Pass for reductions of less than 30%, meaning that the occupants for 9 of the windows assessed will experience a noticeable difference to the VSC figures.

8.8.5 The NSL reported pass rates by XCO2 are summarised in the table below

Property	Number of Rooms Tested	Rooms that meet BRE Guidelines		Rooms that experience gains beyond the consented baseline		DD Rooms No. of Rooms Experiencing Adverse Impacts		
		No.	%	No.	%	20-29.99% loss (minor adverse losses)	30-39.99% loss (moderate adverse losses)	>40% loss (substantial losses)
35-36 Ethelbert Close	8	8	100%	0	0	0	0	0
Total	**8**	**8**	**100%**	**0**	**0%**	**0**	**0**	**0**

8.8.6 The results show that all rooms meet NSL BRE Criteria.

8.8.7 I have highlighted on the XCO2 results spreadsheet the 35-36 Ethelbert Close windows and rooms that will experience a substantial loss in with red cells, moderate impacts in amber cells and negligible / urban pass in lime green and sub urban pass rates in dark green shown below.

35-36 Ethelbert Close	Ground	R1	W1	Further testing required	16.2%	27.8%	0.58	83.8%	87.3%	0.96
35-36 Ethelbert Close	Ground	R1	W2	Pass	16.2%	27.4%	0.59	83.8%	87.3%	
35-36 Ethelbert Close	Ground	R2	W3	Further testing required	16.8%	16.8%	1	99.2%	99.6%	1
35-36 Ethelbert Close	Ground	R2	W4	Further testing required	32.4%	32.4%	1	99.2%	99.6%	
35-36 Ethelbert Close	Ground	R2	W5	Further testing required	32.5%	34.7%	0.93	99.2%	99.6%	
35-36 Ethelbert Close	Ground	R2	W6	Further testing required	26.4%	32.1%	0.82	99.2%	99.6%	
35-36 Ethelbert Close	Ground	R2	W7	Pass	9.1%	14.0%	0.65	99.2%	99.6%	

Project Name: Ringers Road Project No.: 9.604
Report Title: Daylight Assessment - with consented schemes in place Date of Analysis: 26/06/2024

XCO2

Building	Floor	Room no.	Window no.	25/45 degree plane test	VSC tests			NSL tests		
					Proposed VSC 27% ?	Existing VSC (%)	Relative VSC >0.8?	Proposed NSL (%)	Existing NSL (%)	Relative NSL >0.8?
35-36 Ethelbert Close	Ground	R3	W8	Further testing required	13.3%	13.3%	1	96.6%	99.5%	0.97
35-36 Ethelbert Close	Ground	R3	W9	Further testing required	31.4%	31.6%	1	96.6%	99.5%	
35-36 Ethelbert Close	Ground	R3	W10	Further testing required	32.0%	35.2%	0.91	96.6%	99.5%	
35-36 Ethelbert Close	Ground	R3	W11	Further testing required	25.6%	34.2%	0.75	96.6%	99.5%	
35-36 Ethelbert Close	Ground	R3	W12	Further testing required	8.4%	18.6%	0.45	96.6%	99.5%	
35-36 Ethelbert Close	First	R1	W1	Further testing required	16.4%	29.1%	0.56	92.8%	92.8%	1
35-36 Ethelbert Close	First	R1	W2	Further testing required	15.8%	28.0%	0.57	92.8%	92.8%	
35-36 Ethelbert Close	First	R1	W3	Further testing required	15.8%	27.6%	0.57	92.8%	92.8%	
35-36 Ethelbert Close	First	R2	W4	Pass	34.0%	34.8%	0.98	94.4%	95.1%	0.99
35-36 Ethelbert Close	First	R3	W5	Further testing required	16.6%	16.6%	1	99.3%	99.6%	1
35-36 Ethelbert Close	First	R3	W6	Further testing required	30.7%	30.7%	1	99.3%	99.6%	
35-36 Ethelbert Close	First	R3	W7	Further testing required	31.9%	33.8%	0.94	99.3%	99.6%	
35-36 Ethelbert Close	First	R3	W8	Further testing required	23.6%	29.0%	0.81	99.3%	99.6%	
35-36 Ethelbert Close	First	R3	W9	Pass	7.7%	12.6%	0.61	99.3%	99.6%	
35-36 Ethelbert Close	First	R4	W10	Further testing required	12.2%	12.2%	1	96.9%	99.6%	0.97
35-36 Ethelbert Close	First	R4	W11	Further testing required	30.2%	30.3%	1	96.9%	99.6%	
35-36 Ethelbert Close	First	R4	W12	Further testing required	32.9%	36.0%	0.92	96.9%	99.6%	
35-36 Ethelbert Close	First	R4	W13	Further testing required	24.3%	32.5%	0.75	96.9%	99.6%	
35-36 Ethelbert Close	First	R4	W14	Further testing required	6.0%	16.3%	0.37	96.9%	99.6%	
35-36 Ethelbert Close	First	R5	W15	Pass	31.2%	35.4%	0.88	94.3%	97.0%	0.97

8.8.8 It is clear from the table above that while 9 of the windows will experience an adverse impact for VSC, the rooms within 35-36 Ethelbert Close will remain adequately lit for daylight NSL. Therefore, at this point I am happy to discount this property from contention going forward from a daylight perspective.

8.9 1-2 Ethelbert Close

8.9.1 I have reviewed the XCO2 1-2 Ethelbert Close 3D model and I am satisfied that it is accurate as possible and note that assumed room layouts were used in this assessment for NSL.

8.9.2 In terms of the VSC assessment we are satisfied that the results reported by XCO2 in the rebuttal are true and reflective of the likely impact to 1-2 Ethelbert Close windows.

8.9.3 The VSC reported pass rates by XCO2 are summarised in the table below

Property	Number of Windows Tested	Windows that meet BRE Guidelines		Windows that experience gains beyond the consented baseline		VSC Windows No. of Windows Experiencing Adverse Impacts		
		No.	%	No.	%	20-29.99% loss (minor adverse losses)	30-39.99% loss (moderate adverse losses)	>40% loss (substantial losses)
1-2 Ethelbert Close	27	16	59%	0	0	8	1	2
Total	**27**	**16**	**59%**	**0**	**0%**	**8**	**1**	**2**

8.9.4 The results show that 11 (41%) windows do not meet BRE Criteria, this equates to 3 (11%) of all windows assessed not meeting an Urban Pass for reductions of less than 30%, meaning that the occupants of the 3 windows assessed will experience a noticeable difference to the VSC figures.

8.9.5 The NSL reported pass rates by XCO2 are summarised in the table below

Property	Number of Rooms Tested	Rooms that meet BRE Guidelines		Rooms that experience gains beyond the consented baseline		DD Rooms No. of Rooms Experiencing Adverse Impacts		
		No.	%	No.	%	20-29.99% loss (minor adverse losses)	30-39.99% loss (moderate adverse losses)	>40% loss (substantial losses)
1-2 Ethelbert Close	8	7	88%	0	0	1	0	0
Total	**8**	**7**	**88%**	**0**	**0%**	**1**	**0**	**0**

8.9.6 The results show that 1 (12%) rooms do not meet BRE Criteria, this equates to 0 (0%) of all rooms assessed not meeting an Urban Pass for reductions of less than 30%, meaning that the NSL results are compliant in the urban scenario.

8.9.7 I have highlighted on the XCO2 results spreadsheet the 1-2 Ethelbert Close windows and rooms that will experience a substantial loss in with red cells, moderate impacts in amber cells and negligible / urban pass in lime green and sub urban pass rates in dark green shown below.

1-2 Ethelbert Close	Ground	R1	W1	Further testing required	17.1%	17.1%	1	98.9%	99.0%	1
1-2 Ethelbert Close	Ground	R1	W2	Further testing required	28.6%	28.8%	0.99	98.9%	99.0%	
1-2 Ethelbert Close	Ground	R1	W3	Further testing required	25.9%	28.3%	0.91	98.9%	99.0%	
1-2 Ethelbert Close	Ground	R1	W4	Further testing required	20.5%	25.3%	0.81	98.9%	99.0%	
1-2 Ethelbert Close	Ground	R1	W5	Pass	5.2%	8.7%	0.6	98.9%	99.0%	
1-2 Ethelbert Close	Ground	R2	W6	Further testing required	12.1%	12.1%	1	98.6%	99.6%	0.99
1-2 Ethelbert Close	Ground	R2	W7	Further testing required	27.3%	27.6%	0.99	98.6%	99.6%	
1-2 Ethelbert Close	Ground	R2	W8	Further testing required	25.1%	28.5%	0.88	98.6%	99.6%	
1-2 Ethelbert Close	Ground	R2	W9	Further testing required	19.7%	27.7%	0.71	98.6%	99.6%	
1-2 Ethelbert Close	Ground	R2	W10	Further testing required	7.3%	16.8%	0.43	98.6%	99.6%	
1-2 Ethelbert Close	Ground	R3	W11	Further testing required	24.9%	33.4%	0.75	65.7%	82.7%	0.79

Project Name: Ringers Road Project No.: 9.604
Report Title: Daylight Assessment - with consented schemes in place Date of Analysis: 26/06/2024

XCO2

Building	Floor	Room no.	Window no.	25/45 degree plane test	VSC tests			NSL tests		
					Proposed VSC 27% ?	Existing VSC (%)	Relative VSC >0.8?	Proposed NSL (%)	Existing NSL (%)	Relative NSL >0.8?
1-2 Ethelbert Close	Ground	R3	W12	Further testing required	25.2%	33.1%	0.76			
1-2 Ethelbert Close	First	R1	W1	Pass	28.0%	29.1%	0.96	96.3%	97.0%	0.99
1-2 Ethelbert Close	First	R2	W2	Further testing required	21.1%	21.1%	1	99.8%	99.8%	1
1-2 Ethelbert Close	First	R2	W3	Further testing required	29.7%	29.9%	0.99	99.8%	99.8%	
1-2 Ethelbert Close	First	R2	W4	Further testing required	28.2%	30.6%	0.92	99.8%	99.8%	
1-2 Ethelbert Close	First	R2	W5	Further testing required	21.1%	25.6%	0.82	99.8%	99.8%	
1-2 Ethelbert Close	First	R2	W6	Pass	9.6%	12.7%	0.76	99.8%	99.8%	
1-2 Ethelbert Close	First	R3	W7	Further testing required	16.7%	16.7%	1	98.7%	99.7%	0.99
1-2 Ethelbert Close	First	R3	W8	Further testing required	27.6%	27.8%	0.99	98.7%	99.7%	
1-2 Ethelbert Close	First	R3	W9	Further testing required	27.2%	30.5%	0.89	98.7%	99.7%	
1-2 Ethelbert Close	First	R3	W10	Further testing required	18.9%	27.1%	0.7	98.7%	99.7%	
1-2 Ethelbert Close	First	R3	W11	Further testing required	9.9%	19.6%	0.51	98.7%	99.7%	
1-2 Ethelbert Close	First	R4	W12	Further testing required	24.2%	28.5%	0.85	95.8%	97.2%	0.99
1-2 Ethelbert Close	First	R5	W13	Further testing required	24.2%	33.3%	0.73	76.4%	89.7%	0.85
1-2 Ethelbert Close	First	R5	W14	Further testing required	24.7%	33.0%	0.75	76.4%	89.7%	
1-2 Ethelbert Close	First	R5	W15	Further testing required	22.2%	29.9%	0.74	76.4%	89.7%	

8.9.8 It is clear from the table above that while 3 of the windows will experience an adverse impact for VSC, the rooms within 1-2 Ethelbert Close will remain adequately lit for daylight NSL. Therefore, at this point I am happy to discount this property from contention going forward.

8.10 13 Ethelbert Road

8.10.1 I have reviewed the XCO2 13 Ethelbert Road 3D model and I am satisfied that it is accurate as possible and note that assumed room layouts were used in this assessment for NSL.

8.10.2 In terms of the VSC assessment we are satisfied that the results reported by XCO2 in the rebuttal are true and reflective of the likely impact to 13 Ethelbert Road windows.

8.10.3 The VSC reported pass rates by XCO2 are summarised in the table below

Property	Number of Windows Tested	Windows that meet BRE Guidelines		Windows that experience gains beyond the consented baseline		VSC Windows No. of Windows Experiencing Adverse Impacts		
		No.	%	No.	%	20-29.99% loss (minor adverse losses)	30-39.99% loss (moderate adverse losses)	>40% loss (substantial losses)
13 Ethelbert Road	16	16	100%	0	0	0	0	0
Total	**16**	**16**	**100%**	**0**	**0%**	**0**	**0**	**0**

8.10.4 The results show that all windows meet VSC BRE Criteria.

8.10.5 The NSL reported pass rates by XCO2 are summarised in the table below

Property	Number of Rooms Tested	Rooms that meet BRE Guidelines		Rooms that experience gains beyond the consented baseline		DD Rooms No. of Rooms Experiencing Adverse Impacts		
		No.	%	No.	%	20-29.99% loss (minor adverse losses)	30-39.99% loss (moderate adverse losses)	>40% loss (substantial losses)
13 Ethelbert Road	7	6	86%	0	0	1	0	0
Total	**7**	**6**	**86%**	**0**	**0%**	**1**	**0**	**0**

8.10.6 The results show that 1 (14%) room does not meet BRE criteria, this equates to 0 (0%) of all rooms assessed not meeting an Urban Pass for reductions of less than 30%, meaning that the NSL results are compliant in the urban scenario.

8.10.7 I have highlighted on the XCO2 results spreadsheet the 13 Ethelbert Road windows and rooms that will experience a substantial loss in with red cells, moderate impacts in amber cells and negligible / urban pass in lime green and sub urban pass rates in dark green shown below.

13 Ethelbert Road	Ground	R1	W1	Further testing required	15.1%	15.1%	1	61.2%	77.3%	0.79
13 Ethelbert Road	Ground	R1	W2	Further testing required	19.7%	22.3%	0.88	61.2%	77.3%	
13 Ethelbert Road	Ground	R2	W3	Further testing required	32.9%	33.7%	0.98	98.1%	98.6%	0.99
13 Ethelbert Road	Ground	R3	W4	Further testing required	25.2%	25.2%	1	99.8%	99.8%	1
13 Ethelbert Road	Ground	R3	W5	Further testing required	30.6%	30.6%	1	99.8%	99.8%	
13 Ethelbert Road	Ground	R3	W6	Pass	32.4%	32.4%	1	99.8%	99.8%	
13 Ethelbert Road	Ground	R3	W7	Pass	36.6%	36.6%	1	99.8%	99.8%	
13 Ethelbert Road	Ground	R3	W8	Pass	37.0%	37.0%	1	99.8%	99.8%	
13 Ethelbert Road	First	R1	W1	Further testing required	16.9%	16.9%	1	98.1%	98.1%	1
13 Ethelbert Road	First	R1	W2	Further testing required	37.6%	37.6%	1	98.1%	98.1%	
13 Ethelbert Road	First	R1	W3	Further testing required	27.0%	28.9%	0.93	98.1%	98.1%	
13 Ethelbert Road	First	R2	W4	Further testing required	34.6%	35.3%	0.98	98.7%	98.7%	1
13 Ethelbert Road	First	R3	W5	Further testing required	31.8%	31.8%	1	98.1%	98.4%	1
13 Ethelbert Road	First	R3	W6	Pass	33.1%	33.2%	1	98.1%	98.4%	
13 Ethelbert Road	First	R3	W7	Further testing required	37.7%	37.7%	1	98.1%	98.4%	

Project Name: Ringers Road Project No.: 9.604
Report Title: Daylight Assessment - with consented schemes in place Date of Analysis: 26/06/2024

Building	Floor	Room no.	Window no.	25/45 degree plane test	VSC tests			NSL tests		
					Proposed VSC 27% ?	Existing VSC (%)	Relative VSC >0.8?	Proposed NSL (%)	Existing NSL (%)	Relative NSL >0.8?
13 Ethelbert Road	Second	R1	W1	Further testing required	35.1%	35.4%	0.99	89.1%	89.2%	1

8.10.8 It is clear from the table above that all of the windows and rooms in 13 Ethelbert Road will remain adequately lit for both daylight VSC and NSL. Therefore at this point I am happy to discount this property from contention going forward.

8.11 11 Ethelbert Road

8.11.1 I have reviewed the XCO2 11 Ethelbert Road 3D model and I am satisfied that it is accurate as possible and note that assumed room layouts were used in this assessment for NSL.

8.11.2 In terms of the VSC assessment we are satisfied that the results reported by XCO2 in the rebuttal are true and reflective of the likely impact to 11 Ethelbert Road windows.

8.11.3 The VSC reported pass rates by XCO2 are summarised in the table below

Property	Number of Windows Tested	Windows that meet BRE Guidelines		Windows that experience gains beyond the consented baseline		VSC Windows No. of Windows Experiencing Adverse Impacts		
		No.	%	No.	%	20-29.99% loss (minor adverse losses)	30-39.99% loss (moderate adverse losses)	>40% loss (substantial losses)
11 Ethelbert Road	3	3	100%	0	0	0	0	0
Total	**3**	**3**	**100%**	**0**	**0%**	**0**	**0**	**0**

8.11.4 The results show that all windows meet VSC BRE criteria.

8.11.5 The NSL reported pass rates by XCO2 are summarised in the table below

Property	Number of Rooms Tested	Rooms that meet BRE Guidelines		Rooms that experience gains beyond the consented baseline		DD Rooms No. of Rooms Experiencing Adverse Impacts		
		No.	%	No.	%	20-29.99% loss (minor adverse losses)	30-39.99% loss (moderate adverse losses)	>40% loss (substantial losses)
11 Ethelbert Road	3	3	100%	0	0	0	0	0
Total	**3**	**3**	**100%**	**0**	**0%**	**0**	**0**	**0**

8.11.6 The results show that all rooms meet NSL BRE criteria.

8.11.7I have highlighted on the XCO2 results spreadsheet the 11 Ethelbert Road windows and rooms that will experience a substantial loss in with red cells, moderate impacts in amber

cells and negligible / urban pass in lime green and sub urban pass rates in dark green shown below.

Project Name: Ringers Road Project No.: 9.604
Report Title: Daylight Assessment - with consented schemes in place Date of Analysis: 26/06/2024

Building	Floor	Room no.	Window no.	25/45 degree plane test	VSC tests: Proposed VSC 27% ?	VSC tests: Existing VSC (%)	VSC tests: Relative VSC >0.8?	NSL tests: Proposed NSL (%)	NSL tests: Existing NSL (%)	NSL tests: Relative NSL >0.8?
13 Ethelbert Road	Second	R1	W1	Further testing required	35.1%	35.4%	0.99	89.1%	89.2%	1
11 Ethelbert Road	Ground	R1	W1	Further testing required	23.5%	23.5%	1	95.1%	95.1%	1
11 Ethelbert Road	First	R1	W1	Further testing required	32.3%	33.2%	0.97	96.6%	96.6%	1
11 Ethelbert Road	Second	R1	W1	Further testing required	33.1%	34.4%	0.96	97.9%	98.0%	1

8.11.8 It is clear from the table above that all of the windows and rooms within 11 Ethelbert Road will remain adequately lit for both daylight VSC and NSL. Therefore at this point I am happy to discount this property from contention going forward.

8.12 2 Ethelbert Road (Bromley Town Church)

8.12.1 I have reviewed the XCO2 2 Ethelbert Road 3D model and I am satisfied that it is accurate as possible and note that assumed room layouts were used in this assessment for NSL. I believe the notional room layout adopted by XCO2 is not reflective of the internal layout from external site inspection looking into the windows.

8.12.2 In terms of the VSC assessment we are satisfied that the results reported by XCO2 in the rebuttal are true and reflective of the likely impact to 2 Ethelbert Road windows.

8.12.3 The VSC reported pass rates by XCO2 are summarised in the table below

Property	Number of Windows Tested	Windows that meet BRE Guidelines		Windows that experience gains beyond the consented baseline		VSC Windows No. of Windows Experiencing Adverse Impacts		
		No.	%	No.	%	20-29.99% loss (minor adverse losses)	30-39.99% loss (moderate adverse losses)	>40% loss (substantial losses)
2 Ethelbert Road	13	5	38%	0	0	0	8	0
Total	**13**	**5**	**38%**	**0**	**0%**	**0**	**8**	**0**

8.12.4 The results show that 8 (62%) windows do not meet BRE Criteria, this equates to 8 (62%) of all windows assessed not meeting an Urban Pass for reductions of less than 30%, meaning that the occupants of the 8 windows assessed will experience a noticeable difference to the VSC figures.

8.12.5 The NSL reported pass rates by XCO2 are summarised in the table below

Property	Number of Rooms Tested	Rooms that meet BRE Guidelines		Rooms that experience gains beyond the consented baseline		DD Rooms No. of Rooms Experiencing Adverse Impacts		
		No.	%	No.	%	20-29.99% loss (minor adverse losses)	30-39.99% loss (moderate adverse losses)	>40% loss (substantial losses)
2 Ethelbert Road	2	2	100%	0	0	0	0	0
Total	**2**	**2**	**100%**	**0**	**0%**	**0**	**0**	**0**

8.12.6 The results show that all rooms meet VSC BRE criteria.

8.12.7 I have highlighted on the XCO2 results spreadsheet the 2 Ethelbert Road windows and rooms that will experience a substantial loss in with red cells, moderate impacts in amber cells and negligible / urban pass in lime green and sub urban pass rates in dark green shown below.

Project Name: Ringers Road Project No.: 9.604
Report Title: Daylight Assessment - with consented schemes in place Date of Analysis: 26/06/2024

Building	Floor	Room no.	Window no.	25/45 degree plane test	VSC tests: Proposed VSC 27% ?	Existing VSC (%)	Relative VSC >0.8?	NSL tests: Proposed NSL (%)	Existing NSL (%)	Relative NSL >0.8?
13 Ethelbert Road	Second	R1	W1	Further testing required	35.1%	35.4%	0.99	89.1%	89.2%	1
11 Ethelbert Road	Ground	R1	W1	Further testing required	23.5%	23.5%	1	95.1%	95.1%	1
11 Ethelbert Road	First	R1	W1	Further testing required	32.3%	33.2%	0.97	96.6%	96.6%	1
11 Ethelbert Road	Second	R1	W1	Further testing required	33.1%	34.4%	0.96	97.9%	98.0%	1
2 Ethelbert Road	Ground	R1	W1	Pass	26.0%	32.0%	0.81	99.3%	99.3%	1
2 Ethelbert Road	Ground	R1	W2	Further testing required	24.8%	24.8%	1	99.3%	99.3%	
2 Ethelbert Road	Ground	R1	W3	Further testing required	13.2%	19.9%	0.66	99.3%	99.3%	
2 Ethelbert Road	Ground	R1	W4	Further testing required	11.1%	13.8%	0.8	99.3%	99.3%	
2 Ethelbert Road	Ground	R1	W5	Further testing required	12.8%	21.0%	0.61	99.3%	99.3%	
2 Ethelbert Road	Ground	R1	W6	Further testing required	15.0%	23.6%	0.63	99.3%	99.3%	
2 Ethelbert Road	First	R1	W1	Pass	30.7%	36.8%	0.83	99.9%	99.9%	1
2 Ethelbert Road	First	R1	W2	Further testing required	28.8%	28.8%	1	99.9%	99.9%	
2 Ethelbert Road	First	R1	W3	Further testing required	15.3%	22.3%	0.68	99.9%	99.9%	
2 Ethelbert Road	First	R1	W4	Further testing required	15.9%	23.4%	0.68	99.9%	99.9%	
2 Ethelbert Road	First	R1	W5	Further testing required	16.4%	24.4%	0.67	99.9%	99.9%	
2 Ethelbert Road	First	R1	W6	Further testing required	16.7%	25.2%	0.66	99.9%	99.9%	
2 Ethelbert Road	First	R1	W7	Further testing required	17.0%	26.1%	0.65	99.9%	99.9%	

8.12.8 It is clear from the table above that while 8 of the windows will experience an adverse impact for VSC, the rooms within 2 Ethelbert Road are being reported by XCO2 as adequately lit for daylight NSL. However, I disagree with this statement as I believe the rooms are deeper and more likely to be 3 cellular rooms on the front elevation with the reception entrance located in the middle part of the elevation on the ground floor. I appreciate that if the model was updated, the results are likely to remain favourable and on this basis I am to discount this property from contention going forward.

8.13 72-76 High Street

8.13.1 I have reviewed the XCO2 72-76 High Street 3D model and I am satisfied that it is accurate as possible and note that assumed room layouts were used in this assessment for NSL.

8.13.2 In terms of the VSC assessment we are satisfied that the results reported by XCO2 in the rebuttal are true and reflective of the likely impact to 72-76 High Street windows.

8.13.3 The VSC reported pass rates by XCO2 are summarised in the table below

Property	Number of Windows Tested	Windows that meet BRE Guidelines		Windows that experience gains beyond the consented baseline		VSC Windows No. of Windows Experiencing Adverse Impacts		
		No.	%	No.	%	20-29.99% loss (minor adverse losses)	30-39.99% loss (moderate adverse losses)	>40% loss (substantial losses)
72-76 High Street	12	12	100%	0	0	0	0	0
Total	**12**	**12**	**100%**	**0**	**0%**	**0**	**0**	**0**

8.13.4 The results show that all windows meet VSC BRE criteria..

8.13.5 The NSL reported pass rates by XCO2 are summarised in the table below

Property	Number of Rooms Tested	Rooms that meet BRE Guidelines		Rooms that experience gains beyond the consented baseline		DD Rooms No. of Rooms Experiencing Adverse Impacts		
		No.	%	No.	%	20-29.99% loss (minor adverse losses)	30-39.99% loss (moderate adverse losses)	>40% loss (substantial losses)
72-76 High Street	12	12	100%	0	0	0	0	0
Total	**12**	**12**	**100%**	**0**	**0%**	**0**	**0**	**0**

8.13.6 The results show that all rooms meet NSL BRE criteria.

8.13.7I have highlighted on the XCO2 results spreadsheet the 72-76 High Street windows and rooms that will experience a substantial loss in with red cells, moderate impacts in amber cells and negligible / urban pass in lime green and sub urban pass rates in dark green shown below.

Project Name: Ringers Road Project No.: 9.604
Report Title: Daylight Assessment - with consented schemes in place Date of Analysis: 26/06/2024

Building	Floor	Room no.	Window no.	25/45 degree plane test	VSC tests			NSL tests		
					Proposed VSC 27% ?	Existing VSC (%)	Relative VSC >0.8?	Proposed NSL (%)	Existing NSL (%)	Relative NSL >0.8?
13 Ethelbert Road	Second	R1	W1	Further testing required	35.1%	35.4%	0.99	89.1%	89.2%	1
11 Ethelbert Road	Ground	R1	W1	Further testing required	23.5%	23.5%	1	95.1%	95.1%	1
11 Ethelbert Road	First	R1	W1	Further testing required	32.3%	33.2%	0.97	96.6%	96.6%	1
11 Ethelbert Road	Second	R1	W1	Further testing required	33.1%	34.4%	0.96	97.9%	98.0%	1

8.13.8 It is clear from the table above that all of the windows and rooms within 72-76 High Street will remain adequately lit for both daylight VSC and NSL. Therefore at this point I am happy to discount this property from contention going forward.

8.14 66-70 HIGH STREET (19/04588/FULL1) As Proposed Consented

8.14.1 I have reviewed the XCO2 66-70 High Street 3D model and I am satisfied that it reflects the internal layout drawings. There are some minor errors identified with floating balustrades above balconies on four levels of the XCO2 3D model. However, it is unlikely that this will have any material effect on the results reported.

8.14.2 In terms of the VSC assessment we are satisfied that the results reported by XCO2 in the rebuttal are true and reflective of the likely impact to 66-70 High Street windows.

8.14.3 The VSC reported pass rates by XCO2 are summarised in the table below

Property	Number of Windows Tested	Windows that meet BRE Guidelines		Windows that experience gains beyond the consented baseline		VSC Windows No. of Windows Experiencing Adverse Impacts		
		No.	%	No.	%	20-29.99% loss (minor adverse losses)	30-39.99% loss (moderate adverse losses)	>40% loss (substantial losses)
66-70 High Street	136	92	68%	0	0	8	13	23
Total	**136**	**92**	**68%**	**0**	**0%**	**8**	**13**	**23**

8.14.4 The results show that 44 (32%) windows do not meet BRE Criteria, this equates to 36 (26%) of all windows assessed not meeting an Urban Pass for reductions of less than 30%, meaning that the occupants of the 36 windows assessed will experience a noticeable difference to the VSC figures.

8.14.5 In terms of the 3D modelling for the NSL assessment, XCO2 have tested 66-70 High Street exactly as the consented layout drawings.

8.14.6 In terms of the NSL assessment we are satisfied that the results reported by XCO2 in the rebuttal are true and reflective of the likely impact to 66-70 High Street rooms.

8.14.7 The NSL reported pass rates by XCO2 are summarised in the table below

Property	Number of Rooms Tested	Rooms that meet BRE Guidelines		Rooms that experience gains beyond the consented baseline		DD Rooms No. of Rooms Experiencing Adverse Impacts		
		No.	%	No.	%	20-29.99% loss (minor adverse losses)	30-39.99% loss (moderate adverse losses)	>40% loss (substantial losses)
66-70 High Street	54	54	100%	0	0	0	0	0
Total	**54**	**54**	**100%**	**0**	**0%**	**0**	**0**	**0**

8.14.8 The results show that all rooms meet BRE criteria.

8.14.9 I have highlighted on the XCO2 results spreadsheet the 66-70 High Street windows and rooms that will experience a substantial loss in with red cells, moderate impacts in amber cells and negligible / urban pass in lime green and sub urban pass rates in dark green shown overleaf.

66-70 High Street	First	R1	W1	Further testing required	5.5%	13.3%	0.42	83.5%	95.8%	0.87

Project Name: Ringers Road Project No.: 9.604
Report Title: Daylight Assessment - with consented schemes in place Date of Analysis: 26/06/2024

Building	Floor	Room no.	Window no.	25/45 degree plane test	VSC tests			NSL tests		
					Proposed VSC 27% ?	Existing VSC (%)	Relative VSC >0.8?	Proposed NSL (%)	Existing NSL (%)	Relative NSL >0.8?
66-70 High Street	First	R1	W2	Further testing required	9.6%	17.9%	0.54	83.5%	95.8%	0.87
66-70 High Street	First	R2	W3	Further testing required	18.0%	29.4%	0.61	84.5%	96.7%	0.87
66-70 High Street	First	R3	W4	Further testing required	18.1%	30.5%	0.59	81.1%	91.5%	0.89
66-70 High Street	First	R4	W5	Further testing required	10.3%	21.7%	0.47	99.2%	99.2%	1
66-70 High Street	First	R4	W6	Further testing required	11.5%	21.8%	0.53	99.2%	99.2%	
66-70 High Street	First	R4	W7	Further testing required	36.5%	36.6%	1	99.2%	99.2%	
66-70 High Street	First	R4	W8	Further testing required	36.4%	36.4%	1	99.2%	99.2%	
66-70 High Street	Second	R1	W1	Further testing required	6.1%	14.8%	0.42	83.6%	95.8%	0.87
66-70 High Street	Second	R1	W2	Further testing required	10.2%	19.6%	0.52	83.6%	95.8%	
66-70 High Street	Second	R2	W3	Further testing required	19.7%	32.0%	0.62	85.1%	97.0%	0.88
66-70 High Street	Second	R3	W4	Further testing required	19.7%	33.1%	0.6	82.1%	94.9%	0.87
66-70 High Street	Second	R4	W5	Further testing required	11.2%	24.0%	0.47	99.2%	99.2%	1
66-70 High Street	Second	R4	W6	Further testing required	12.0%	23.7%	0.51	99.2%	99.2%	
66-70 High Street	Second	R4	W7	Further testing required	38.4%	38.4%	1	99.2%	99.2%	
66-70 High Street	Second	R4	W8	Further testing required	38.3%	38.3%	1	99.2%	99.2%	
66-70 High Street	Third	R1	W1	Further testing required	6.6%	15.7%	0.42	84.3%	96.1%	0.88
66-70 High Street	Third	R1	W2	Further testing required	10.4%	20.6%	0.51	84.3%	96.1%	
66-70 High Street	Third	R2	W3	Further testing required	20.8%	33.2%	0.63	85.4%	97.0%	0.88
66-70 High Street	Third	R3	W4	Further testing required	21.1%	34.5%	0.61	84.1%	97.3%	0.86
66-70 High Street	Third	R4	W5	Further testing required	12.0%	25.0%	0.48	99.3%	99.6%	1
66-70 High Street	Third	R4	W6	Further testing required	12.3%	24.4%	0.51	99.3%	99.6%	
66-70 High Street	Third	R4	W7	Further testing required	39.0%	39.1%	1	99.3%	99.6%	
66-70 High Street	Third	R4	W8	Further testing required	39.0%	39.0%	1	99.3%	99.6%	
66-70 High Street	Fourth	R1	W1	Pass	22.0%	22.0%	1	99.5%	99.6%	1
66-70 High Street	Fourth	R1	W2	Further testing required	18.4%	19.0%	0.97	99.5%	99.6%	
66-70 High Street	Fourth	R1	W3	Pass	23.8%	23.8%	1	99.5%	99.6%	
66-70 High Street	Fourth	R1	W4	Further testing required	17.2%	17.8%	0.97	99.5%	99.6%	
66-70 High Street	Fourth	R2	W5	Further testing required	13.1%	13.7%	0.96	96.3%	99.0%	0.97
66-70 High Street	Fourth	R2	W6	Further testing required	11.6%	12.1%	0.96	96.3%	99.0%	
66-70 High Street	Fourth	R2	W7	Further testing required	9.5%	21.4%	0.44	96.3%	99.0%	
66-70 High Street	Fourth	R2	W8	Further testing required	11.7%	23.9%	0.49	96.3%	99.0%	

Project Name: Ringers Road Project No.: 9.604
Report Title: Daylight Assessment - with consented schemes in place Date of Analysis: 26/06/2024

Building	Floor	Room no.	Window no.	25/45 degree plane test	VSC tests			NSL tests		
					Proposed VSC 27% ?	Existing VSC (%)	Relative VSC >0.8?	Proposed NSL (%)	Existing NSL (%)	Relative NSL >0.8?
66-70 High Street	Fourth	R3	W9	Further testing required	22.2%	35.1%	0.63	90.5%	96.9%	0.93
66-70 High Street	Fourth	R4	W10	Further testing required	22.7%	35.7%	0.64	86.3%	97.9%	0.88
66-70 High Street	Fourth	R5	W11	Further testing required	13.4%	25.8%	0.52	98.9%	99.4%	1
66-70 High Street	Fourth	R5	W12	Further testing required	13.4%	25.0%	0.54	98.9%	99.4%	
66-70 High Street	Fourth	R5	W13	Further testing required	39.3%	39.4%	1	98.9%	99.4%	
66-70 High Street	Fourth	R5	W14	Further testing required	39.3%	39.3%	1	98.9%	99.4%	
66-70 High Street	Fifth	R1	W1	Pass	24.7%	24.7%	1	99.6%	99.6%	1
66-70 High Street	Fifth	R1	W2	Further testing required	36.5%	38.4%	0.95	99.6%	99.6%	
66-70 High Street	Fifth	R1	W3	Pass	25.5%	25.5%	1	99.6%	99.6%	
66-70 High Street	Fifth	R1	W4	Further testing required	36.0%	38.3%	0.94	99.6%	99.6%	
66-70 High Street	Fifth	R2	W5	Further testing required	34.2%	38.2%	0.89	99.0%	99.2%	1
66-70 High Street	Fifth	R2	W6	Further testing required	33.3%	38.2%	0.87	99.0%	99.2%	
66-70 High Street	Fifth	R2	W7	Further testing required	11.7%	25.1%	0.47	99.0%	99.2%	
66-70 High Street	Fifth	R2	W8	Further testing required	13.1%	26.0%	0.5	99.0%	99.2%	
66-70 High Street	Fifth	R3	W9	Further testing required	23.8%	36.1%	0.66	90.8%	96.9%	0.94
66-70 High Street	Fifth	R4	W10	Further testing required	24.4%	36.2%	0.67	87.5%	98.0%	0.89
66-70 High Street	Fifth	R5	W11	Further testing required	15.0%	26.1%	0.58	98.9%	99.4%	1
66-70 High Street	Fifth	R5	W12	Further testing required	14.8%	25.3%	0.59	98.9%	99.4%	
66-70 High Street	Fifth	R5	W13	Further testing required	39.5%	39.5%	1	98.9%	99.4%	
66-70 High Street	Fifth	R5	W14	Further testing required	39.5%	39.5%	1	98.9%	99.4%	
66-70 High Street	Sixth	R1	W1	Pass	25.0%	25.0%	1	99.6%	99.6%	1
66-70 High Street	Sixth	R1	W2	Further testing required	37.2%	38.9%	0.96	99.6%	99.6%	
66-70 High Street	Sixth	R1	W3	Pass	25.8%	25.8%	1	99.6%	99.6%	
66-70 High Street	Sixth	R1	W4	Further testing required	36.9%	38.9%	0.95	99.6%	99.6%	
66-70 High Street	Sixth	R2	W5	Further testing required	35.3%	38.8%	0.91	99.1%	99.2%	1
66-70 High Street	Sixth	R2	W6	Further testing required	34.5%	38.8%	0.89	99.1%	99.2%	
66-70 High Street	Sixth	R2	W7	Further testing required	13.8%	25.3%	0.55	99.1%	99.2%	
66-70 High Street	Sixth	R2	W8	Further testing required	15.0%	26.1%	0.57	99.1%	99.2%	
66-70 High Street	Sixth	R3	W9	Further testing required	25.7%	36.3%	0.71	91.8%	96.9%	0.95
66-70 High Street	Sixth	R4	W10	Further testing required	26.3%	36.3%	0.73	88.3%	98.0%	0.9
66-70 High Street	Sixth	R5	W11	Further testing required	16.9%	26.2%	0.64	99.3%	99.4%	1

Project Name: Ringers Road Project No.: 9.604
Report Title: Daylight Assessment - with consented schemes in place Date of Analysis: 26/06/2024

Building	Floor	Room no.	Window no.	25/45 degree plane test	VSC tests			NSL tests		
					Proposed VSC 27% ?	Existing VSC (%)	Relative VSC >0.8?	Proposed NSL (%)	Existing NSL (%)	Relative NSL >0.8?
66-70 High Street	Sixth	R5	W12	Further testing required	16.5%	25.4%	0.65	99.3%	99.4%	
66-70 High Street	Sixth	R5	W13	Further testing required	39.6%	39.6%	1	99.3%	99.4%	
66-70 High Street	Sixth	R5	W14	Further testing required	39.6%	39.6%	1	99.3%	99.4%	
66-70 High Street	Seventh	R1	W1	Pass	25.1%	25.1%	1	99.6%	99.6%	1
66-70 High Street	Seventh	R1	W2	Further testing required	37.8%	39.2%	0.97	99.6%	99.6%	
66-70 High Street	Seventh	R1	W3	Pass	26.0%	26.0%	1	99.6%	99.6%	
66-70 High Street	Seventh	R1	W4	Further testing required	37.5%	39.2%	0.96	99.6%	99.6%	
66-70 High Street	Seventh	R2	W5	Further testing required	36.3%	39.2%	0.93	99.1%	99.2%	1
66-70 High Street	Seventh	R2	W6	Further testing required	35.6%	39.2%	0.91	99.1%	99.2%	
66-70 High Street	Seventh	R2	W7	Further testing required	15.7%	24.1%	0.65	99.1%	99.2%	
66-70 High Street	Seventh	R2	W8	Further testing required	16.6%	24.8%	0.67	99.1%	99.2%	
66-70 High Street	Seventh	R3	W9	Further testing required	27.8%	36.2%	0.77	95.5%	96.9%	0.99
66-70 High Street	Seventh	R4	W10	Further testing required	28.3%	36.2%	0.78	92.1%	97.9%	0.94
66-70 High Street	Seventh	R5	W11	Further testing required	18.3%	24.8%	0.74	99.3%	99.4%	1
66-70 High Street	Seventh	R5	W12	Further testing required	17.7%	24.2%	0.73	99.3%	99.4%	
66-70 High Street	Seventh	R5	W13	Further testing required	39.6%	39.6%	1	99.3%	99.4%	
66-70 High Street	Seventh	R5	W14	Further testing required	39.6%	39.6%	1	99.3%	99.4%	
66-70 High Street	Eighth	R1	W1	Pass	25.2%	25.2%	1	99.6%	99.6%	1
66-70 High Street	Eighth	R1	W2	Further testing required	38.4%	39.4%	0.97	99.6%	99.6%	
66-70 High Street	Eighth	R1	W3	Pass	26.1%	26.1%	1	99.6%	99.6%	
66-70 High Street	Eighth	R1	W4	Further testing required	38.1%	39.4%	0.97	99.6%	99.6%	
66-70 High Street	Eighth	R2	W5	Further testing required	37.2%	39.4%	0.94	99.1%	99.2%	1
66-70 High Street	Eighth	R2	W6	Further testing required	36.7%	39.4%	0.93	99.1%	99.2%	
66-70 High Street	Eighth	R2	W7	Further testing required	18.1%	24.1%	0.75	99.1%	99.2%	
66-70 High Street	Eighth	R2	W8	Further testing required	19.0%	24.8%	0.76	99.1%	99.2%	
66-70 High Street	Eighth	R3	W9	Further testing required	30.2%	36.3%	0.83	96.9%	96.9%	1
66-70 High Street	Eighth	R4	W10	Further testing required	30.5%	36.3%	0.84	94.8%	97.9%	0.97
66-70 High Street	Eighth	R5	W11	Further testing required	20.3%	24.9%	0.82	99.3%	99.4%	1
66-70 High Street	Eighth	R5	W12	Further testing required	19.7%	24.2%	0.81	99.3%	99.4%	
66-70 High Street	Eighth	R5	W13	Further testing required	39.6%	39.6%	1	99.3%	99.4%	
66-70 High Street	Eighth	R5	W14	Further testing required	39.6%	39.6%	1	99.3%	99.4%	

Project Name: Ringers Road Project No.: 9.604
Report Title: Daylight Assessment - with consented schemes in place Date of Analysis: 26/06/2024

Building	Floor	Room no.	Window no.	25/45 degree plane test	VSC tests			NSL tests		
					Proposed VSC 27% ?	Existing VSC (%)	Relative VSC >0.8?	Proposed NSL (%)	Existing NSL (%)	Relative NSL >0.8?
66-70 High Street	Ninth	R1	W1	Pass	25.3%	25.3%	1	99.6%	99.6%	1
66-70 High Street	Ninth	R1	W2	Further testing required	38.8%	39.5%	0.98	99.6%	99.6%	
66-70 High Street	Ninth	R1	W3	Pass	26.2%	26.2%	1	99.6%	99.6%	
66-70 High Street	Ninth	R1	W4	Further testing required	38.7%	39.5%	0.98	99.6%	99.6%	
66-70 High Street	Ninth	R2	W5	Further testing required	38.0%	39.6%	0.96	99.2%	99.2%	1
66-70 High Street	Ninth	R2	W6	Further testing required	37.7%	39.6%	0.95	99.2%	99.2%	
66-70 High Street	Ninth	R2	W7	Pass	20.4%	24.2%	0.84	99.2%	99.2%	
66-70 High Street	Ninth	R2	W8	Pass	21.3%	24.9%	0.85	99.2%	99.2%	
66-70 High Street	Ninth	R3	W9	Pass	32.6%	36.6%	0.89	96.9%	96.9%	1
66-70 High Street	Ninth	R4	W10	Pass	32.8%	36.6%	0.9	97.9%	97.9%	1
66-70 High Street	Ninth	R5	W11	Pass	22.3%	24.9%	0.9	99.4%	99.4%	1
66-70 High Street	Ninth	R5	W12	Pass	21.6%	24.2%	0.89	99.4%	99.4%	
66-70 High Street	Ninth	R5	W13	Further testing required	39.6%	39.6%	1	99.4%	99.4%	
66-70 High Street	Ninth	R5	W14	Further testing required	39.6%	39.6%	1	99.4%	99.4%	
66-70 High Street	Tenth	R1	W1	Pass	25.4%	25.4%	1	99.6%	99.6%	1
66-70 High Street	Tenth	R1	W2	Further testing required	39.1%	39.6%	0.99	99.6%	99.6%	
66-70 High Street	Tenth	R1	W3	Pass	26.3%	26.3%	1	99.6%	99.6%	
66-70 High Street	Tenth	R1	W4	Further testing required	39.1%	39.6%	0.99	99.6%	99.6%	
66-70 High Street	Tenth	R2	W5	Further testing required	38.7%	39.6%	0.98	99.2%	99.2%	1
66-70 High Street	Tenth	R2	W6	Further testing required	38.5%	39.6%	0.97	99.2%	99.2%	
66-70 High Street	Tenth	R2	W7	Pass	22.3%	24.2%	0.92	99.2%	99.2%	
66-70 High Street	Tenth	R2	W8	Pass	23.2%	25.0%	0.93	99.2%	99.2%	
66-70 High Street	Tenth	R3	W9	Pass	35.5%	37.4%	0.95	96.9%	96.9%	1
66-70 High Street	Tenth	R4	W10	Pass	35.6%	37.4%	0.95	97.9%	97.9%	1
66-70 High Street	Tenth	R5	W11	Pass	23.9%	25.0%	0.95	99.4%	99.4%	1
66-70 High Street	Tenth	R5	W12	Pass	23.1%	24.2%	0.95	99.4%	99.4%	
66-70 High Street	Tenth	R5	W13	Further testing required	39.6%	39.6%	1	99.4%	99.4%	
66-70 High Street	Tenth	R5	W14	Further testing required	39.6%	39.6%	1	99.4%	99.4%	
66-70 High Street	Eleventh	R1	W1	Pass	39.6%	39.6%	1	99.6%	99.6%	1
66-70 High Street	Eleventh	R1	W2	Further testing required	39.4%	39.6%	0.99	99.6%	99.6%	
66-70 High Street	Eleventh	R1	W3	Pass	39.6%	39.6%	1	99.6%	99.6%	

Project Name: Ringers Road Project No.: 9.604
Report Title: Daylight Assessment - with consented schemes in place Date of Analysis: 26/06/2024

Building	Floor	Room no.	Window no.	25/45 degree plane test	VSC tests			NSL tests		
					Proposed VSC 27% ?	Existing VSC (%)	Relative VSC >0.8?	Proposed NSL (%)	Existing NSL (%)	Relative NSL >0.8?
66-70 High Street	Eleventh	R1	W4	Further testing required	39.3%	39.6%	0.99	99.6%	99.6%	1
66-70 High Street	Eleventh	R2	W5	Further testing required	39.2%	39.6%	0.99	99.2%	99.2%	1
66-70 High Street	Eleventh	R2	W6	Further testing required	39.1%	39.6%	0.99	99.2%	99.2%	
66-70 High Street	Eleventh	R2	W7	Pass	38.7%	39.6%	0.98	99.2%	99.2%	
66-70 High Street	Eleventh	R2	W8	Pass	38.7%	39.6%	0.98	99.2%	99.2%	
66-70 High Street	Eleventh	R3	W9	Pass	38.9%	39.6%	0.98	97.0%	97.0%	1
66-70 High Street	Eleventh	R4	W10	Pass	39.0%	39.6%	0.98	98.1%	98.1%	1
66-70 High Street	Eleventh	R5	W11	Pass	39.1%	39.6%	0.99	99.4%	99.4%	1
66-70 High Street	Eleventh	R5	W12	Pass	39.1%	39.6%	0.99	99.4%	99.4%	
66-70 High Street	Eleventh	R5	W13	Pass	39.6%	39.6%	1	99.4%	99.4%	
66-70 High Street	Eleventh	R5	W14	Pass	39.6%	39.6%	1	99.4%	99.4%	

8.14.10 Overall, for the best case for the appellant, the reported urban scenario results for 66-70 High Street generates a pass rate for VSC 74% and NSL 100%, this means that 36 (26%) Windows will experience a noticeable reduction in light and 0 (0%) rooms will experience a noticeable loss to direct sky visibility from their working plane (850mm above the finished floor level) area within the room.

8.14.11 I believe that on balance, the overall pass rate for 66-70 High Street is commensurate with those of an urban setting given the volume of rooms and windows assessed on this property.

8.15 56 Ravensbourne Road, 52-54 Ravensbourne Road, 12 Ringers Road

8.15.1 These three properties were identified by EK McQuade as having potential daylight impacts as a result of the development proposals. XCO2 have added these properties into the assessment.

8.15.2 I have reviewed the XCO2 56 Ravensbourne Road, 52-54 Ravensbourne Road, 12 Ringers Road 3D model and I am satisfied that it is accurate as possible and note that assumed room layouts and known layouts were used in this assessment for NSL.

8.15.3 In terms of the VSC assessment we are satisfied that the results reported by XCO2 in the rebuttal are true and reflective of the likely impact to 56 Ravensbourne Road, 52-54 Ravensbourne Road, 12 Ringers Road windows.

8.15.4 The VSC reported pass rates by XCO2 are summarised in the table below

Property	Number of Windows Tested	Windows that meet BRE Guidelines		Windows that experience gains beyond the consented baseline		VSC Windows No. of Windows Experiencing Adverse Impacts		
		No.	%	No.	%	20-29.99% loss (minor adverse losses)	30-39.99% loss (moderate adverse losses)	>40% loss (substantial losses)
52-56 Ravensbourne Road, 12 Ringers Road	29	27	93%	0	0	2	0	0
Total	**29**	**27**	**93%**	**0**	**0%**	**2**	**0**	**0**

8.15.5 The results show that 2 (7%) windows do not meet BRE Criteria, this equates to 0 (0%) of all windows assessed not meeting an Urban Pass for reductions of less than 30%, meaning that all windows will meet VSC urban criteria.

8.15.6 The NSL reported pass rates by XCO2 are summarised in the table below

Property	Number of Rooms Tested	Rooms that meet BRE Guidelines		Rooms that experience gains beyond the consented baseline		DD Rooms No. of Rooms Experiencing Adverse Impacts		
		No.	%	No.	%	20-29.99% loss (minor adverse losses)	30-39.99% loss (moderate adverse losses)	>40% loss (substantial losses)
52-56 Ravensbourne Road, 12 Ringers Road	19	18	95%	0	0	1	0	0
Total	**19**	**18**	**95%**	**0**	**0%**	**1**	**0**	**0**

8.15.7 The results show that 1 (5%) rooms do not meet BRE Criteria, this equates to 0 (0%) of all rooms assessed not meeting an Urban Pass for reductions of less than 30%, meaning that all rooms will meet NSL urban criteria.

8.15.8 I have highlighted on the XCO2 results spreadsheet the 56 Ravensbourne Road, 52-54 Ravensbourne Road, 12 Ringers Road windows and rooms that will experience a substantial loss in with red cells, moderate impacts in amber cells and negligible / urban pass in lime green and sub urban pass rates in dark green shown below.

Project Name: Ringers Road Project No.: 9.604
Report Title: Daylight Assessment - with consented schemes in place Date of Analysis: 26/06/2024

Building	Floor	Window Room no.	Window no.	25/45 degree plane test	VSC tests Proposed VSC 27% ?	VSC tests Existing VSC (%)	VSC tests Relative VSC >0.8?	NSL tests Proposed NSL (%)	NSL tests Existing NSL (%)	NSL tests Relative NSL >0.8?
Bromley Temple	First	R4	W11	Further testing required	0.2%	34.3%	0.01	0.2%	95.2%	0
Bromley Temple	First	R4	W12	Further testing required	0.1%	21.5%	0.01	0.2%	95.2%	0
Bromley Temple	First	R5	W13	Further testing required	0.1%	17.5%	0	0.6%	42.7%	0.02
56 Ravensbourne	Ground	R1	W1	Further testing required	25.4%	27.0%	0.94	98.5%	98.8%	1
56 Ravensbourne	Ground	R1	W2	Further testing required	25.6%	27.5%	0.93	98.5%	98.8%	
56 Ravensbourne	Ground	R1	W3	Further testing required	11.4%	11.8%	0.96	98.5%	98.8%	
56 Ravensbourne	Ground	R1	W4	Further testing required	17.3%	17.7%	0.97	98.5%	98.8%	
56 Ravensbourne	Ground	R2	W5	Further testing required	16.7%	18.5%	0.9	87.5%	87.5%	1
56 Ravensbourne	First	R1	W1	Further testing required	28.0%	29.8%	0.94	99.1%	99.1%	1
56 Ravensbourne	First	R1	W2	Further testing required	27.7%	29.7%	0.93	99.1%	99.1%	
56 Ravensbourne	First	R1	W3	Further testing required	24.5%	25.0%	0.98	99.1%	99.1%	
56 Ravensbourne	First	R2	W4	Further testing required	25.0%	26.9%	0.93	98.0%	98.0%	1
52-54 Ravensbourne	Ground	R1	W1	Further testing required	17.9%	18.8%	0.95	75.6%	84.7%	0.89
52-54 Ravensbourne	Ground	R2	W2	Further testing required	23.5%	26.0%	0.9	87.3%	95.8%	0.91
52-54 Ravensbourne	Ground	R2	W3	Further testing required	7.1%	7.4%	0.96	87.3%	95.8%	
52-54 Ravensbourne	Ground	R3	W4	Further testing required	9.3%	10.8%	0.86	59.6%	63.6%	0.94
52-54 Ravensbourne	First	R1	W1	Further testing required	27.2%	29.3%	0.93	95.6%	96.3%	0.99
52-54 Ravensbourne	First	R2	W2	Further testing required	26.3%	28.9%	0.91	95.8%	98.0%	0.98
52-54 Ravensbourne	First	R3	W3	Further testing required	26.0%	28.7%	0.91	94.2%	97.9%	0.96
52-54 Ravensbourne	First	R4	W4	Further testing required	20.4%	22.8%	0.89	72.0%	73.2%	0.98
12 Ringers Road	Ground	R1	W1	Further testing required	6.9%	8.1%	0.85	60.3%	79.1%	0.76
12 Ringers Road	Ground	R1	W3	Further testing required	10.6%	12.3%	0.86	60.3%	79.1%	
12 Ringers Road	Ground	R2	W2	Further testing required	19.4%	19.8%	0.98	59.7%	61.0%	0.98
12 Ringers Road	First	R1	W1	Further testing required	9.3%	12.1%	0.77	73.8%	91.3%	0.81
12 Ringers Road	First	R1	W3	Further testing required	12.6%	15.4%	0.82	73.8%	91.3%	
12 Ringers Road	First	R2	W2	Further testing required	26.0%	28.6%	0.91	76.6%	90.4%	0.85
12 Ringers Road	Second	R1	W1	Further testing required	10.7%	13.7%	0.78	91.5%	97.3%	0.94
12 Ringers Road	Second	R1	W3	Further testing required	13.9%	16.8%	0.82	91.5%	97.3%	
12 Ringers Road	Second	R2	W2	Further testing required	27.8%	30.8%	0.9	92.8%	100.0%	0.93
12 Ringers Road	Third	R1	W1	Further testing required	26.6%	29.5%	0.9	98.5%	99.2%	0.99
12 Ringers Road	Third	R1	W3	Further testing required	28.3%	31.2%	0.91	98.5%	99.2%	
12 Ringers Road	Third	R2	W2	Further testing required	29.4%	32.4%	0.91	93.9%	100.0%	0.94

8.15.9 It is clear from the table above that all of the windows and rooms within 56 Ravensbourne Road, 52-54 Ravensbourne Road, 12 Ringers Road will remain adequately lit for both

daylight VSC and NSL. Therefore at this point I am happy to discount these properties from contention going forward.

9.3 Appendix C

XCO2 Proof, 2.0 Background Information and 3.0 Main Issues, EK McQuade Review and Response to matters

XCO2 - Background Information

Extracts and Quotation from XCO2 Proof of Evidence

Quote from XCO2 Proof 2.4, "*The Applicant appealed the refusal and XCO2 were appointed by the Appellant to review the reasons for refusal raised by the Council in the decision notice and the officers report (CD3.3) as well as to update the submitted reports and their associated technical models in light of the independent review and inspection of the results carried out by EK McQuade as raised in the Council's Statement of Case (CD10.1)in order to validate the results presented in the interest of presenting evidence which is agreed on technical grounds as far as can be reached*".

Upon review of the XCO2 submitted Proof of Evidence 18 June 2024 it was impossible to agree any technical grounds at that stage. This was subsequently conceded by Tomas Keating XCO2 during a telephone call on 21 July 2024 when he advised that they were updating their technical assessment in preparation for the XCO2 rebuttal to be issued on 2 July 2024.

Following receipt of the XCO2 1 July 2024 updated assessment and 3D model and subsequent 2 July 2024 rebuttal, I have been able to provide commentary on the impact of daylight, sunlight and overshadowing on a property by property basis in section 6 of the EK McQuade rebuttal.

Quote from XCO2 Proof 2.6, "*Notwithstanding assertions in the Councils Statement of Case regarding the validity of the results following independent review, it is understood that the level of sunlight reported within the proposed scheme daylight and sunlight report is deemed to be acceptable and therefore it follows that upon revision of the report in response to elements raised and subsequently amended in collaboration with EK McQuade, should a similar or improved level of performance with the sunlight assessment be achieved then the proposed design should be considered to offer adequate accessibility to sunlight in living spaces*".

Whilst the results reported seemed satisfactory in principle, in the main, the results were proven to be flawed due to the inaccuracies of the 3D model. The column of LKD's on the southeast corner of Block B were reported as underperforming for both daylight and sunlight at multiple floors.

The daylight, sunlight and overshadowing assessment has been recalculated by XCO2 as a consequence. My commentary on the results for each block based on the XCO2 1 July 2024 updated assessment and 3D model is contained within section 5 of this rebuttal.

XCO2 - Main Issues

Extracts and Quotation from XCO2 Proof of Evidence

Quote from XCO2 Proof 3.2. "*Given the disputes with regards to the daylight and sunlight raised in the Council's Statement of Case a specific Statement of Common Ground on matters relating to daylight sunlight will be produced and agreed (CD11.1)".*

At this point in time, further to the submission of each consultant's PoE, we were still quite some distance away from being able to put together a Statement of Common Ground (SoCG) of any merit to assist the inspector. However, plans are in place for EK McQuade and XCO2 to meet shortly after the submission of both party's rebuttals in order to reach as much common ground where possible.

XCO2 - Planning Policy And Industry Guidance

Extracts and Quotation from XCO2 Proof of Evidence

I set out my response to points raised by XCO2 within their Proof of Evidence 18 June 2024.

Quote from XCO2 Proof 4.1.37

- "*Suggests this can be done through comparisons against comparable areas and typologies across London and their light values (rather than strictly with the national numerical values)*";

Agreed, XCO2 need to provide the data for those typologies for the vicinity around Ringers Road in order to substantiate their claims.

Quote from XCO2 Proof 4.1.46. "*From national through to local level, policy and guidance is clear, if land is to be used more efficiently and density is to be increased in urban locations then deviations from the BRE Guidelines will occur*".

Agreed, however there needs to justification as to the alternative target values to be applied within the area and how that compares with the Ringers Road development results. I.e. Does the proposed results fit in with the local typology in the vicinity of the development site. Conversely, are the neighbouring buildings enjoying greater levels of light than one would expect in an area in close proximity to the high street.

Quote from XCO2 Proof 4.1.48. "*The BRE Guidelines, which policy refers to, makes this acknowledgement within the document itself where it is stated*":

> "*1.6 - The advice given here is not mandatory and the guide 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 since natural lighting is only one of many factors in site layout design. In special circumstances the developer or planning authority may wish to use different target values.*"

This does not necessarily mean that lower target levels should be adopted, it is the planning department's prerogative to adopt the levels they deem appropriate in keeping with those decisions of case precedent within the borough and respective town.

Quote from XCO2 Proof 4.1.48 "*The NSL test calculates the distribution of daylight within rooms by determining the area of the room at desk / work surface height (the 'working plane') which can and cannot receive a direct view of the sky and hence 'sky light'. The working plane height is set at 850mm above floor level within residential property*".

No mention of paragraphs 2.2.10 & 2.2.11 from BRE 209 Paper, which state that known room layouts should be used to qualify the use of the No Sky Line assessment.

Quote from XCO2 Proof 4.2.8. "*It is therefore important that the BRE Guidelines are not incorrectly interpreted, by applying a rigid interpretation of the baseline targets in the BRE Guidelines as being the set target criteria regardless of context, when assessing new development in more urban locations or when assessing new housing schemes which may include areas with higher levels of density where lower levels of daylight are to be expected. This is not a correct or appropriate interpretation of the BRE Guidelines*".

This statement does not make sense and contains an element of contradiction when aligned to paragraph 1.6 of the BRE 209 paper as discussed in paragraph 4.1.5 above.

Quote from XCO2 Proof 4.2.15. "*With regards to relevant case law, the Rainbird judgement (28th March 2018) advises that daylight and sunlight should be approached in a certain way i.e. a two-stage process should be followed when assessing impacts. Stage One is a calculation and the question to ask is whether there is a noticeable impact. Stage Two is a matter of judgement and it is necessary to consider whether any noticeable impact is unacceptable in the particular context of the case. Similar to GIA's approach, in order to answer the Stage One question, the BRE Guidelines can be utilised. In answering the Stage Two question, wider contextual considerations are to be taken into account in arriving at a balanced judgement for a specific site location*".

XCO2 have not justified the contextual consideration within their own assessment as shown in many of their planning appeals case precedent references. In fact many of the case precedents planning appeals referred to within their Proof of Evidence are not comparable with the Ringers Road typography or proposed height, bulk and massing.

Quote from XCO2 rebuttal 4.1.3 "There were also comments raised with regards to the positions of the proposed scheme buildings (their positions on the X and Y plane) which have been amended accordingly against the topographical survey. It should also be noted that the EK McQuade proof was based on a scaled drawing and as such there may be some expected margins for error in the deviations noted".

Whilst XCO2 are correct that our information was based on PDF format versions of the proposed development. In this instance there are no expected margins for error. I say this because AutoCAD drawings that are converted to PDF format can be imported as a PDF back into AutoCAD with full functionality. As long as the proposed drawings included a scale bar or dimensions then it is possible to bring back the PDF to AutoCAD to the correct scale as if it was the original AutoCAD Drawing itself. I had used this technique throughout my due diligence of the XCO2 digital 3D model within my proof of Evidence 18 June 2024. The only exception to this is if the PDF drawing is effectively a photo. Then this can only be

brought back into AutoCAD as a raster image which will not be pinpoint accuracy. This is typical for older PDF drawings that were produced more than 10 years ago.

Quote from XCO2 rebuttal "*In paragraphs 2.4.2 – 2.4.3 of the proof there is brief discussion on the acceptability of alternative target values, and whilst this was accepted, it was requested that a better rationale be provided for doing so, such as example of average VSC for the Bromley area. Whilst this has been provided in the XCO2 proof, it should also be considered that there is limited value in looking at existing low rise housing typologies in the centre of Bromley as there is a masterplan which anticipates the town centre will undergo fundamental urban regeneration*".

Quote from XCO2 rebuttal 4.1.15. *"The suggested approach would fail to recognise the Housing SPG advice on the use of alternative target values, which should take into account the need to optimise housing capacity and scope for the character and form of an area to change over time".*

Quote from XCO2 rebuttal 4.1.16. "*I note it is confirmed by DW in section 1.3.1 of this same document (Final Proof of Evidence) that this site is in a town centre location. It is widely accepted that lower daylight and sunlight standards are commonplace in town centre locations and therefore, the use of alternative targets is appropriate for this assessment".*

I fail to see where plausible alternative acceptable targets levels are represented within the XCO2 assessment that are justified for use within the vicinity of the 2-4 Ringers Road Development Site.

Quote from XCO2 rebuttal 4.1.17. "*In paragraphs 2.4.4 – 2.4.6 it is confirmed that the significance criteria scope (as expected within an environmental statement in an EIA) was used to evaluate the level of impact to the surrounding properties. Whilst it is acknowledged that this was done in lieu of 'credible' alternative targets, I would stress that this is a very simplistic approach and fails to consider daylight and sunlight holistically. It only recognises reductions in daylight and sunlight which is only part of the overall consideration. It fails to consider what light the neighbours would be left with, which in my opinion has a fundamental bearing on the policy test of whether satisfactory living conditions are maintained*".

I disagree with this statement, the significance criteria assessment is a measure of the light loss to each window and room. This assessment provides the existing and proposed levels of light for both daylight and sunlight. It shows whether the reductions are likely to be noticeable to the occupant, typically any reduction beyond 20% will be noticeable to the occupant and the significance criteria assessment goes one step beyond this to say that in an urban context the reduction of light beyond 30% will be noticeable.

Quote from XCO2 rebuttal 4.1.21 "*In paragraph 7.1.1 and 7.1.2 it is contended that the 25-degree line assessment should be revised to form a cone shape. This is not explicitly*

requested in the BRE methodology and so I would contend this is not required. For completeness and simplicity, however, for all windows purported to meet the 25-degree line test their full detailed VSC/NSL/APSH/WPSH results are presented also to demonstrate their compliance with the BRE targets".

The 25° Line assessment is a 2D elevation / section exercise that works well primarily for windows that are facing perpendicular to a development. However, XCO2 have applied a 2D theory into a 3D model. Therefore, logic dictates that this would generate a 25° Cone against the window you are looking at from a 3D perspective. I bring this point up where XCO2 have discounted assessments on windows around the site using the 25° rule. There are exceptions such as neighbouring windows that have projections, balconies or recessed balconies above them which reduced the sky visibility.

I have reviewed the XCO2 updated 1 July 2024 AutoCAD digital 3D model that we are in receipt of. Whilst the existing building has been remodelled and relocated, there are still some small anomalies with the parapet heights on both Ringers Road and Ethelbert Road.