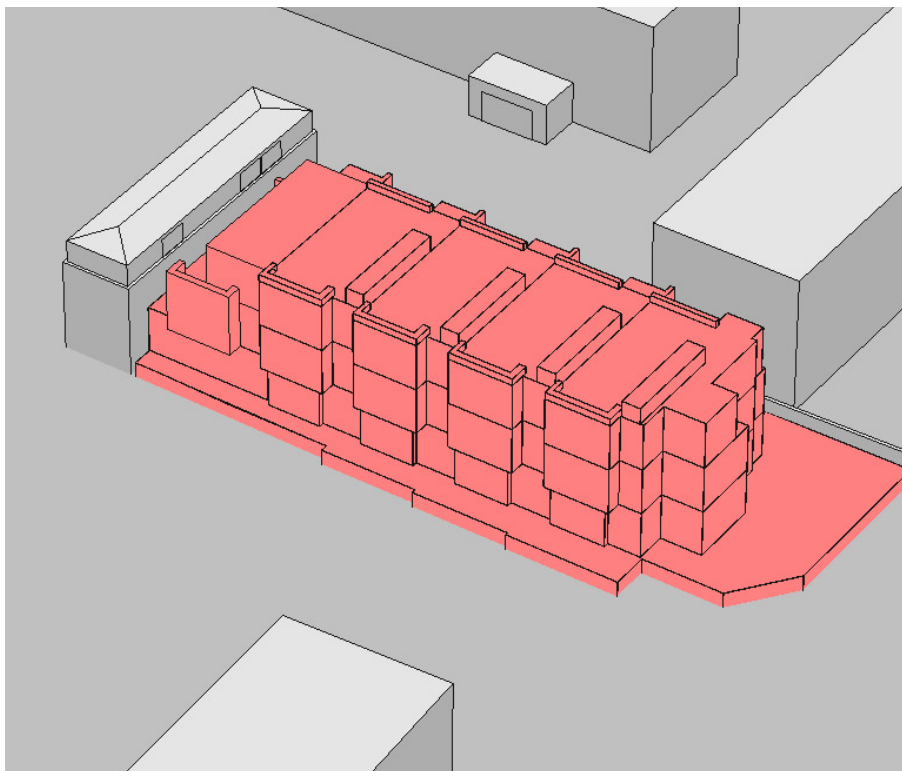


28th October 2010

The Adelaide

Camden, London



Carried out for

Gas Spring Limited

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About us:

XCO2 Energy are a Low-Carbon Consultancy working in the Built Environment. We are multidisciplinary company comprising of both architects and engineers, with specialists including; CIBSE low carbon consultant, Code for Sustainable Homes Assessors, EcoHomes Assessors and BREEAM Assessors.

	Issue 01	Issue 02	Issue 03	Issue 04
Remarks	Draft	For Planning		
Prepared by	AM	AM		
Authorised by	TN	TN		
Date	20/10/10	28/10/10		

Executive Summary

A sunlight and daylight analysis was undertaken for the Adelaide redevelopment based on the BRE's "Site Layout Planning for daylight and sunlight, a Guide to good practice" PJ Littlefair 1991. This methodology is generally accepted as good practice by Town and Country Planning authorities (shown to the right).

Analysis shows that the proposed development is unlikely to seriously affect daylight to the surrounding properties with the only window failing the analysis criteria being onto circulation space.

In total, 5 windows were modelled in 3 separate buildings.

Analysis showed that the 25 degree plane from one of these windows was not crossed. Of the remaining 4 windows, 3 of them had a vertical sky component above 27%.

The remaining window had a vertical sky component of less than 27% and this was less than 0.8 of its former value. However as this window opens onto circulation space it can be omitted from the analysis.

Due to the orientation of the site and surrounding properties and the design of the proposed development it is unlikely this will have a significant impact on sunlight access to existing neighbours.

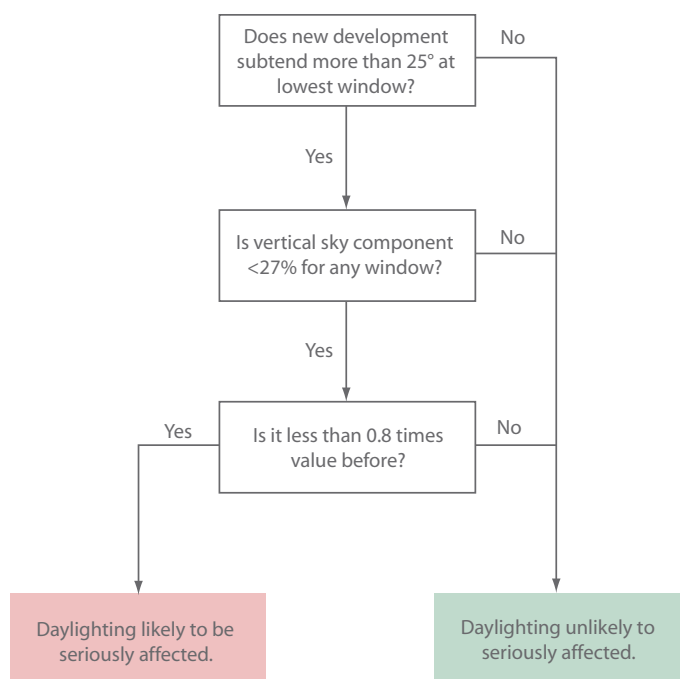


fig 1. The methodology hierarchy used in the report

Building	Solar Envelope	No. of windows	VSC > 27%	VSC > 0.8 of existing value	VSC < 0.8 of existing value	Pass or Fail
15 Elliott Square	FAILS	1	1	1	0	PASS
17 Elliott Square	PASS	1	N/A	N/A	N/A	PASS
3 + 4 Elsworthy Rise	FAILS	2	2	2	0	PASS
TOTAL		4	3	3	0	PASS

Result table omitting windows opening onto circulation space

Introduction

This report is intended to provide guidance on daylight and sunlight impacts of the proposed redevelopment of The Adelaide Public House.

The approach is based on the BRE's "Site Layout Planning for daylight and sunlight, a Guide to good practice" PJ Littlefair 1991, which is generally accepted as good practice by Town and Country Planning authorities.

Information provided is based on measured survey data provided by the design team at the time of the analysis. The proposed building dimensions are based on the CAD drawings provided by the architects.

Any changes in the proposed scheme which affect the external envelope are also likely to affect the results of this analysis.

Site

The proposed development site occupies a corner plot between Adelaide Road and Elsworthy Rise Camden, London.

The redevelopment of the site involves the demolition of the existing building and construction of new residential units to a lower height but increased footprint.

The development is surrounded by other residential properties.



fig 2. Site Location

Site Survey

A site inspection was undertaken to highlight the neighbouring buildings that would be most affected by the redevelopment of The Adelaide.

Additional survey work was undertaken to establish the ground levels and window heights of the surrounding buildings.

Three buildings were identified as most likely to be affected and were included in the analysis model, these are:

- 15 Elliott Square
- 17 Elliott Square
- 3 + 4 Elsworthy Rise



fig 3. A map highlighting the existing development and nearby properties that may be affected by the new proposal

Existing Building

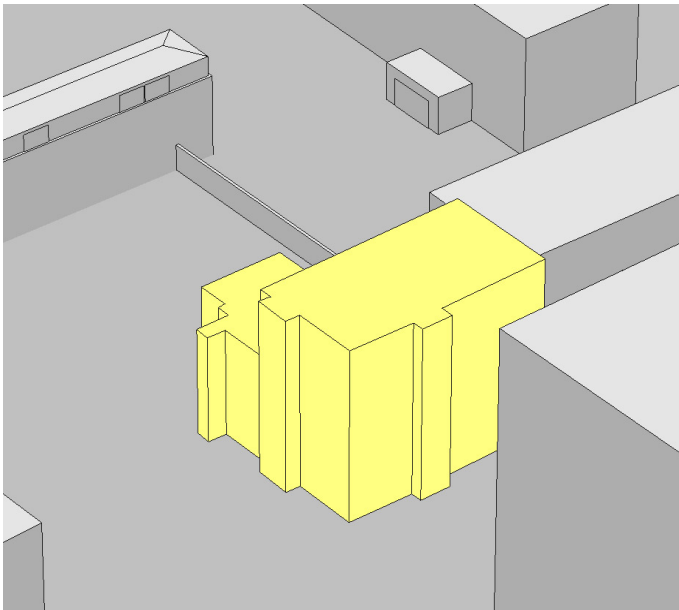


fig 4a. North east view of existing building

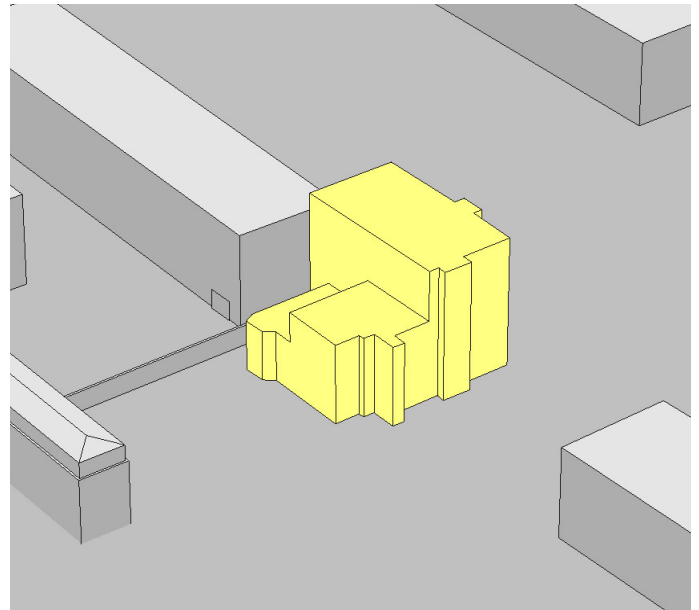


fig 4b. South east view of existing building

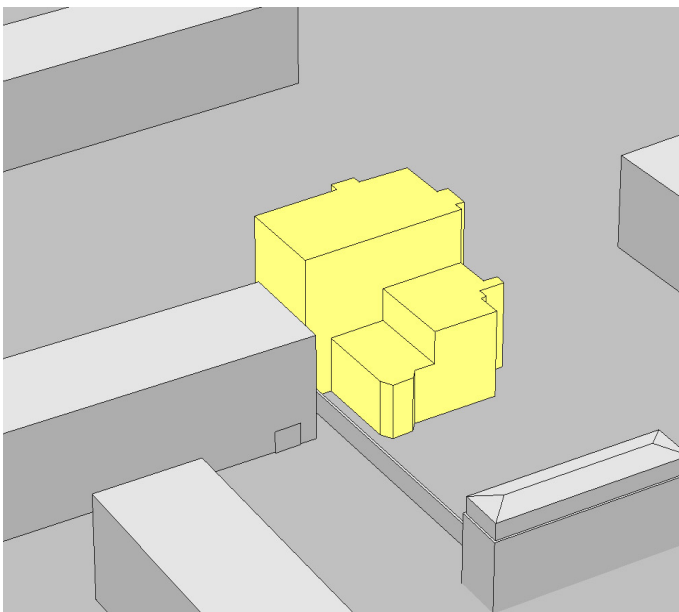


fig 4c. South west view of existing building

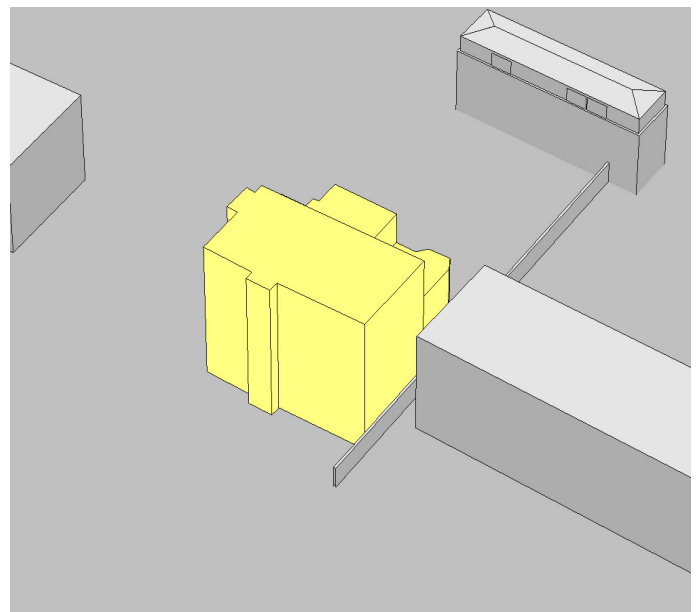


fig 4d. North west view of existing building

Proposed Building

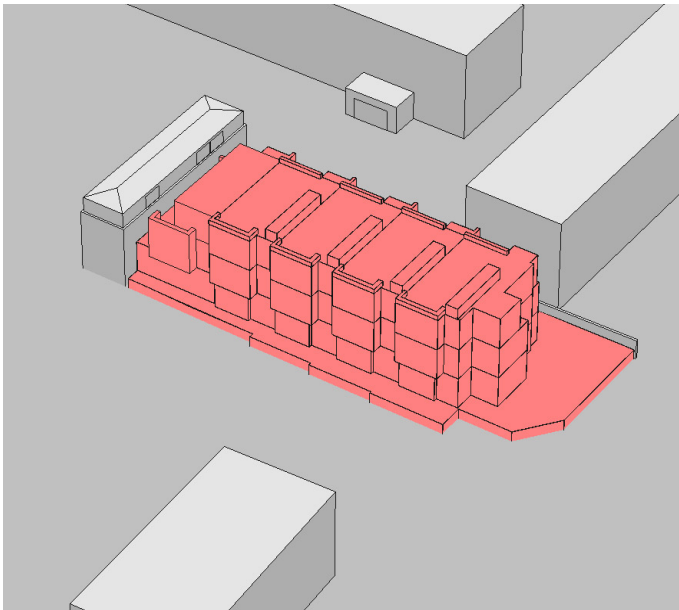


fig 5a. North east view of proposed building

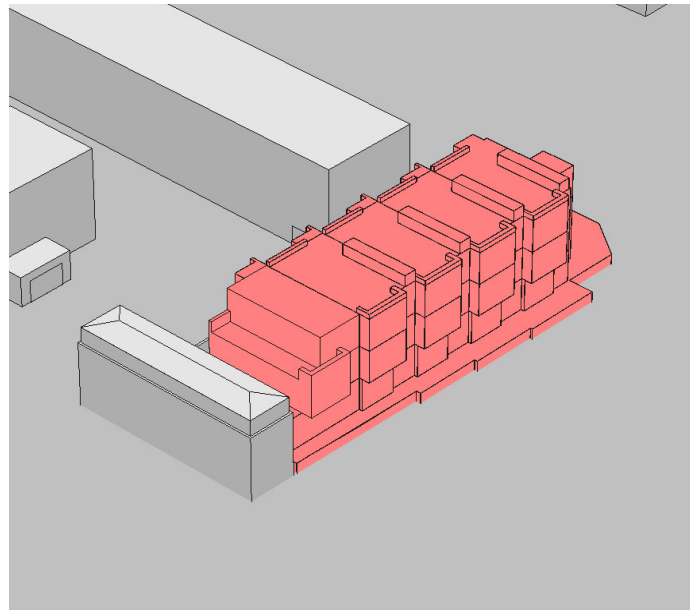


fig 5b. South east view of proposed building

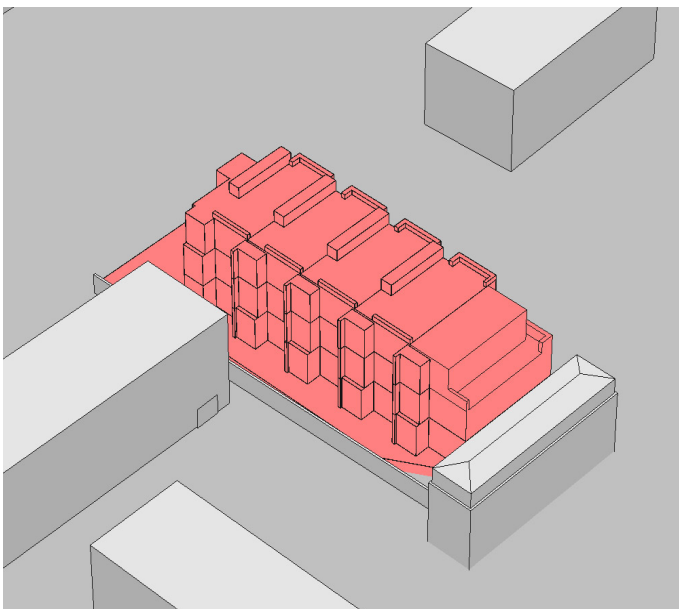


fig 5c. South west view of proposed building

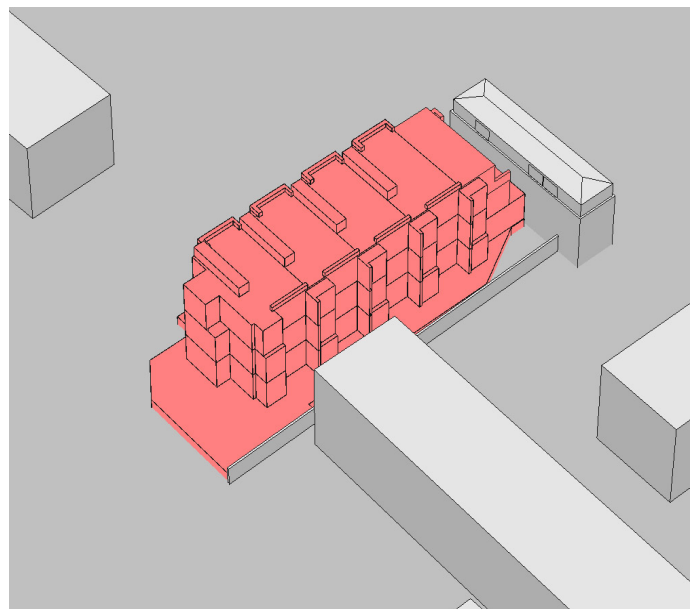


fig 5d. North west view of proposed building

Methodology

A 3D model of the existing site and surrounding buildings was constructed using Autodesk's Ecotect software.

Daylight to surrounding windows

A plane was drawn at 25° from the horizontal from the centre of the tested windows. If the new development intersected this plane then it would fail the first criteria.

Absolute Vertical Sky Component

All effected windows were analysed to ascertain whether the VSC was greater than 0.27 at the centre of the window pain. If the value was less than 0.27 then the window failed the second criteria.

Relative Vertical Sky Component

Any window that failed the absolute analysis was checked to see whether the VSC was less than 80% of the existing VSC value.

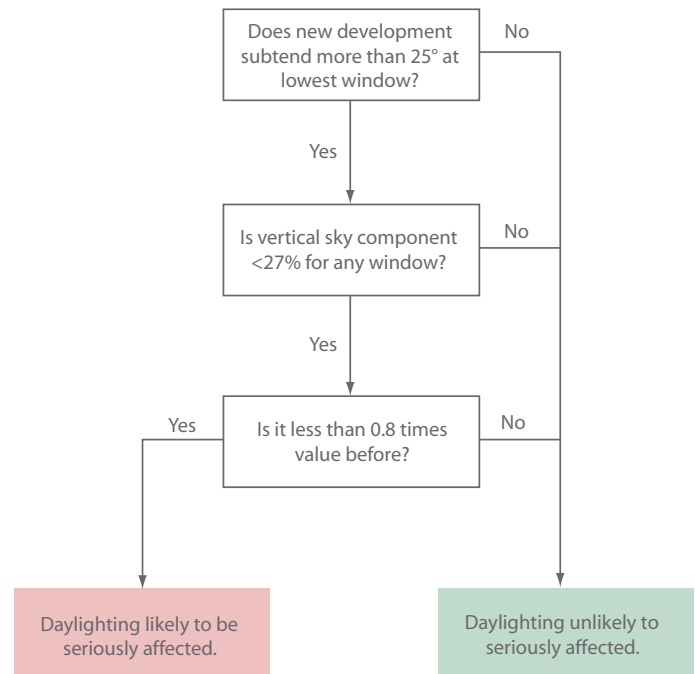


fig 6. The methodology hierarchy used in this report

Daylight to Surrounding Windows

The initial analysis of the proposed development looks at a plane 25° from the horizontal at the centre of the tested windows or 2m above ground level for ground floor full height openings.

Where any proposed development infringes this plane, it is not definitely the case that daylighting will be seriously affected at the windows in question, but, that further analysis of detailed proposals will need to be carried out to establish the severity of the impact and if it falls within acceptable limits.

The analysis shows that the new development subtends the 25° line for the windows at 15 Elliott Square and 3 + 4 Elsworthy Rise but not 17 Elliott Square.

Because of this, the second stage of analysis must be conducted for the windows at 15 Elliott Square and 3 + 4 Elsworthy Rise.

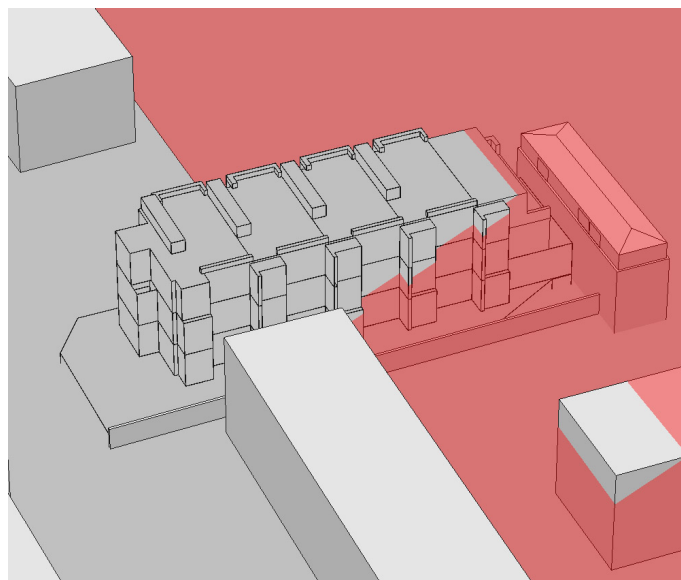


fig 7a. The 25 degree plane as taken from the window to the ground floor of 15 Elliott Square

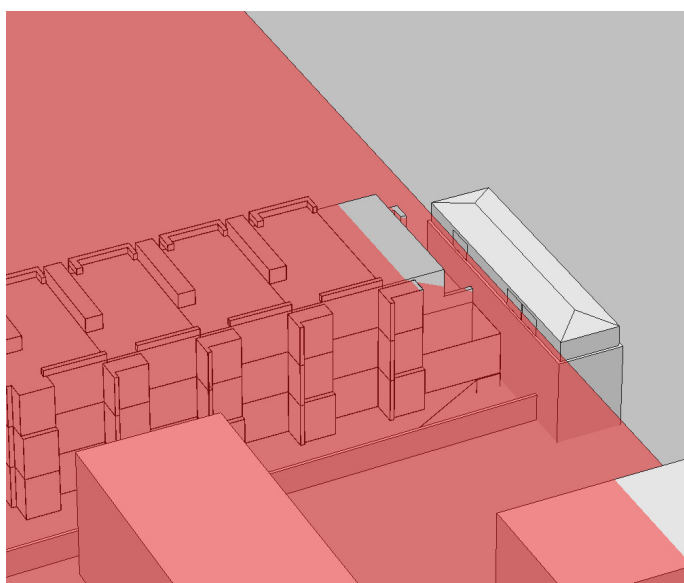


fig 7b. The 25° plane taken from the upper floor windows at 3 + 4 Elsworthy Rise

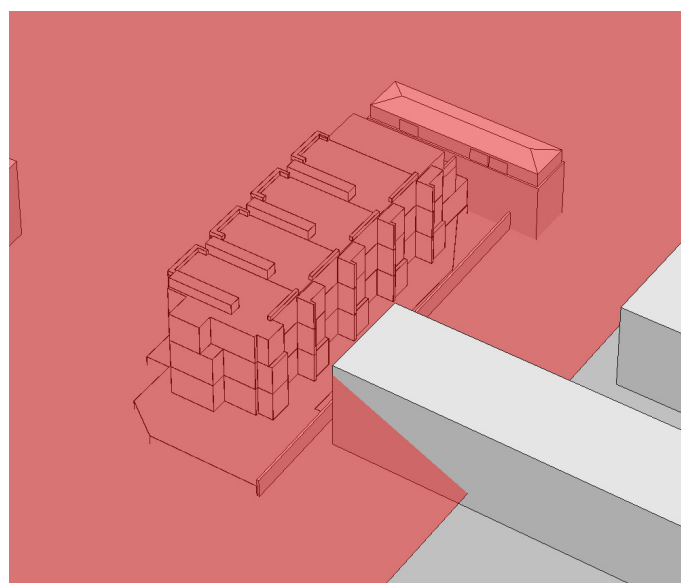
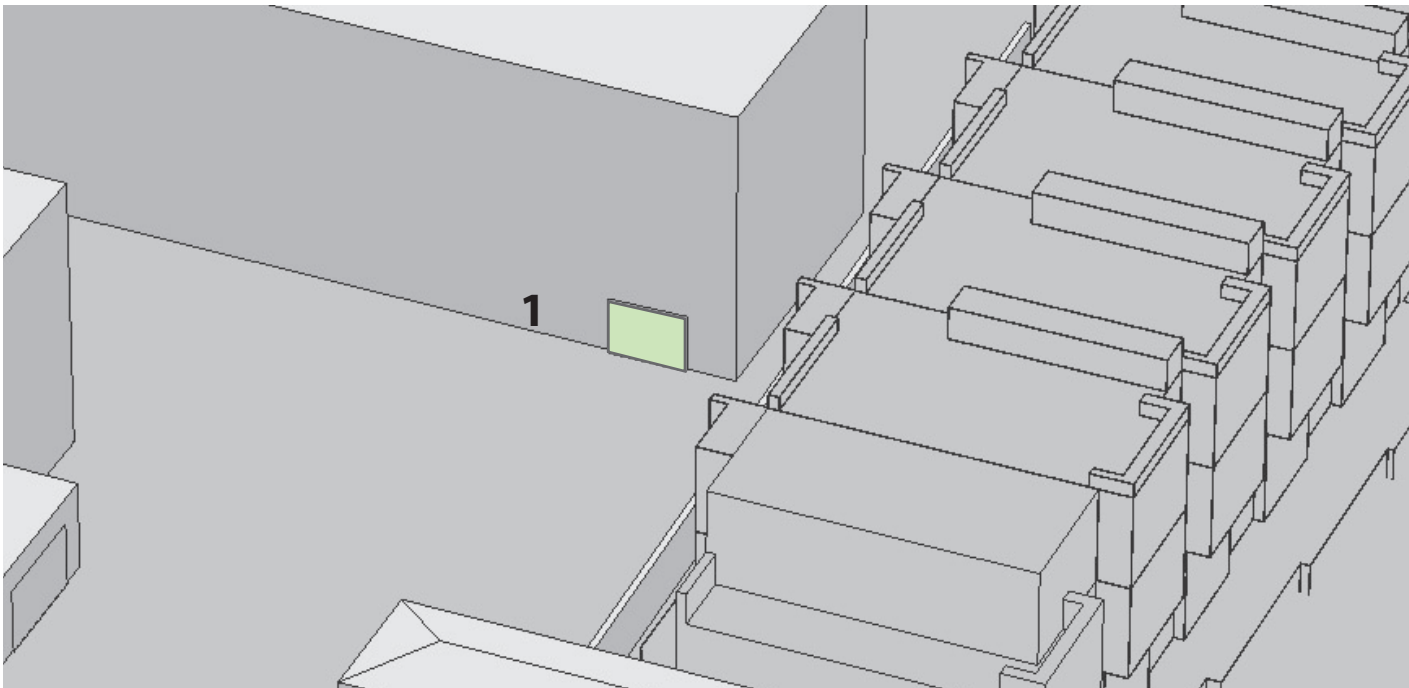


fig 7c. The 25° plane taken from the ground floor window at 17 Elliott Square

Vertical Sky Component

15 Elliott Square



Key

- Passed VSC analysis (>27%)
- Did not pass VSC analysis (<27%)
- Passed comparison VSC analysis (>0.8 of previous value)
- Did not pass VSC analysis (<27%)
- Did not pass comparison VSC analysis (<0.8 of previous value)

Detailed Results

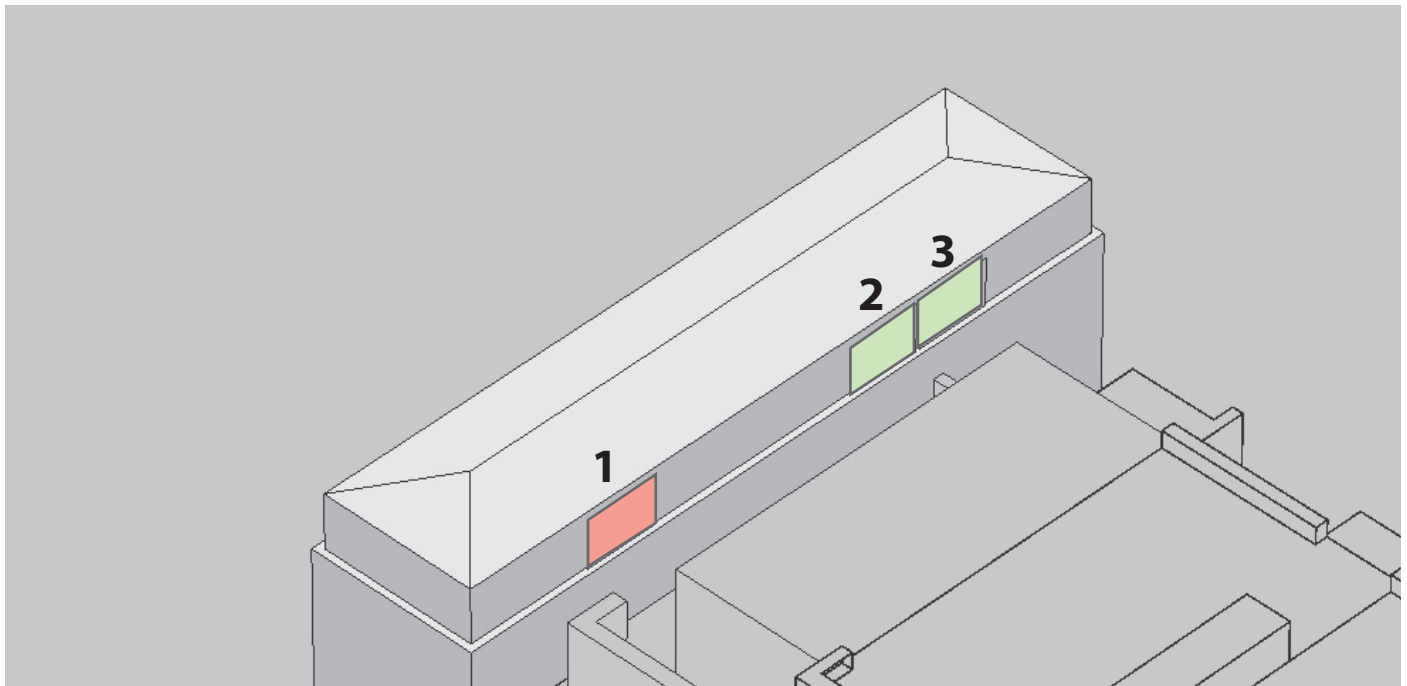
Window No.	Before (%)	After (%)	Difference
1	32.0	27.3	0.85

Result Summary

No. of windows	1
Windows with VSC greater than 0.27	1
Windows that have VSC of at least 80% of existing value	0
Windows that do not meet either criteria	0

Vertical Sky Component

3 + 4 Elsworthy Rise



Key

- Passed VSC analysis ($>27\%$)
- Did not pass VSC analysis ($<27\%$)
- Passed comparison VSC analysis (>0.8 of previous value)
- Did not pass VSC analysis ($<27\%$)
- Did not pass comparison VSC analysis (<0.8 of previous value)

Detailed Results

Window No.	Before (%)	After (%)	Difference
1	32.9	22.3	0.68
2	33.6	27.6	0.82
3	33.6	29.8	0.87

Result Summary

No. of windows	3
Windows with VSC greater than 0.27	2
Windows that have VSC of at least 80% of existing value	0
Windows that do not meet either criteria	1

Conclusion

Calculations show that the proposed redevelopment of The Adelaide is unlikely to seriously affect the daylight of all of the windows analysed except that of 4 Elsworthy Rise.

The affected window at 4 Elsworthy rise is shown on the recent planning drawings as opening onto a landing and stairwell. As such this window would be considered as onto circulation space and need not be considered for daylight impact.

Should the window at 4 Elsworthy Rise still open onto circulation space then the daylight at the surrounding properties is unlikely to be seriously affected by the development as currently proposed.

The table below shows a summary of result omitting the window at 4 Elsworthy Rise which is believed to open onto circulation space

Building	Solar Envelope	No. of windows	VSC > 27%	VSC > 0.8 of existing value	VSC < 0.8 of existing value	Pass or Fail
15 Elliott Square	FAILS	1	1	1	0	PASS
17 Elliott Square	PASS	1	N/A	N/A	N/A	PASS
3 + 4 Elsworthy Rise	FAILS	2	2	2	0	PASS
TOTAL		4	3	3	0	PASS

Result table omitting windows opening onto circulation space

Sunlight

Analysis of sunlight access is based on areas that will receive no sunlight at all on the 21st of March (spring equinox).

Suncast analysis of the site and proposed development shows that the most affected areas of the site will be western edge and neighbouring properties to the west side of the site. It also shows that the increase in areas that will receive no sunlight at all is minimal and falls well within acceptable limits.

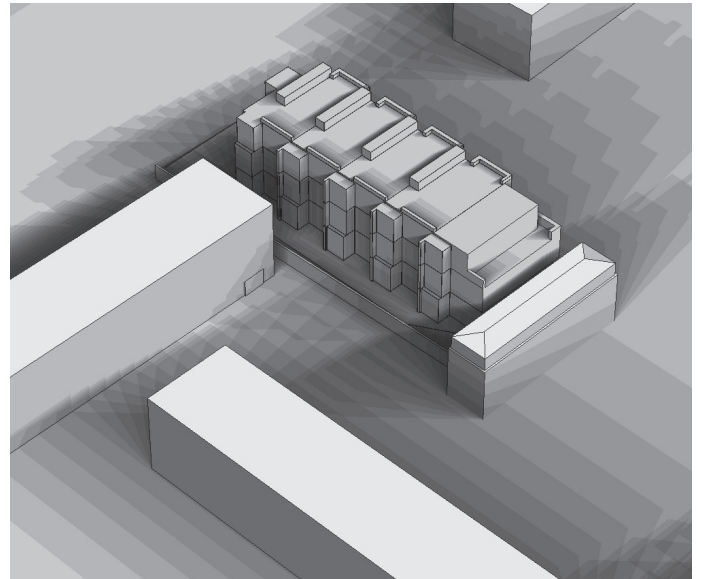


fig 8a. Shadow range on the 21st March for the proposed development. Black areas indicate no direct sunlight throughout the day.

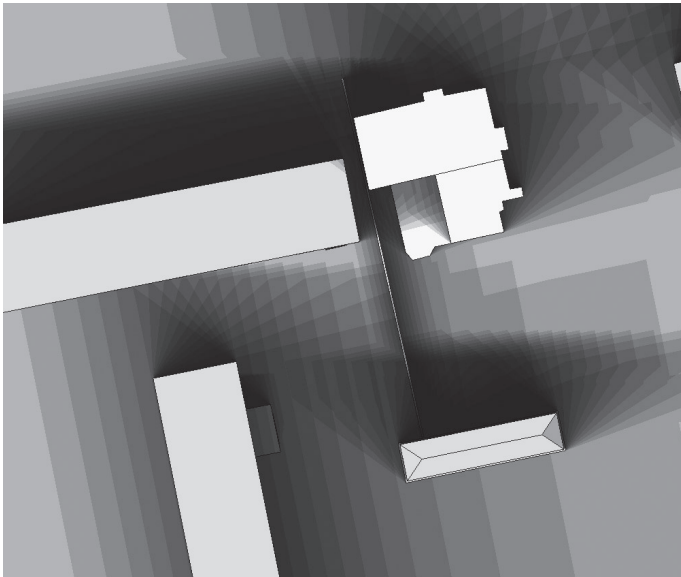


fig 8b. Shadow range on the 21st March for the existing site. Black areas indicate no direct sunlight throughout the day.

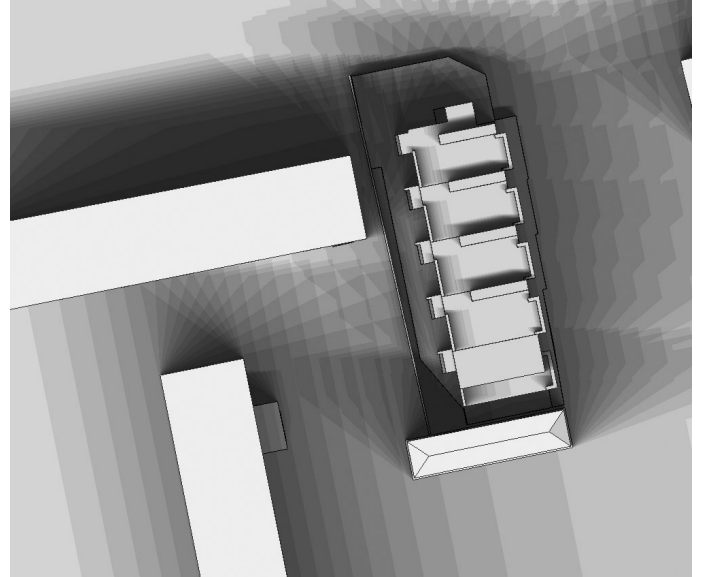


fig 8c. Shadow range on the 21st March for the proposed development. Black areas indicate no direct sunlight throughout the day.