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DAYLIGHT & SUNLIGHT LIGHT

Fitzwilliam Inn
24 Sackville Street
Barnsley, S70 2DB

21st March 2019



MAXIMISING DEVELOPMENT POTENTIAL MINIMISING RISK.

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1. Introduction

1.1. This practice has been instructed to provide an assessment of the daylight & sunlight implications of the proposed development located at Fitzwilliam Inn, 24 Sackville Street, Barnsley.

1.2. The proposals comprise: -

'Demolition of the existing public house and the erection of an apartment building compromising 14 no. apartments together with erection of 2 no. town houses'

1.3. The methodology and criteria used for these assessments is provided by the Building Research Establishments guidance 'Site layout planning for daylight and sunlight: a guide to good practice' (BRE, 2011).

2. Guidance

Daylight & sunlight for planning

Site layout planning for daylight and sunlight: a guide to good practice, BRE 2011

2.1. This document follows from previous guidance produced by Her Majesty's Stationary Office (HMSO) on daylight and sunlight in the built environment and is now the accepted methodology used by local authorities for assessing daylight and sunlight in relation to new developments. It provides methods for the calculation of daylight and sunlight impacts of development upon existing surrounding properties and within proposed new dwellings.

Daylight Assessment

2.2. There are three detailed methods for calculating daylight, the Vertical Sky Component (VSC), the No-Sky Line Contour (NSC) and the Average Daylight Factor (ADF). For sunlight the Annual Probable Sunlight Hours (APSH) method is detailed.

2.3. The VSC method calculates the amount of visible sky available to each window or to points on the façade of a building where windows have not yet been designed. This is the primary assessment of daylight impacts and does not consider the size or nature of rooms behind the façade. The guidelines suggest that, post-development, properties should enjoy at least 27% VSC or that VSC is reduced to no less than 0.8 times its former value.

2.4. The NSC method describes the distribution of daylight within rooms by calculating the area of the 'working plane' which can receive a direct view of the sky and hence 'sky light'. The working plane height is set at 850mm above floor level within a residential property. The BRE does not state a required amount of no-sky line but merely suggests a recommended reduction within which changes are not considered noticeable.

Sunlight Assessment

2.5. For sunlight the APSH test calculates the percentage of statistically probable hours of sunlight received by each window in both the summer and winter months. March 21st through to September 21st is considered to be the summer period while September 21st to March 21st is considered the winter period. For properties neighbouring a development only those windows orientated within 90° of due south and which overlook the site of the proposal are relevant for assessment.

2.6. The guidelines suggest that windows should receive at least 25% total APSH with 5% of this total being enjoyed in the winter months. The guidelines also allow for a 20% reduction in sunlighting when compared to the former value with total reductions of less than 4% APSH not being considered noticeable.

Policy Context

2.7. It is important to note that within urban centres achieving good levels of daylight and sunlight in accordance with the BRE guidelines, can be weighed in the balance against other beneficial design factors.

2.8. The opening paragraphs of the BRE guidelines state: -

> *"The guide is intended for building designers and their clients, consultants and planning officials. The advice given here is not mandatory and the document should not be seen as an instrument of planning policy. Its aim is to help rather than constrain the designer. Although it gives numerical guidelines, these should be interpreted flexibly because natural lighting is only one of many factors in site layout design. In special circumstances the developer or planning authority may wish to use different target values. For example, in a historic city centre a higher degree of obstruction may be unavoidable if new developments are to match the height and proportions of existing buildings".*

2.9. The targets set out in the BRE document are very much 'guidelines' and they should be applied sensibly and flexibly based on the site-specific context of development.

3. Assumptions

3.1. We have not sought access internally to any of the surrounding properties. Details of the internal layouts have been drawn from planning drawings available on the Barnsley Metropolitan Borough Council planning portal or estate agents plans.

3.2. Where such information is unavailable, floor levels have been assumed from the external appearance of the building and the locations of windows. Unless known or otherwise appropriate the depths of rooms have been assumed at 4.27m for residential properties and 6m for commercial properties, or half the building depth if this is less than these dimensions.

4. Sources of Information

4.1. A 3D measured survey model, an architects' 3D model, site photographs and Ordnance Survey information have been utilised to create a 3D computer model of the proposed development in the context of the existing site and surrounding buildings.

Cloud 10 Ltd (Measured survey)
Sackville St Barnsley 22-06-2018.dwg
Sackville St Sections Layout.dwg
Sackville St Topographical Survey.dwg
Received 25/06/2018

Alan Power Architects (Scheme drawings)
580 - 24 Sackville Street S70 2DB.3ds
Received 25/02/2019

EB7 Limited
Site Photographs
Ordnance Survey

5. The Site and Proposal

5.1. The site is located on the western edge of Barnsley Town Centre at the junction of Fitzwilliam Street and Sackville Street. The site is currently occupied by the Fitzwilliam Arms public house.

5.2. The existing building is three-storeys in height stepping down to two-storeys the rear and include a lower ground level. The public house has been derelict for c.10 years. The northern parcel of the site is an open grassed area which adjoins 38 Sackville Street.

5.3. The surrounding context varies from two-storey terraced housing to the north, east and west at Coalby Walk and Sackville Street, residential apartments up to 11-storeys to the south and an open surface car park to the south east of the site.

5.4. It should be noted, the site itself slopes significantly from east to west.

5.5. Most of the neighbouring properties surrounding the existing site are residential in use with the exclusion of the ground level at the Gateway Plaza building.

5.6. The proposal is for the demolition of the existing public house and the erection of an apartment building compromising 14 apartments together with erection of 2 town houses.

5.7. Our drawings showing the existing and proposed buildings in the context of the

neighbouring properties are attached within appendix 1. Full results of the daylight and sunlight assessments are attached within appendix 2.

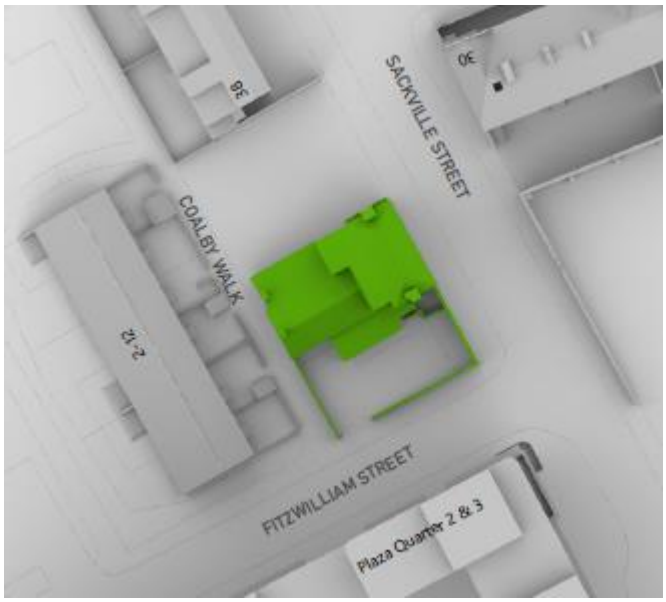


Image 1: Plan view of the existing site at 24 Sackville Street

5.8. The following neighbouring properties were considered within our assessment:

- 30 Churchfield;
- Plaza Quarter 2 & 3;
- 2-12 Coalby Walk; and,
- 38 Sackville Street.

6. Daylight and Sunlight Results

6.1. Full results of the daylight and sunlight assessment are attached within appendix 2.

30 Churchfield

6.2. This two-storey Victorian terrace is located to the north-east of the site on the eastern side of Sackville Street. Three windows within the flank wall elevation face the site and have been considered for daylight and sunlight effects.

Daylight

6.3. The results of our Vertical Sky Component (VSC) assessments show that all windows facing the proposals will retain at least 0.8 times their existing levels and as a result, remain BRE compliant for the primary VSC daylighting assessment.

6.4. The results our No-Sky Contour (NSC) assessments confirm all rooms tested will

experience little change as a result of the proposed scheme and fully satisfy the BRE targets for NSC.

Sunlight

6.5. To consider the sunlight effects to a neighbouring property, the BRE suggests that all main living rooms which face within 90° of south should be tested.

6.6. From external observation, the main living rooms appear to be located at the front of the property however without internal plans to confirm this, we have assessed all rooms within this property.

6.7. Our results show all rooms with south facing windows will achieve sunlight levels well in excess of the BRE targets of 25% total annual probable sunlight hours (APSH) and 5% for winter months. As such, the property is fully compliant for sunlight under the BRE guidelines.

Plaza Quarter 2 & 3

6.8. This residential development is located to the south of the site ranging from four to eight-storeys in height. The building comprises residential apartments with some commercial retail units at ground level.

Daylight

6.9. Our assessments demonstrate all windows serving residential accommodation will retain VSC levels of at least 0.8 times their existing values with the proposed in place and thus fully comply with the BRE guidelines.

6.10. The results of our No-Sky Contour (NSC) assessments show little effects in terms of NSC daylight with all rooms retaining 0.9 times their existing levels. The property is fully compliant for NSC under the BRE guidelines.

Sunlight

6.11. None of the windows facing the proposal are within 90 degrees of due south. As such the windows to this property are not relevant for Annual Probable Sunlight Hours (APSH) assessment under the BRE criteria.

2-12 Coalby Walk

6.12. This two-storey residential terrace is located to the west of the site. The property is made up of six individual houses all of which have windows overlooking the site. Given their proximity to the site, these have been considered for daylight and sunlight effects.

6.13. From external observation, the windows at ground level are understood to serve a mix of bathrooms / WCs, hallways or kitchens with bedrooms located above.

6.14. The proposed design has been developed to respond to these neighbours pulling away from the rear boundary and stepping back at the roof level to help limit daylight effects to these houses.

Daylight

6.15. In terms of VSC, all windows overlooking the site achieve 0.8 times their former value with the scheme in place and fully satisfy the BRE guidelines for the Vertical Sky Component (VSC) test.

6.16. In regards to NSC daylight, a total of eleven rooms experience shifts in the No-Sky Contour below 0.8 times their former level in the proposed condition. Five of the rooms are ground level kitchens retaining between 0.5-0.7 times their existing level. The remaining 6 rooms are located at first level (retaining 0.6-0.7 times their existing level) and are likely to be bedrooms. These kitchens are not blighted by the proposals where the key areas close to the window still receive light. Given these kitchens are fully compliant for the primary daylight metric VSC and bedrooms are deemed 'less important' for daylight under the BRE guidelines, these deviations from the targets are considered acceptable and fully in line with the intentions of the BRE guidelines.

Sunlight

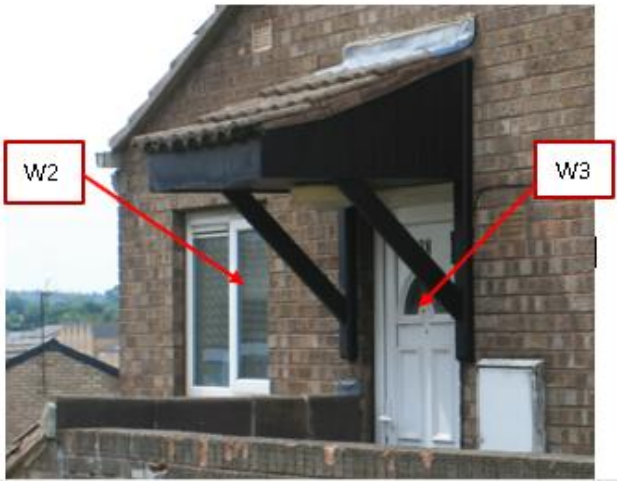
6.17. In relation to sunlight, none of the windows with a view of the proposals face within 90° of due south. As such, they are not relevant for APSH assessment under the BRE criteria.

38 Sackville Street

6.18. This three-storey end of terrace property is located directly north of the site. The main principal windows to this property face east and west away from the proposal however there are two windows which overlook the site. These have been considered for daylight and sunlight effects.

Daylight

6.19. The results of our VSC and NSC assessments show that all windows / rooms which are understood to serve habitable space will meet the BRE target of 0.8 times their existing level. The two rooms which experience changes beyond this appear to serve a hallway (W3) and a bathroom (W2) as the glazing is obscured. These are not relevant for daylight assessment under the BRE guidelines.



6.20. The property therefore fully satisfies the BRE criteria for VSC and NSC daylighting.

Sunlight

6.21. The windows to the side of this property face within 90° of due south however as they do not serve main living spaces, are not relevant for APSH assessment under the BRE guidelines.

6.22. The effects to this property are fully compliant with the BRE guide for sunlight.

7. Conclusions

7.1. This practice has undertaken an assessment to consider the potential daylight / sunlight effects of the proposed development at Fitzwilliam Inn, 24 Sackville Street, Barnsley.

7.2. The quality of the daylight and sunlight within the neighbouring properties has been assessed using the VSC, NSC and APSH assessments as recommended within the BRE document 'Site layout planning for daylight and sunlight – a guide to good practice'.

7.3. Redevelopment of an underutilised site will inevitably lead to a degree of change from the prevailing daylight / sunlight levels and will more often than not lead to relative reductions beyond the BRE guidelines. The current proposals demonstrate that whilst reductions do occur these effects will not result in an unacceptable level of harm and retained daylight amenity will remain good for a town centre location (between the late-teens to late twenties for VSC).

7.4. The proposals have been developed to respond the nearest neighbours at Coalby Walk and 38 Sackville Street pulling away from the rear boundary and stepping back from the parapet at the roof level to help limit daylight and sunlight effects to these properties.

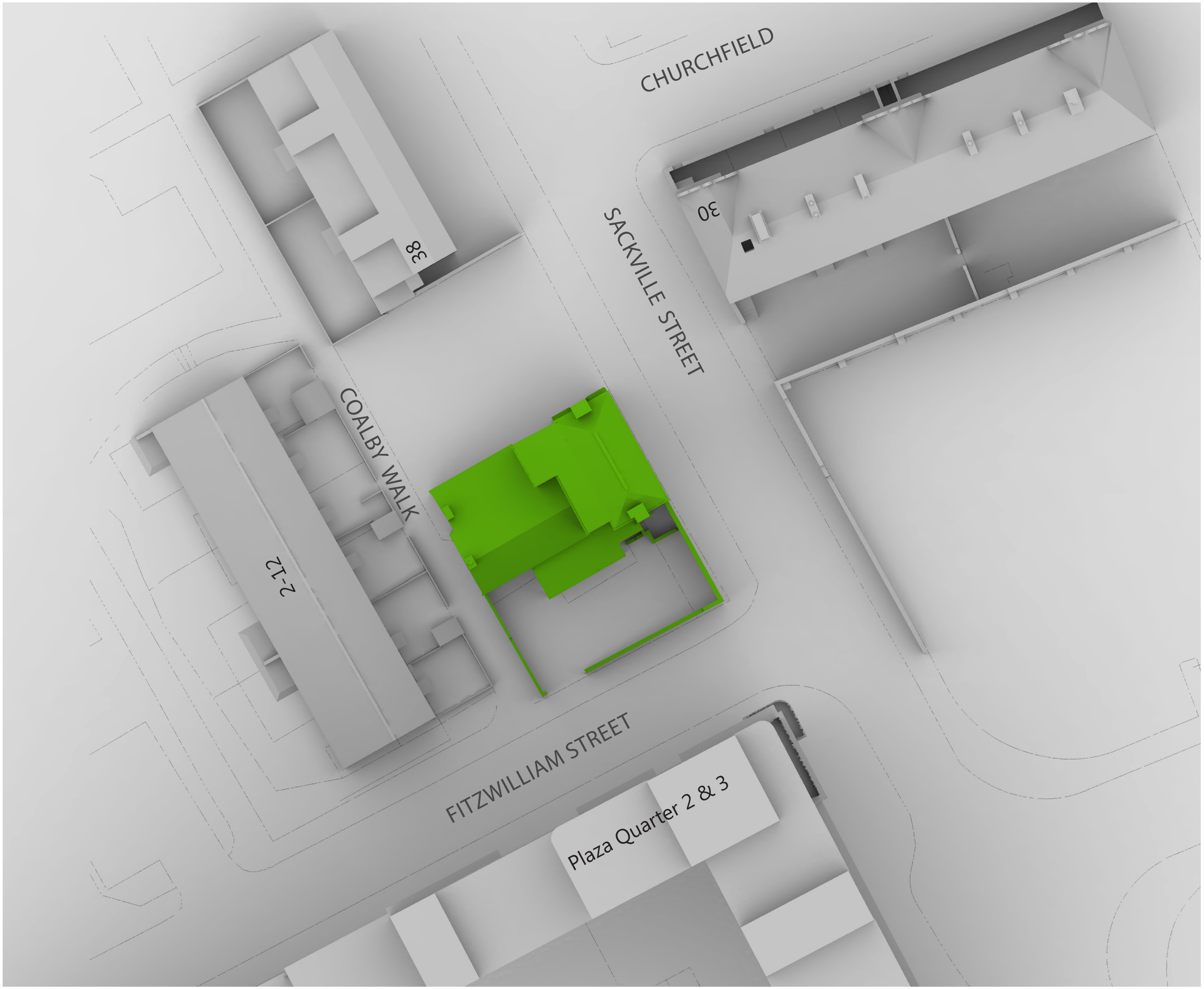
7.5. The results of these assessments demonstrate an excellent level of compliance with the BRE criteria in terms of the primary Vertical Sky Component test where all rooms achieve at least 0.8 times their former level with the scheme in place. Whilst deviations do occur to the secondary daylight metric NSC, these are isolated to five kitchens and six bedrooms within 2-12 Coalby Walk. Given these kitchens meet the targets for the primary metric VSC and that bedrooms are considered less important for daylight under the BRE guidance, these deviations are regarded fully acceptable.

7.6. In terms of sunlight levels, all neighbouring properties retain levels in line with the BRE criteria for APSH.

7.7. Overall, the scheme proposals respond well to the neighbours maintaining good amenity levels to all residential properties. The proposals are therefore wholly in line with the BRE guidelines and relevant planning policy.

Appendix 1

Drawings of the existing, proposed and surrounding buildings



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Sources of information

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580 - 24 Sackville Street S70 2DB.3ds
Received 25/02/2019

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Ordnance Survey

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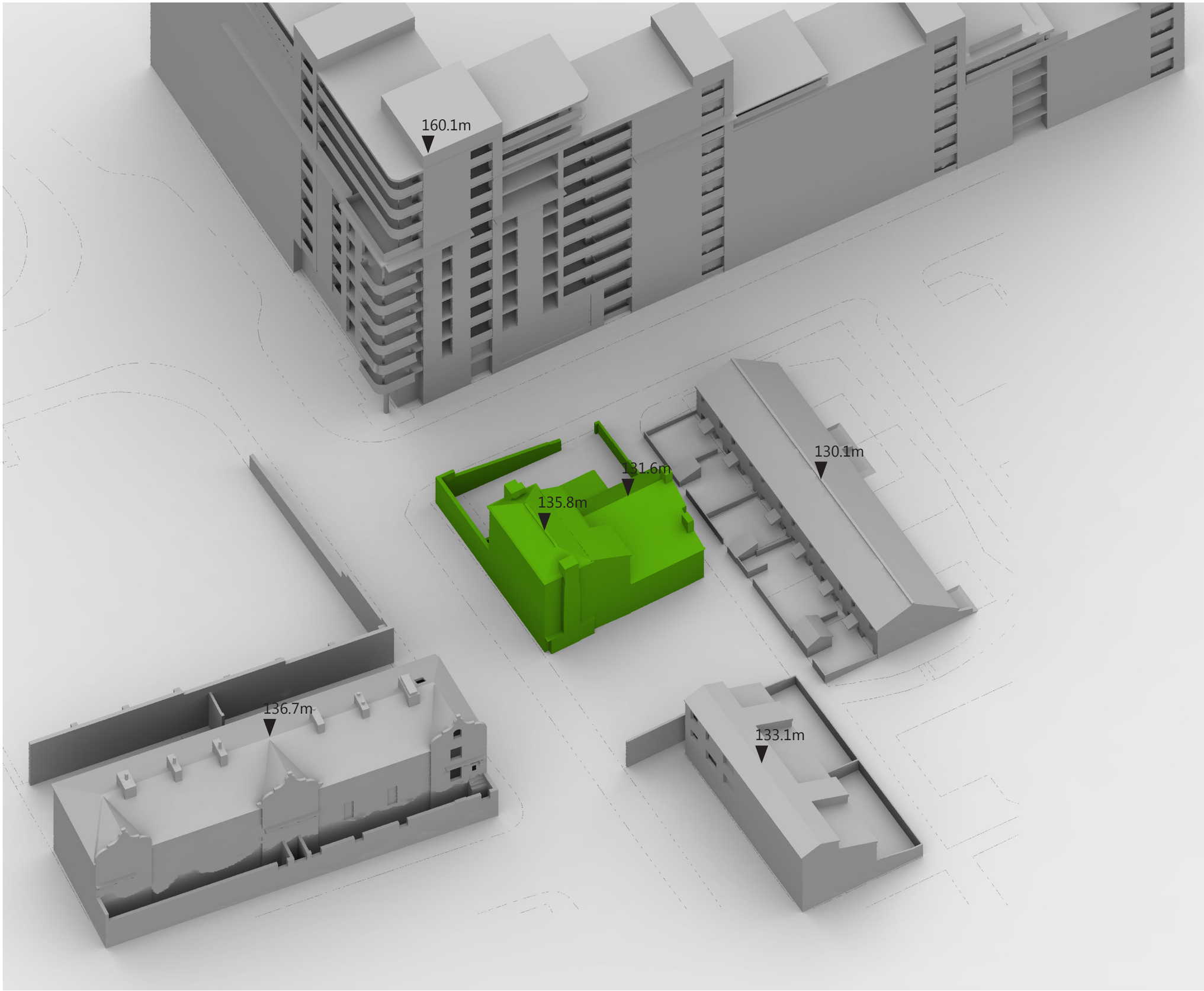
Existing

Proposed

NORTH

Project	24 Sackville Street Barnsley S70 2DB
Title	Existing Condition Plan View

Drawn	YH	Checked	--
Date	08/03/2019	Project	3206
Rel no.	03	Prefix	DS01
Page no.	01		



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Key:

Existing

Proposed

Notes:
All heights and dimensions are in AOD

Project	24 Sackville Street Barnsley S70 2DB
Title	Existing Condition 3D View

Drawn	YH	Checked	--
Date	08/03/2019	Project	3206
Rel no.	03	Prefix	DS01
Page no.	02		



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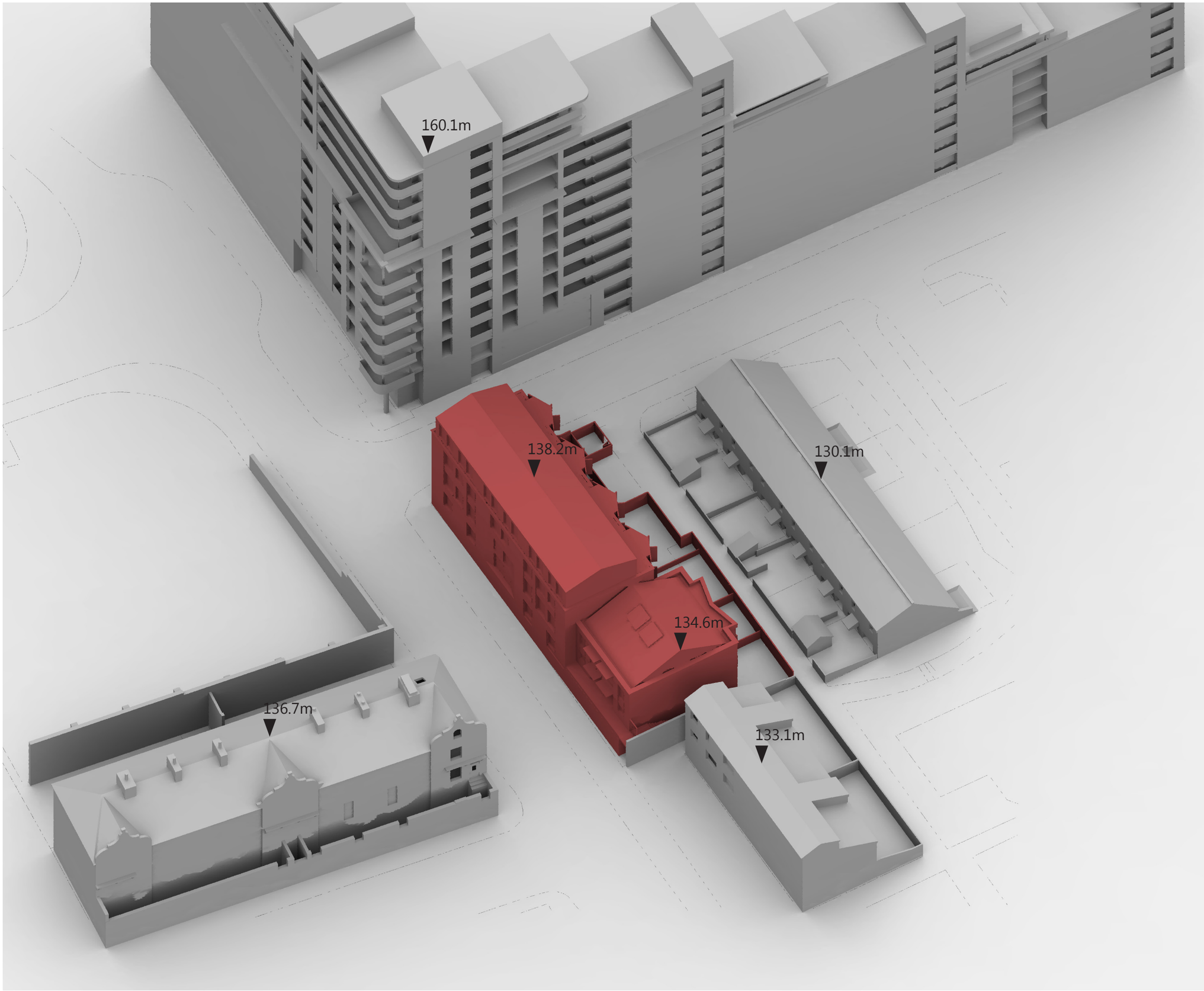
Proposed

NORTH

Project	24 Sackville Street Barnsley S70 2DB
Title	Proposed Development Plan View

Drawn	YH	Checked	--
Date	08/03/2019	Project	3206

Rel no.	Prefix	Page no.
03	DS01	03



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Key:

Existing

Proposed

Notes:
All heights and dimensions are in AOD

Project	24 Sackville Street Barnsley S70 2DB
Title	Proposed Development 3D View

Drawn	YH	Checked	--
Date	08/03/2019	Project	3206

Rel no.	Prefix	Page no.
03	DS01	04

Appendix 2

Results of the daylight and sunlight assessments within neighbouring properties

Address	Room	Window	Room Use	Existing VSC	Proposed VSC	Loss	Proportion Retained	Room Area	Existing NSC	Proposed NSC	Loss	Proportion Retained	Existing APSH Total	Existing APSH Winter	Proposed APSH Total	Proposed APSH Winter	Total Retained	Winter Retained
38 Sackville Street																		
Ground	R1	W1-L	Residential	34.4	34.3	0.0	1.0											
		W1-U						133.2	132.4	132.4	0.0	1.0	53	12	53	12	1.0	1.0
Ground	R2	W2	Residential	34.6	34.6	0.0	1.0											
	R2	W3		33.8	33.8	0.0	1.0	90.7	88.8	88.8	0.0	1.0	52	12	52	12	1.0	1.0
First	R1	W1	Residential	37.0	37.0	0.0	1.0	46.1	43.6	43.6	0.0	1.0	59	17	59	17	1.0	1.0
First	R2	W2-L	Bathroom	26.9	14.7	12.1	0.5											
		W2-U						85.8	55.7	34.6	21.2	0.6	66	16	33	12	0.5	0.8
First	R3	W3	Hallway	6.4	2.5	3.9	0.4	31.1	3.7	0.4	3.3	0.1	17	10	8	6	0.5	0.6
First	R4	W4-L	Residential	36.6	33.2	3.5	0.9											
		W4-U						87.1	86.2	85.2	1.0	1.0	N/A	N/A	N/A	N/A	N/A	N/A
First	R5	W5-L	Residential	36.9	35.7	1.1	1.0											
		W5-U						103.6	103.2	103.0	0.2	1.0	N/A	N/A	N/A	N/A	N/A	N/A
Second	R1	W1-L	Residential	37.2	35.7	1.5	1.0											
		W1-U						87.1	86.2	86.1	0.1	1.0	N/A	N/A	N/A	N/A	N/A	N/A
Second	R2	W2-L	Residential	37.4	36.8	0.6	1.0											
		W2-U						103.6	86.3	86.1	0.2	1.0	N/A	N/A	N/A	N/A	N/A	N/A
30 Churchfield																		
Ground	R1	W1-L	Residential	37.2	37.1	0.0	1.0											
		W1-U																
	R1	W2		29.6	29.6	0.0	1.0											
	R1	W3		36.7	36.7	0.0	1.0	206.8	202.6	202.6	0.0	1.0	N/A	N/A	N/A	N/A	N/A	N/A
Ground	R2	W4-L	Residential	32.0	26.4	5.6	0.8											
		W4-U																
	R2	W5		27.5	27.0	0.5	1.0											
	R2	W6		24.8	24.3	0.5	1.0											
	R2	W7-L		30.3	29.7	0.7	1.0											
		W7-U						184.3	184.2	182.8	1.3	1.0	86	18	82	14	1.0	0.8
First	R1	W1-L	Residential	39.5	39.5	0.0	1.0											
		W1-U																
	R1	W2-L		35.7	33.3	2.4	0.9											
		W2-U						206.8	204.8	204.8	0.0	1.0	57	15	54	12	0.9	0.8
First	R2	W3-L	Residential	34.5	31.2	3.2	0.9											
		W3-U																
	R2	W4-L		31.7	31.2	0.5	1.0											
		W4-U						184.3	181.8	181.8	0.0	1.0	90	21	87	18	1.0	0.9
Second	R1	W1-L	Residential	39.6	39.6	0.0	1.0											
		W1-U						175.9	167.5	167.5	0.0	1.0	N/A	N/A	N/A	N/A	N/A	N/A
Second	R2	W2	Residential	79.8	79.7	0.1	1.0	141.7	96.4	96.4	0.0	1.0	86	23	85	22	1.0	1.0
Plaza Quarter 2 and 3																		
Ground	R1	W1-L	Residential	27.9	26.4	1.6	0.9											
		W1-U						155.1	153.9	153.9	0.0	1.0	N/A	N/A	N/A	N/A	N/A	N/A
Ground	R2	W2-L	Residential	38.0	35.7	2.3	0.9											
		W2-U						139.3	137.6	137.6	0.0	1.0	N/A	N/A	N/A	N/A	N/A	N/A
Ground	R3	W3-L	Residential	37.6	34.3	3.4	0.9											
		W3-U						134.6	133.4	133.4	0.0	1.0	N/A	N/A	N/A	N/A	N/A	N/A
Ground	R4	W4-L	Residential	30.4	26.0	4.4	0.9											
		W4-U						162.5	160.5	160.5	0.0	1.0	N/A	N/A	N/A	N/A	N/A	N/A
Ground	R5	W5-L	Residential	36.9	30.4	6.5	0.8											
		W5-U						120.8	118.6	103.4	15.2	0.9	N/A	N/A	N/A	N/A	N/A	N/A
Ground	R6	W6-L	Residential	29.5	22.7	6.9	0.8											
		W6-U																
	R6	W7-L		31.1	31.1	0.0	1.0											
		W7-U																
	R6	W8-L		38.3	38.3	0.0	1.0											
		W8-U						345.1	345.1	344.9	0.3	1.0	N/A	N/A	N/A	N/A	N/A	N/A
First	R1	W1-L	Residential	28.7	27.7	1.0	1.0											
		W1-U						155.1	153.9	153.9	0.0	1.0	N/A	N/A	N/A	N/A	N/A	N/A
First	R2	W2-L	Residential	38.9	37.6	1.3	1.0											
		W2-U						139.3	137.6	137.6	0.0	1.0	N/A	N/A	N/A	N/A	N/A	N/A
First	R3	W3-L	Residential	38.8	36.8	2.0	0.9											
		W3-U						134.6	133.4	133.4	0.0	1.0	N/A	N/A	N/A	N/A	N/A	N/A
First	R4	W4-L	Residential	31.7	29.2	2.5	0.9											
		W4-U						162.5	160.8	160.8	0.0	1.0	N/A	N/A	N/A	N/A	N/A	N/A
First	R5	W5-L	Residential	38.4	34.8	3.6	0.9											
		W5-U						120.8	118.6	118.6	0.0	1.0	N/A	N/A	N/A	N/A	N/A	N/A
First	R6	W6-L	Residential	30.8	26.8	4.1	0.9											

Address	Room	Window	Room Use	Existing VSC	Proposed VSC	Loss	Proportion Retained	Room Area	Existing NSC	Proposed NSC	Loss	Proportion Retained	Existing APSH Total	Existing APSH Winter	Proposed APSH Total	Proposed APSH Winter	Total Retained	Winter Retained
		W6-U																
	R6	W7-L		31.3	31.3	0.0	1.0											
		W7-U																
	R6	W8-L		38.7	38.7	0.0	1.0											
		W8-U						345.1	345.1	345.1	0.0	1.0	N/A	N/A	N/A	N/A	N/A	N/A
Second	R1	W1-L	Residential	29.0	28.7	0.4	1.0											
		W1-U						155.1	153.9	153.9	0.0	1.0	N/A	N/A	N/A	N/A	N/A	N/A
Second	R2	W2-L	Residential	39.3	38.9	0.5	1.0											
		W2-U						139.3	137.6	137.6	0.0	1.0	N/A	N/A	N/A	N/A	N/A	N/A
Second	R3	W3-L	Residential	39.3	38.7	0.6	1.0											
		W3-U						134.6	133.4	133.4	0.0	1.0	N/A	N/A	N/A	N/A	N/A	N/A
Second	R4	W4-L	Residential	32.3	31.7	0.6	1.0											
		W4-U						162.5	160.9	160.9	0.0	1.0	N/A	N/A	N/A	N/A	N/A	N/A
Second	R5	W5-L	Residential	39.0	38.2	0.8	1.0											
		W5-U						120.8	118.6	118.6	0.0	1.0	N/A	N/A	N/A	N/A	N/A	N/A
Second	R6	W6-L	Residential	31.7	30.9	0.9	1.0											
		W6-U																
	R6	W7-L		31.8	31.8	0.0	1.0											
		W7-U																
	R6	W8-L		39.0	39.0	0.0	1.0											
		W8-U						345.1	345.1	345.1	0.0	1.0	N/A	N/A	N/A	N/A	N/A	N/A
Third	R1	W1-L	Residential	29.0	29.0	0.0	1.0											
		W1-U						155.1	153.9	153.9	0.0	1.0	N/A	N/A	N/A	N/A	N/A	N/A
Third	R2	W2-L	Residential	39.3	39.3	0.0	1.0											
		W2-U						139.3	137.6	137.6	0.0	1.0	N/A	N/A	N/A	N/A	N/A	N/A
Third	R3	W3-L	Residential	39.2	39.2	0.0	1.0											
		W3-U						134.6	133.4	133.4	0.0	1.0	N/A	N/A	N/A	N/A	N/A	N/A
Third	R4	W4-L	Residential	32.3	32.3	0.0	1.0											
		W4-U						162.5	160.9	160.9	0.0	1.0	N/A	N/A	N/A	N/A	N/A	N/A
Third	R5	W5-L	Residential	38.9	38.9	0.0	1.0											
		W5-U						120.8	118.6	118.6	0.0	1.0	N/A	N/A	N/A	N/A	N/A	N/A
Third	R6	W6-L	Residential	31.7	31.7	0.0	1.0											
		W6-U																
	R6	W7-L		31.8	31.8	0.0	1.0											
		W7-U																
	R6	W8-L		39.1	39.1	0.0	1.0											
		W8-U						345.1	345.1	345.1	0.0	1.0	N/A	N/A	N/A	N/A	N/A	N/A
Fourth	R1	W1-L	Residential	29.3	29.3	0.0	1.0											
		W1-U						155.1	153.9	153.9	0.0	1.0	N/A	N/A	N/A	N/A	N/A	N/A
Fourth	R2	W2-L	Residential	38.9	38.9	0.0	1.0											
		W2-U						139.3	137.6	137.6	0.0	1.0	N/A	N/A	N/A	N/A	N/A	N/A
Fourth	R3	W3-L	Residential	38.9	38.9	0.0	1.0											
		W3-U						134.6	133.4	133.4	0.0	1.0	N/A	N/A	N/A	N/A	N/A	N/A
Fourth	R4	W4-L	Residential	32.4	32.4	0.0	1.0											
		W4-U						162.5	160.8	160.8	0.0	1.0	N/A	N/A	N/A	N/A	N/A	N/A
Fourth	R5	W5-L	Residential	38.6	38.6	0.0	1.0											
		W5-U						120.8	118.6	118.6	0.0	1.0	N/A	N/A	N/A	N/A	N/A	N/A
Fourth	R6	W6-L	Residential	31.6	31.6	0.0	1.0											
		W6-U																
	R6	W7-L		31.9	31.9	0.0	1.0											
		W7-U																
	R6	W8-L		39.2	39.2	0.0	1.0											
		W8-U						345.1	345.1	345.1	0.0	1.0	N/A	N/A	N/A	N/A	N/A	N/A
Fifth	R1	W1-L	Residential	28.6	28.6	0.0	1.0											
		W1-U						155.1	153.9	153.9	0.0	1.0	N/A	N/A	N/A	N/A	N/A	N/A
Fifth	R2	W2-L	Residential	33.8	33.8	0.0	1.0											
		W2-U						139.3	137.6	137.6	0.0	1.0	N/A	N/A	N/A	N/A	N/A	N/A
Fifth	R3	W3-L	Residential	33.5	33.5	0.0	1.0											
		W3-U						134.6	133.3	133.3	0.0	1.0	N/A	N/A	N/A	N/A	N/A	N/A
Fifth	R4	W4-L	Residential	30.6	30.6	0.0	1.0											
		W4-U						162.5	160.9	160.9	0.0	1.0	N/A	N/A	N/A	N/A	N/A	N/A
Fifth	R5	W5-L	Residential	32.9	32.9	0.0	1.0											
		W5-U						120.8	118.5	118.5	0.0	1.0	N/A	N/A	N/A	N/A	N/A	N/A
Fifth	R6	W6-L	Residential	31.7	31.7	0.0	1.0											
		W6-U																
	R6	W7-L		39.0	39.0	0.0	1.0											
		W7-U																
	R6	W8-L		39.0	39.0	0.0	1.0											
		W8-U						345.1	345.1	345.1	0.0	1.0	N/A	N/A	N/A	N/A	N/A	N/A
Sixth	R1	W1-L	Residential	29.0	29.0	0.0	1.0											
		W1-U						155.1	153.9	153.9	0.0	1.0	N/A	N/A	N/A	N/A	N/A	N/A

Address	Room	Window	Room Use	Existing VSC	Proposed VSC	Loss	Proportion Retained	Room Area	Existing NSC	Proposed NSC	Loss	Proportion Retained	Existing APSH Total	Existing APSH Winter	Proposed APSH Total	Proposed APSH Winter	Total Retained	Winter Retained
Sixth	R2	W2-L W2-U	Residential	39.5	39.5	0.0	1.0	278.5	278.4	278.4	0.0	1.0	N/A	N/A	N/A	N/A	N/A	N/A
Sixth	R3	W3-L W3-U	Residential	32.3	32.3	0.0	1.0	162.5	160.5	160.5	0.0	1.0	N/A	N/A	N/A	N/A	N/A	N/A
Sixth	R4	W4-L W4-U	Residential	27.2	27.2	0.0	1.0											
	R4	W5-L W5-U		29.5	29.5	0.0	1.0	284.9	284.9	284.9	0.0	1.0	N/A	N/A	N/A	N/A	N/A	N/A
Seventh	R1	W1-L W1-U	Residential	26.1	26.1	0.0	1.0	155.1	153.9	153.9	0.0	1.0	N/A	N/A	N/A	N/A	N/A	N/A
Seventh	R2	W2-L W2-U	Residential	39.3	39.3	0.0	1.0	278.5	278.4	278.4	0.0	1.0	N/A	N/A	N/A	N/A	N/A	N/A
Seventh	R3	W3-L W3-U	Residential	32.3	32.3	0.0	1.0	162.5	160.7	160.7	0.0	1.0	N/A	N/A	N/A	N/A	N/A	N/A
Seventh	R4	W4-L W4-U	Residential	27.1	27.1	0.0	1.0											
	R4	W5-L W5-U		29.4	29.4	0.0	1.0	284.9	284.9	284.9	0.0	1.0	N/A	N/A	N/A	N/A	N/A	N/A
Eighth	R1	W1-L W1-U	Residential	25.0	25.0	0.0	1.0											
	R1	W2-L W2-U		23.4	23.4	0.0	1.0											
	R1	W6-L W6-U		26.9	26.9	0.0	1.0	329.3	329.3	329.3	0.0	1.0	42	17	42	17	1.0	1.0
Eighth	R2	W3-L W3-U	Residential	32.3	32.3	0.0	1.0	162.5	160.8	160.8	0.0	1.0	N/A	N/A	N/A	N/A	N/A	N/A
Eighth	R3	W4-L W4-U	Residential	27.5	27.5	0.0	1.0											
	R3	W5-L W5-U		29.9	29.9	0.0	1.0	284.9	284.9	284.9	0.0	1.0	N/A	N/A	N/A	N/A	N/A	N/A
Ninth	R1	W1-L W1-U	Residential	24.9	24.9	0.0	1.0											
	R1	W2-L W2-U		23.9	23.9	0.0	1.0											
	R1	W3-L W3-U		22.4	22.4	0.0	1.0											
	R1	W7-L W7-U		25.4	25.4	0.0	1.0	329.3	329.3	329.3	0.0	1.0	38	16	38	16	1.0	1.0
Ninth	R2	W4-L W4-U	Residential	30.5	30.5	0.0	1.0	162.5	160.7	160.7	0.0	1.0	N/A	N/A	N/A	N/A	N/A	N/A
Ninth	R3	W5-L W5-U	Residential	24.4	24.4	0.0	1.0											
	R3	W6-L W6-U		26.4	26.4	0.0	1.0	284.9	284.9	284.9	0.0	1.0	N/A	N/A	N/A	N/A	N/A	N/A
2 Coalby Walk																		
Ground	R3	W3	Kitchen	22.6	18.0	4.7	0.8	48.9	48.3	26.4	21.9	0.5	N/A	N/A	N/A	N/A	N/A	N/A
First	R1	W1	Residential	25.8	20.5	5.2	0.8	67.1	58.8	45.1	13.7	0.8	N/A	N/A	N/A	N/A	N/A	N/A
First	R2	W2-L W2-U	Bedroom	26.5	20.9	5.6	0.8	70.4	64.7	40.6	24.1	0.6	N/A	N/A	N/A	N/A	N/A	N/A
4 Coalby Walk																		
Ground	R6	W6	Kitchen	21.9	18.5	3.4	0.8	101.4	91.3	60.0	31.3	0.7	N/A	N/A	N/A	N/A	N/A	N/A
First	R3	W3-L W3-U	Bedroom	26.8	21.2	5.6	0.8	90.2	80.2	51.2	29.0	0.6	N/A	N/A	N/A	N/A	N/A	N/A
First	R4	W4	Bedroom	27.0	21.6	5.4	0.8	86.9	78.4	51.4	27.0	0.7	N/A	N/A	N/A	N/A	N/A	N/A
6 Coalby Walk																		
Ground	R7	W7	Kitchen	21.4	18.1	3.3	0.8	89.8	80.2	49.5	30.7	0.6	N/A	N/A	N/A	N/A	N/A	N/A
First	R5	W5	Bedroom	27.4	22.0	5.4	0.8	82.0	68.9	41.7	27.2	0.6	N/A	N/A	N/A	N/A	N/A	N/A
First	R6	W6-L W6-U	Bedroom	28.3	22.8	5.5	0.8	85.4	78.8	54.6	24.2	0.7	N/A	N/A	N/A	N/A	N/A	N/A
8 Coalby Walk																		
Ground	R10	W10	Kitchen	22.5	17.0	5.5	0.8	50.8	49.3	26.5	22.9	0.5	N/A	N/A	N/A	N/A	N/A	N/A
First	R7	W7-L W7-U	Bedroom	28.9	23.4	5.5	0.8	71.5	63.6	40.3	23.3	0.6	N/A	N/A	N/A	N/A	N/A	N/A
First	R8	W8	Bedroom	29.9	24.3	5.6	0.8	68.2	64.6	55.0	9.7	0.9	N/A	N/A	N/A	N/A	N/A	N/A
10 Coalby Walk																		

Address	Room	Window	Room Use	Existing VSC	Proposed VSC	Loss	Proportion Retained	Room Area	Existing NSC	Proposed NSC	Loss	Proportion Retained	Existing APSH Total	Existing APSH Winter	Proposed APSH Total	Proposed APSH Winter	Total Retained	Winter Retained
Ground	R15	W16	Kitchen	25.8	20.6	5.2	0.8	51.2	50.6	35.0	15.6	0.7	N/A	N/A	N/A	N/A	N/A	N/A
First	R9	W9	Bedroom	30.4	24.9	5.6	0.8	68.8	64.9	52.6	12.3	0.8	N/A	N/A	N/A	N/A	N/A	N/A
First	R10	W10-L W10-U	Bedroom	31.1	26.0	5.1	0.8	72.2	66.6	64.1	2.5	1.0	N/A	N/A	N/A	N/A	N/A	N/A
12 Coalby Walk																		
Ground	R18	W19	Kitchen	27.6	24.4	3.2	0.9	97.0	94.2	89.1	5.1	0.9	N/A	N/A	N/A	N/A	N/A	N/A
First	R11	W11-L W11-U	Bedroom	31.3	27.0	4.3	0.9	87.6	82.3	77.0	5.3	0.9	N/A	N/A	N/A	N/A	N/A	N/A
First	R12	W12	Bedroom	31.2	28.1	3.1	0.9	84.3	78.2	77.6	0.6	1.0	N/A	N/A	N/A	N/A	N/A	N/A