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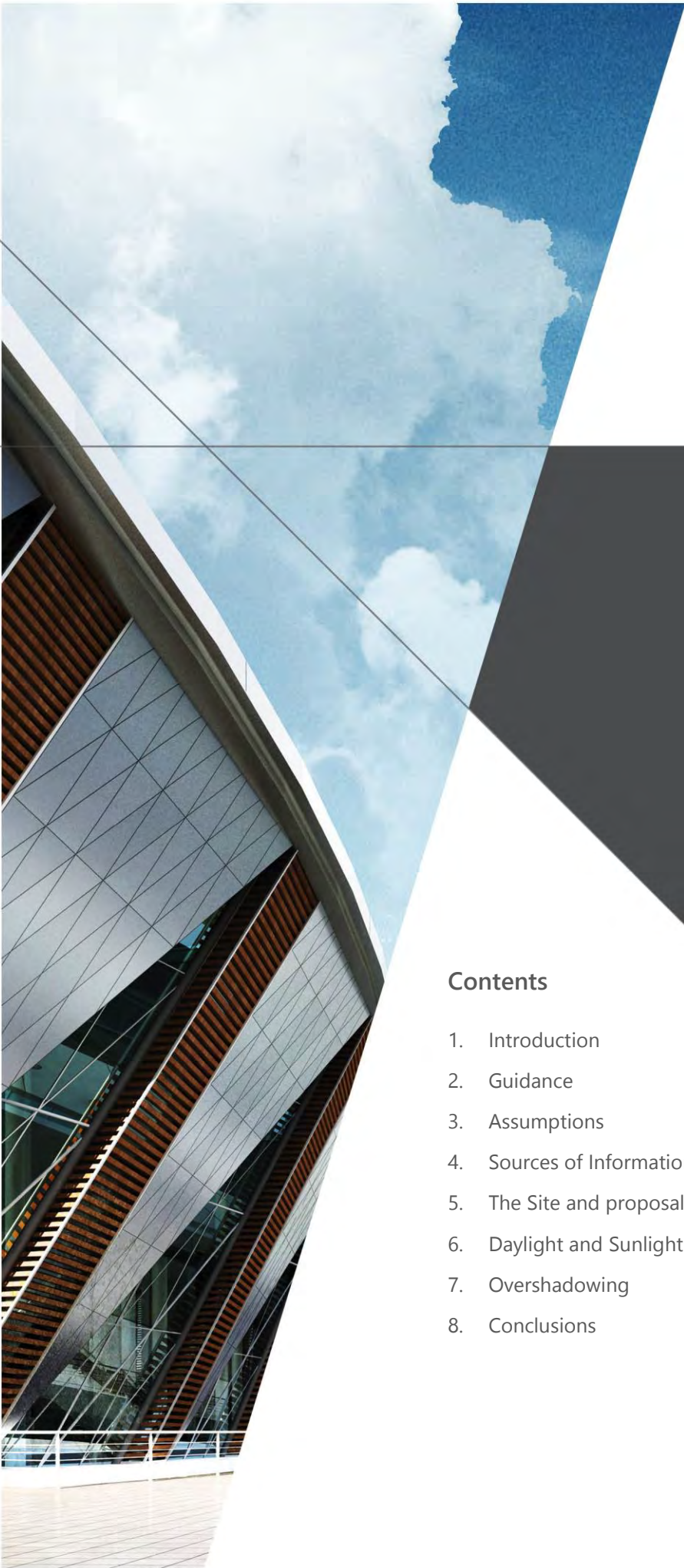
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DAYLIGHT & SUNLIGHT REPORT

Cox and Wyman, Cardiff Road
Reading

27th September 2017

A low-angle, upward-looking photograph of a modern building's facade. The building features a complex, geometric design with a grid of white structural elements and large glass panels. The sky is blue with scattered white clouds. The image is partially obscured by a large, dark grey, angular shape on the right side of the page.

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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 new development at Cox and Wyman, Cardiff Road, Reading.
- 1.2. 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) and the British Standard document BS8206 Pt2.

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 to no less than 0.8 times its former value within which changes are not considered noticeable.
- 2.5. The ADF method calculates the average illuminance within a room as a proportion of the illuminance available to an unobstructed point outdoors under a sky of known luminance and luminance distribution. This is the most detailed of the daylight calculations and considers the physical nature of the room behind the window,

including; window transmittance, and surface reflectivity. The BRE guidance and British Standard sets the following recommended ADF levels for habitable room uses:

- 1% Bedrooms
- 1.5% Living Rooms
- 2.0% Kitchens

- 2.6. This assessment is generally used for the assessment of daylight to residential properties within a proposed scheme where all parameters are known and is generally not considered appropriate for the assessment of neighbouring properties. As such, the ADF assessment is not included within this report.

Sunlight Assessment

- 2.7. 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.
- 2.8. The guidelines suggest that windows should receive at least 25% total APSH with 5% of this total being enjoyed in the winter months. When this is not achieved, the guidelines allow for a 20% reduction in sunlight when compared to the former value with total reductions of less than 4% APSH not being considered noticeable.

Sunlight Amenity Assessment (Overshadowing)

- 2.9. In respect of the shading impacts to amenity space, such as neighbouring gardens, the BRE guidelines set out a sunlight amenity assessment to ensure the space remains adequately sunlit throughout the year. This is achieved by plotting a contour of the area which receives at least 2 hours of direct sunlight on the 21st March. An amenity space with at least 2 hours of sunlight across at least 50% of its area, or if the area retains 0.8 times or greater its former value, can be said to see acceptable levels of sunlight.

Policy Context

- 2.10. 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.
- 2.11. 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”.

- 2.12. 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. Eb7 have used photogrammetry, site photographs and Ordnance Survey information to build a 3D computer model of the existing building and its surroundings. Our understanding of the former site is shown within appendix 1. The architect’s drawings have been used to build a model of the proposal, drawings of which can also be found in appendix 1.
- 3.2. Where it has not been possible to gain access to the surrounding properties, details of the internal layouts and floor level heights 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 (14ft) for residential properties and 6m (20ft) for commercial properties.

4. Sources of Information

Barton Willmore

24325_Cox&Wyman_Model_060717.dwg

Received 07/06/2017

24325 – RG-L-01D Landscape GA.pdf

24325_A-PP-P10-01-Proposed site Plan.dwg

24325_A-PP-P10-02-Proposed Roof Plan.dwg

Received 25/09/2017

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Site Photographs

Ordnance Survey

EB7 Immersive

Master.dwg

Received 24/04/2017

5. The Site and Proposal

- 5.1. The existing site is of commercial / light industrial use and is bound by Meadow Road to the north, Addison Road to the east, Cardiff Road to the south and Milford Road to the west. The proposal is to demolish the existing buildings on the site to develop a new residential development comprised of both residential terraces and apartments.
- 5.2. The nearby surrounding area is a mix of commercial and residential use. To the east, south and south west is of residential use and to the west and north is of commercial use. The wider site
- 5.3. The following residential properties were considered within our assessment as those with potential to see an impact to their daylight:
 - 40 Cardiff Road
 - 67 – 129 Cardiff Road (odd numbers only) and Cardiff Mews
 - 24 Cardiff Road
 - 6 – 40 Addison Road (even numbers only)

6. Daylight and Sunlight Results

- 6.1. Full results of the daylight and sunlight assessment are attached within appendix 2. Drawings showing the existing and proposed scenarios are included within appendix 1.

40 Cardiff Road

- 6.2. This end of row terrace house is situated across Milford Road, to the west of the proposed site. The rear elevation and flank wall looks towards the proposed site and have therefore been considered within the technical analysis.

Daylight

- 6.3. The results of our VSC assessment have shown no noticeable change to the VSC levels, with all windows relevant for assessment retaining 0.8 times their former VSC values. In addition, the NSC results show full compliance with the BRE criteria, with the area of the No Sky Line Contour retaining 0.8 times its former value. As such, the proposed scheme demonstrates full compliance with the BRE criteria.

Sunlight

- 6.4. The results of the APSH sunlighting assessment show that all rooms potentially relevant for assessment retain in excess of 0.8 times their existing APSH or are within 4% total APSH of the pre-existing values. These results therefore confirm full compliance with the BRE criteria.

67 – 129 Cardiff Road (odd numbers only) and Cardiff Mews

- 6.5. This row of terraces houses and flats is situated across Cardiff Road, immediately to the south of the site. The front elevations of these properties look directly towards the proposed scheme.

Daylight

- 6.6. The results of our VSC assessment have shown no noticeable change to the VSC levels, with all windows relevant for assessment retaining 0.8 times their former VSC values. In addition, the NSC results show full compliance with the BRE criteria, with the area of the No Sky Line Contour retaining 0.8 times its former value. As such, the proposed scheme demonstrates full compliance with the BRE criteria.

Sunlight

- 6.7. None of the windows within this property that face the proposed scheme are orientated within 90° of due south and are therefore not relevant under the APSH sunlight assessment.

24 Cardiff Road

- 6.8. This end of row terrace house is situated across Addison Road, to the south east of the proposed site. The rear elevations and flank wall looks towards the proposed site and have therefore been considered within the technical analysis.

Daylight

- 6.9. The results of our VSC assessment have shown no noticeable change to the VSC levels, with all windows relevant for assessment retaining 0.8 times their former VSC values. In addition, the NSC results show full compliance with the BRE criteria, with the area of the No Sky Line Contour retaining 0.8 times its former value. As such, the proposed scheme demonstrates full compliance with the BRE criteria.

Sunlight

- 6.10. None of the windows within this property that face the proposed scheme are orientated within 90° of due south and are therefore not relevant under the APSH sunlight assessment.

6 - 40 Addison Road (even numbers only)

- 6.11. This row of terrace properties is situated across Addison Road, immediately to the east of the proposed site. The front elevations of this property looks towards the proposal and have therefore been considered within the technical analysis.

Daylight

- 6.12. The results of our VSC assessment have shown no noticeable change to the VSC levels, with all windows relevant for assessment retaining 0.8 times their former VSC values. In addition, the NSC results show full compliance with the BRE criteria, with the area of the No Sky Line Contour retaining 0.8 times its former value. As such, the proposed scheme demonstrates full compliance with the BRE criteria.

Sunlight

- 6.13. All windows within 90 degrees of due south have been assessed under the Annual Probable Sunlight Hours (APSH) sunlight assessment, in line with the BRE criteria.
- 6.14. The results from our studies indicate that all windows within all of these properties retain well in excess of 25% total APSH and 5% winter APSH with the proposal in place and the scheme is therefore fully compliant with the recommendations of the BRE guidance in regard to sunlight.

7. Overshadowing

- 7.1. The BRE guide sets out a methodology for assessing shading impacts upon specific areas of amenity space. Having reviewed the amenity spaces within the neighbouring properties, we consider there to be no adverse impacts. We have continued to undertake an assessment in respect of the proposed amenity areas within the site.
- 7.2. For an amenity area to be considered well sunlit, the BRE guide suggests that at least 50% of the space should enjoy at least 2 hours of direct sunlight on March 21st. The results of this assessment are attached at appendix 3.
- 7.3. The results of our analysis have shown that 13 of the 40 amenity spaces would experience compliance with the BRE criteria, with at least 50% of each space achieving at least 2 hours or more of direct sunlight on the 21st of March.
- 7.4. The remaining areas are all situated immediately to the north of a typical row of terrace houses and this is not uncommon in a suburban context. These spaces can be identified as 1-25 (inclusive), 37 and 38. Finally, we note that in order to ensure privacy, these spaces are also surrounded by fences.
- 7.5. The areas labelled as 1- 25 are situated to the north of the proposed units situated along Cardiff Road. These spaces enjoy a broadly open northerly aspect, however this orientation limits the direct sunlight potential. We note that these spaces are identical to those situated at 2 – 24 Cardiff Road, therefore confirming the acceptability of the design. With regard to the areas labelled as 37 and 38, these areas are situated in a particularly constrained courtyard location. Whilst these specific areas would experience non-compliant amenity levels, it should be noted that these spaces are directly linked to a well sunlit communal amenity space. In fact, the results show all communal amenity spaces will achieve sunlight levels well in excess of the suggested

targets.

- 7.6. The BRE guidelines allow the criteria to be applied flexibly where other factors are to be considered. The orientation of the amenity spaces has been balanced against the wider site considerations such as privacy. Whilst some of the private amenity spaces, do not meet the BRE targets, given the high levels of direct sunlight within all communal spaces, coupled with the nature of the deviations, the impacts should be considered in line with the overall intentions of the BRE criteria.

8. Conclusions

- 8.1. An assessment has been undertaken to consider the potential daylight / sunlight effects of the proposed development at Cox and Wyman, Cardiff Road, Reading. 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' and the British Standards Document BS8206 part 2.
- 8.2. The results of the VSC and NSC assessments have shown that all windows / rooms within the surrounding properties would retain compliant daylight levels in line with the BRE criteria.
- 8.3. The results of the APSH sunlight assessment also shows that all potentially relevant windows / rooms comply with the BRE guidelines.
- 8.4. In addition to the above, an assessment of the sunlight available to the gardens within the proposed scheme has also been assessed. The results show deviations from the suggested targets, however these effects are driven by the orientation of the standard row of terrace houses which form part of the scheme. As the proposed communal spaces retain sunlight levels in excess of the BRE targets, coupled with the consideration of the wider effects of the scheme, the results should be considered acceptable and in line with the overall intentions of the BRE criteria.
- 8.5. The proposed scheme is in line with the intentions of the BRE guidelines and relevant planning policy in terms of daylight and sunlight.



Appendix 1

Drawings of the existing, proposed and surrounding buildings



Sources of information

Barton Willmore
24325_Cox&Wyman_Model_060717.dwg
Received 07/06/2017

24325 - RG-L01D Landscape GA.pdf
24325_A-PP-P10-01-Proposed Site Plan.
dwg
24325_A-PP-P10-02-Proposed Roof
Plan.dwg
Received 25/09/2017

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Site Photographs
Ordnance Survey

EB7 Immersive
Master.dwg
Received 24/04/2017



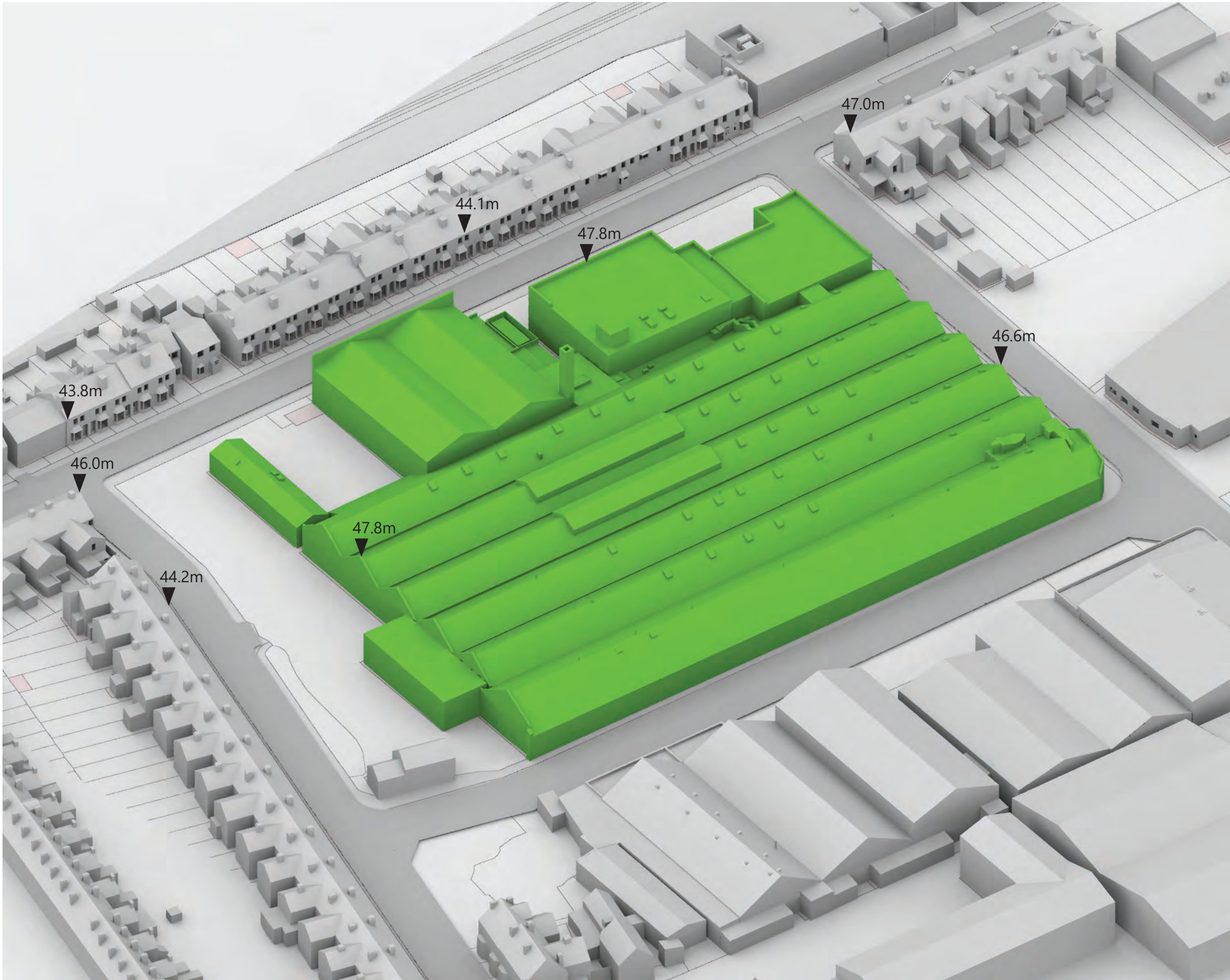
Project Cox and Wyman Building
Reading

Title Existing Condition
Plan View

Drawn ID Checked --

Date 25/09/2017 Rel no. 01

Drawing no. 2407-01



Sources of information

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Received 07/06/2017

24325 - RG-L01D Landscape GA.pdf
24325_A-PP-P10-01-Proposed Site Plan.
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Project Cox and Wyman Building
Reading

Title Existing Condition
3D View

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Sources of information

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24325 - RG-L01D Landscape GA.pdf
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24325_A-PP-P10-02-Proposed Roof
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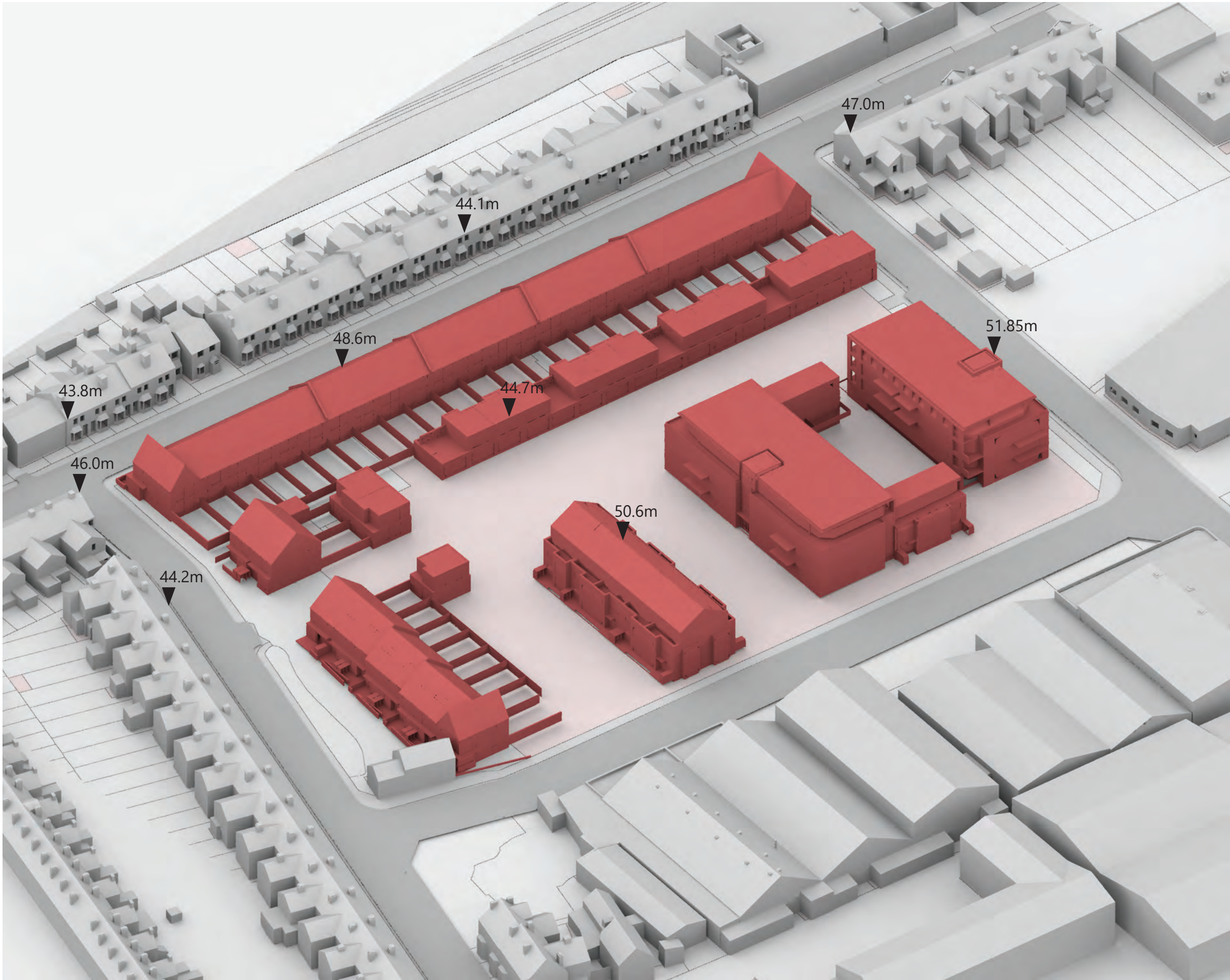
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Title Proposed Condition
Plan View

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Date 25/09/2017 Rel no. 01

Drawing no. 2407-01



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Project Cox and Wyman Building
Reading

Title Proposed Condition
3D View

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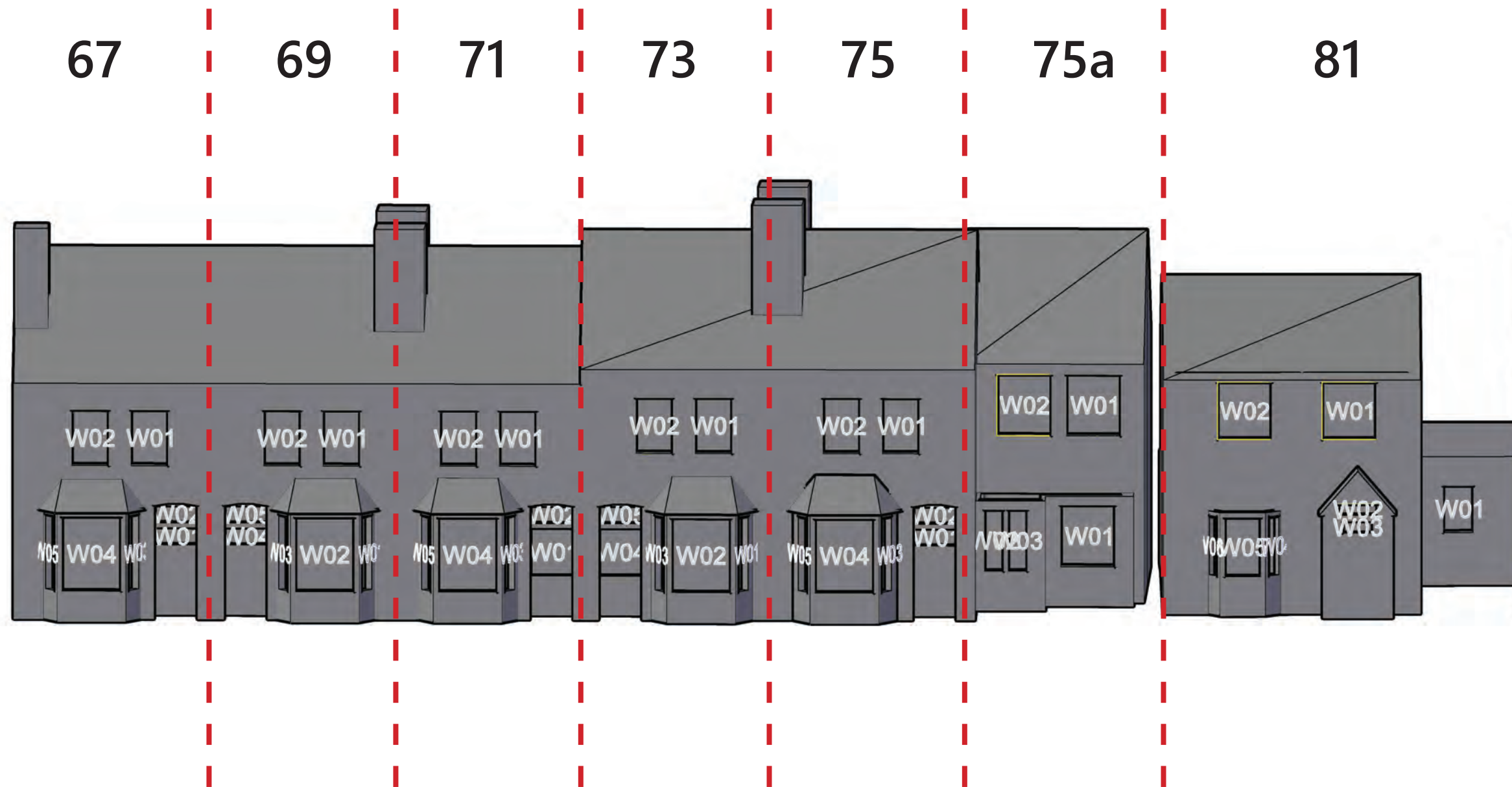
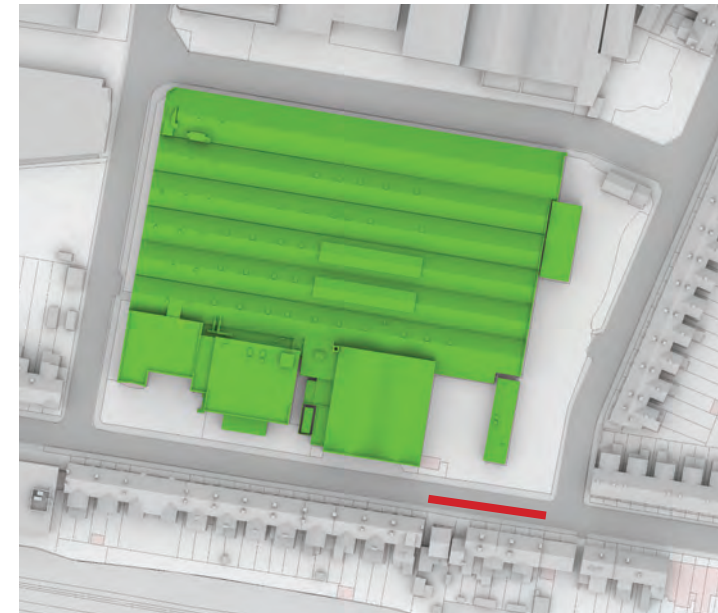
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24325_A-PP-P10-02-Proposed Roof
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Project Cox and Wyman Building
Reading

Title 67 to 81 Cardiff Road
Window Map

Drawn ID Checked --

Date 25/09/2017 Rel no. 01

Drawing no. 2407-WM01

Sources of information

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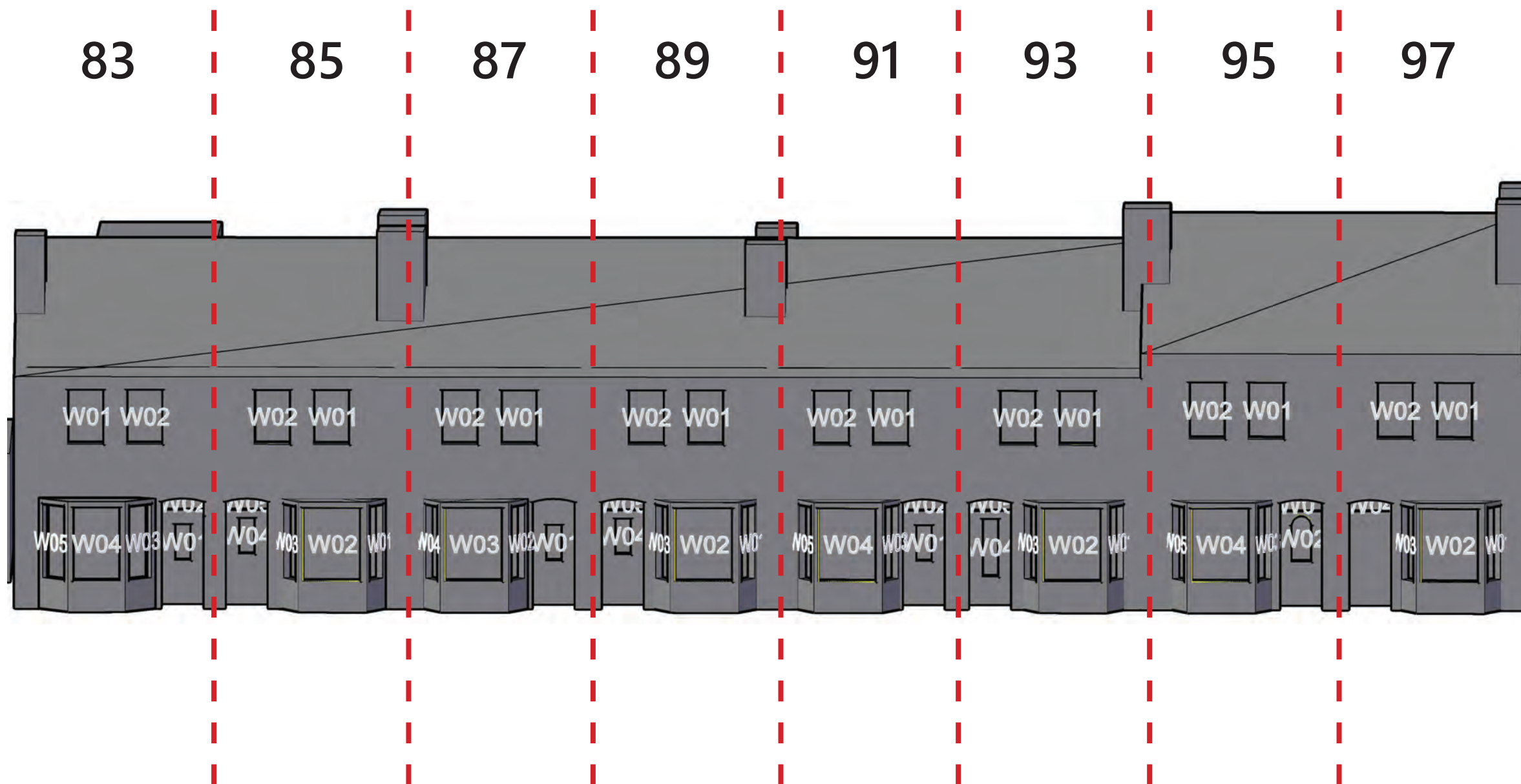
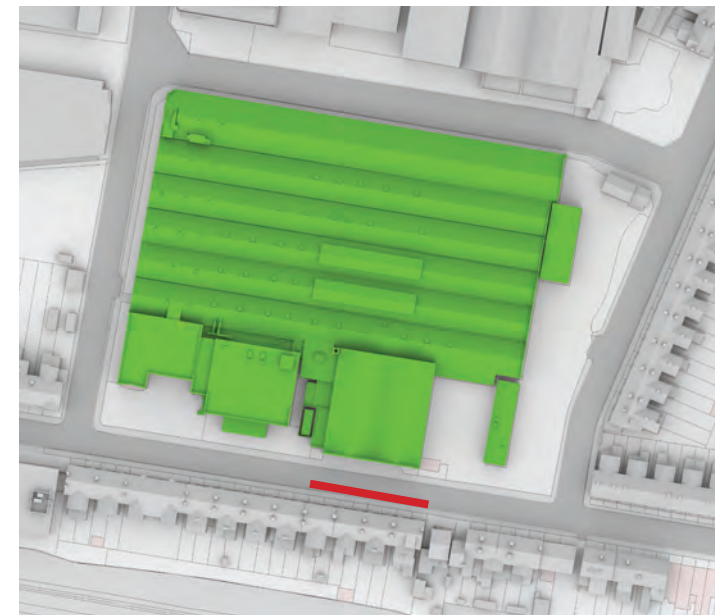
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Received 25/09/2017

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Project Cox and Wyman Building
Reading

Title 81 to 97 Cardiff Road
Window Map

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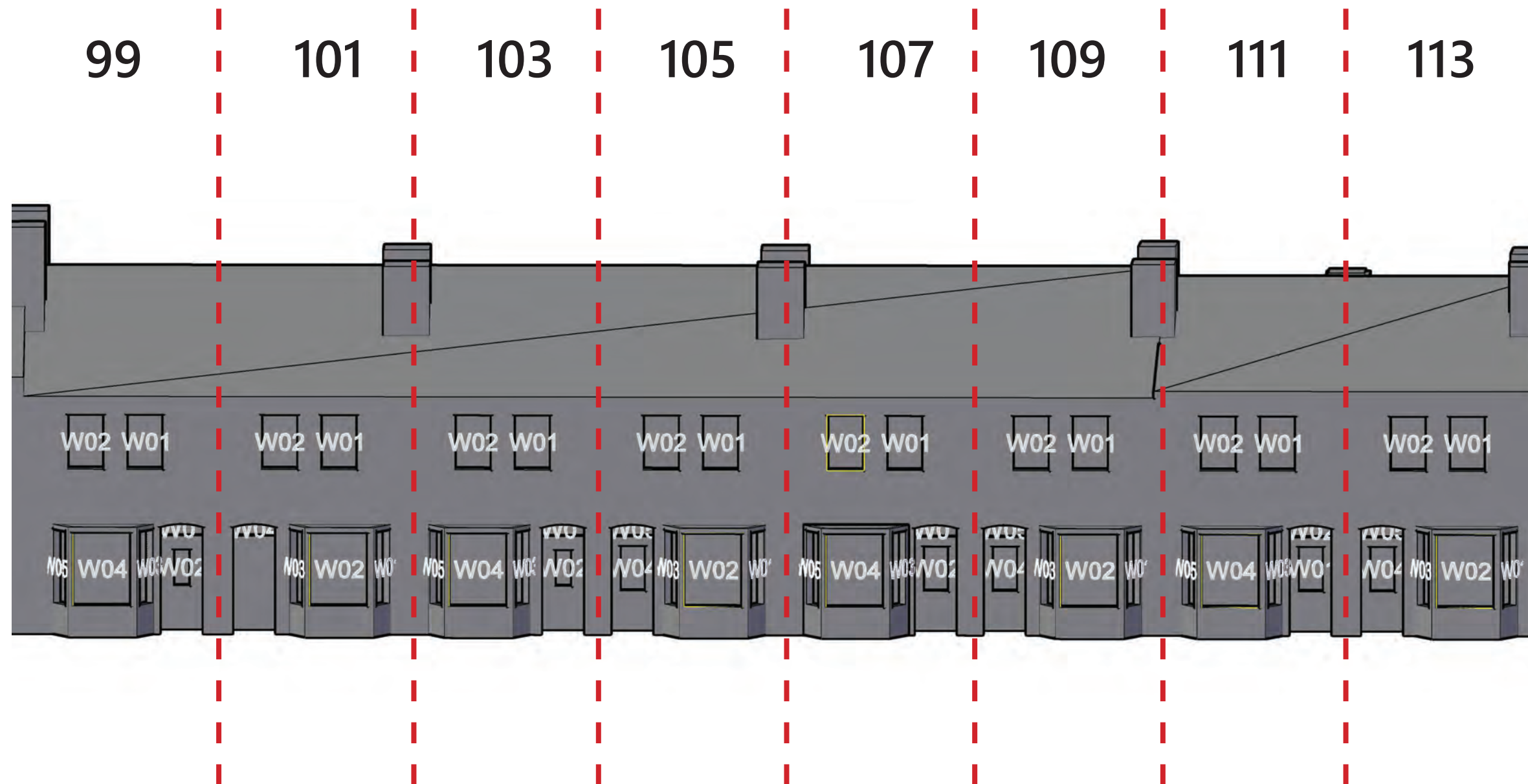
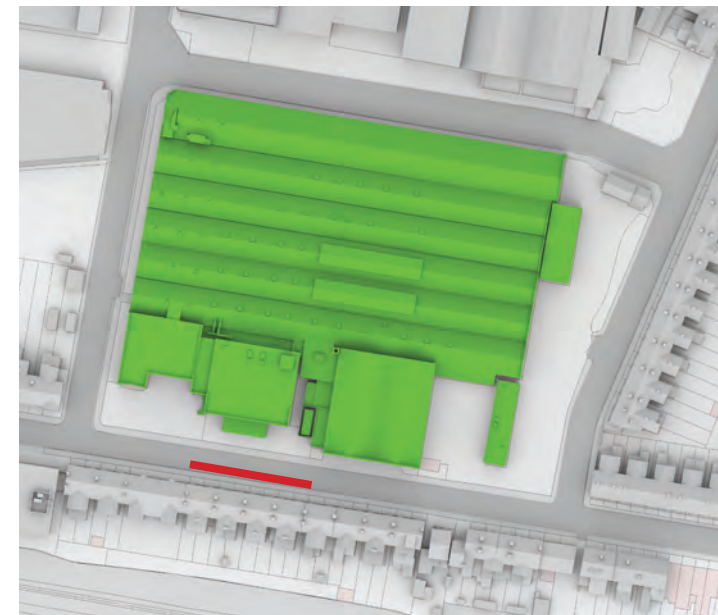
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Ordnance Survey

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Project Cox and Wyman Building
Reading

Title 99 to 113 Cardiff Road
Window Map

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Sources of information

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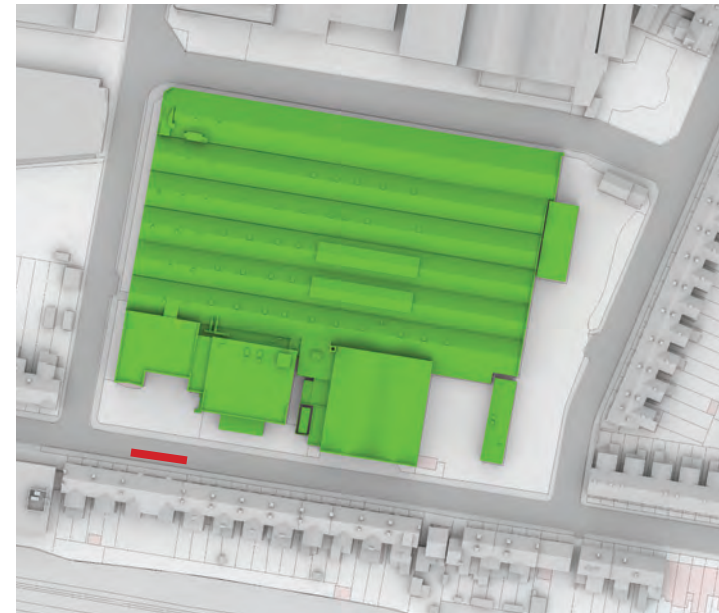
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24325_A-PP-P10-02-Proposed Roof Plan.dwg
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Project Cox and Wyman Building
Reading

Title 1 to 6 Cardiff Mews
Window Map

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Date 25/09/2017 Rel no. 01

Drawing no. 2407-WM04

Sources of information

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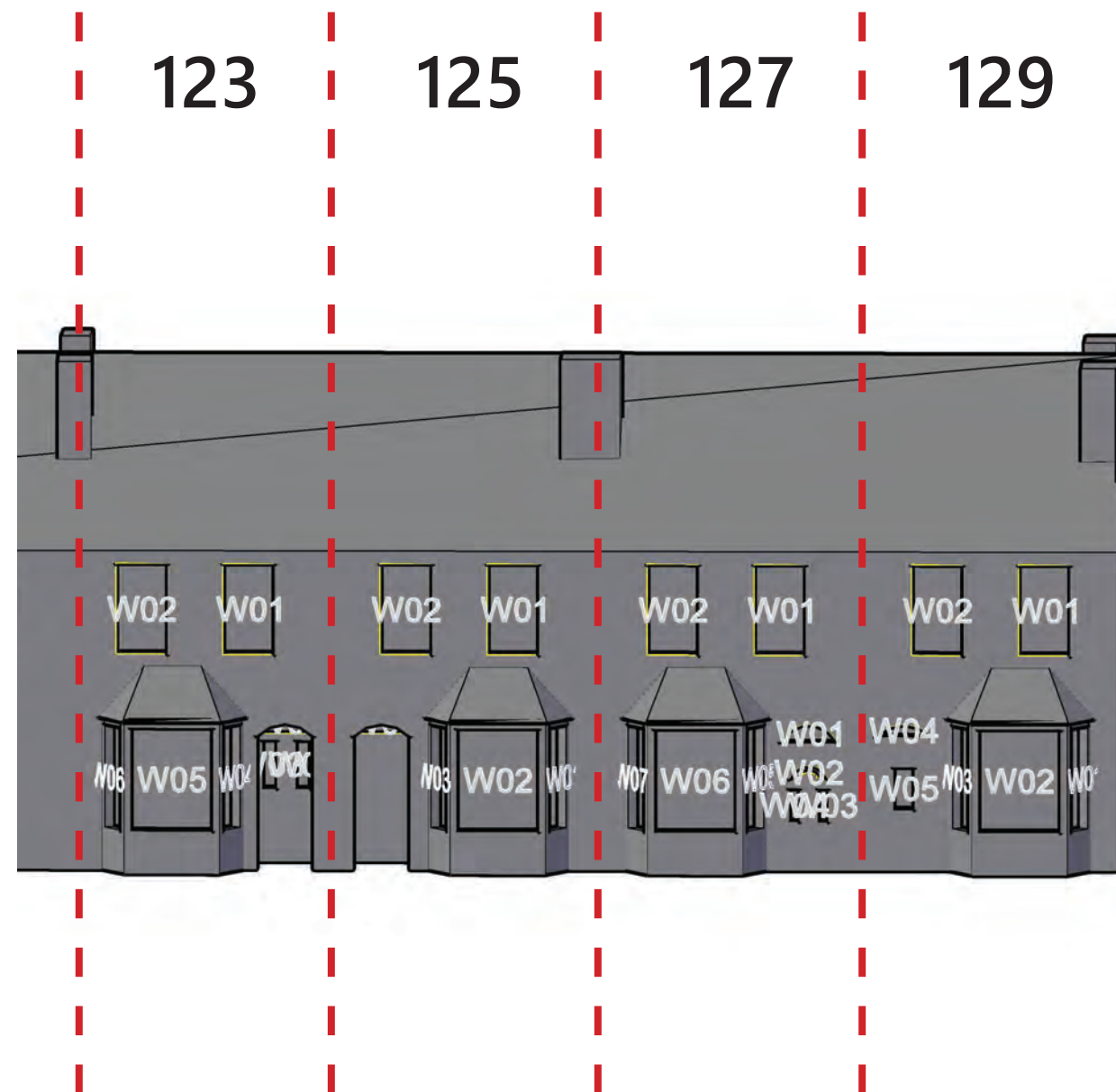
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Project Cox and Wyman Building
Reading

Title 123 to 129 Cardiff Road
Window Map

Drawn ID Checked --

Date 25/09/2017 Rel no. 01

Drawing no. 2407-WM05

Sources of information

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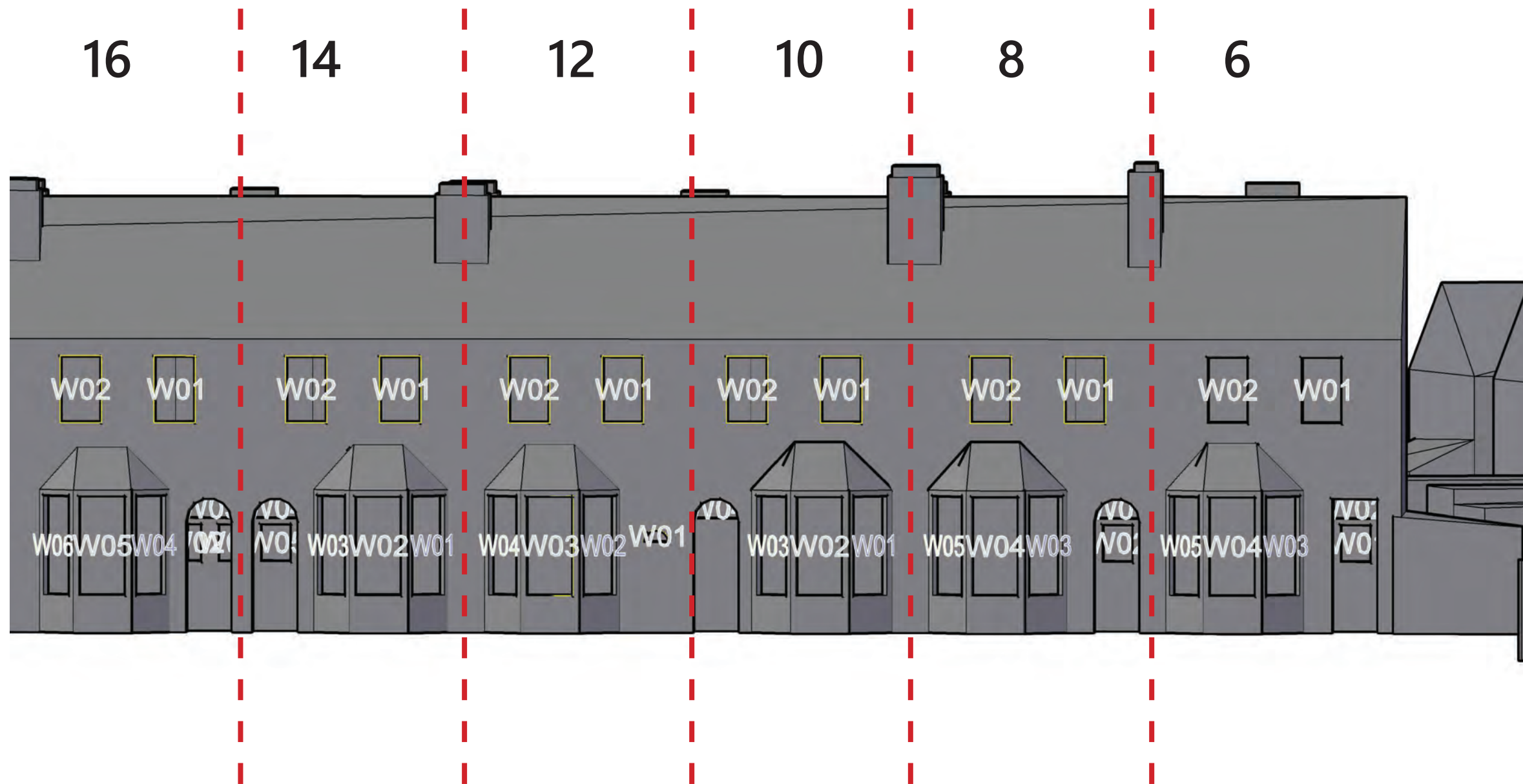
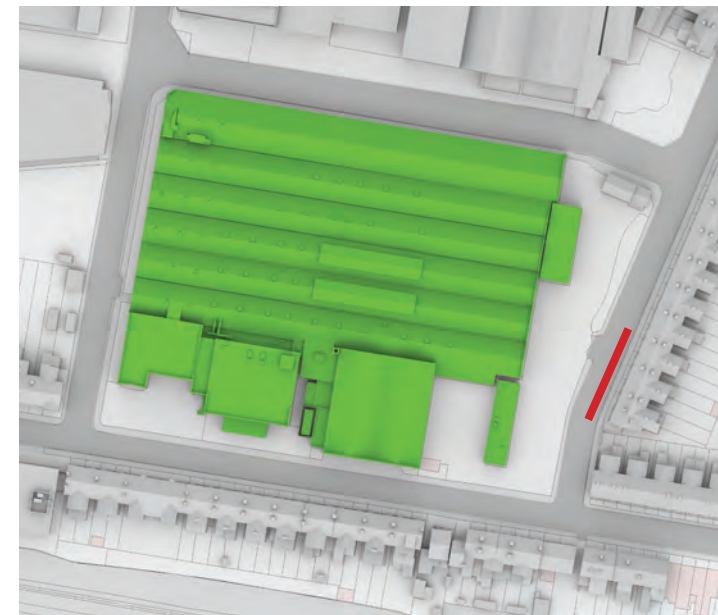
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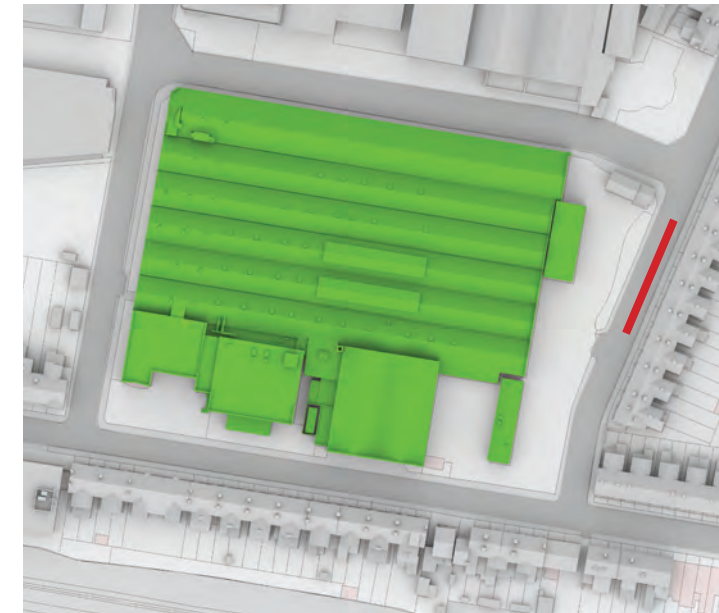
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Title 6 to 16 Addison Road
Window Map

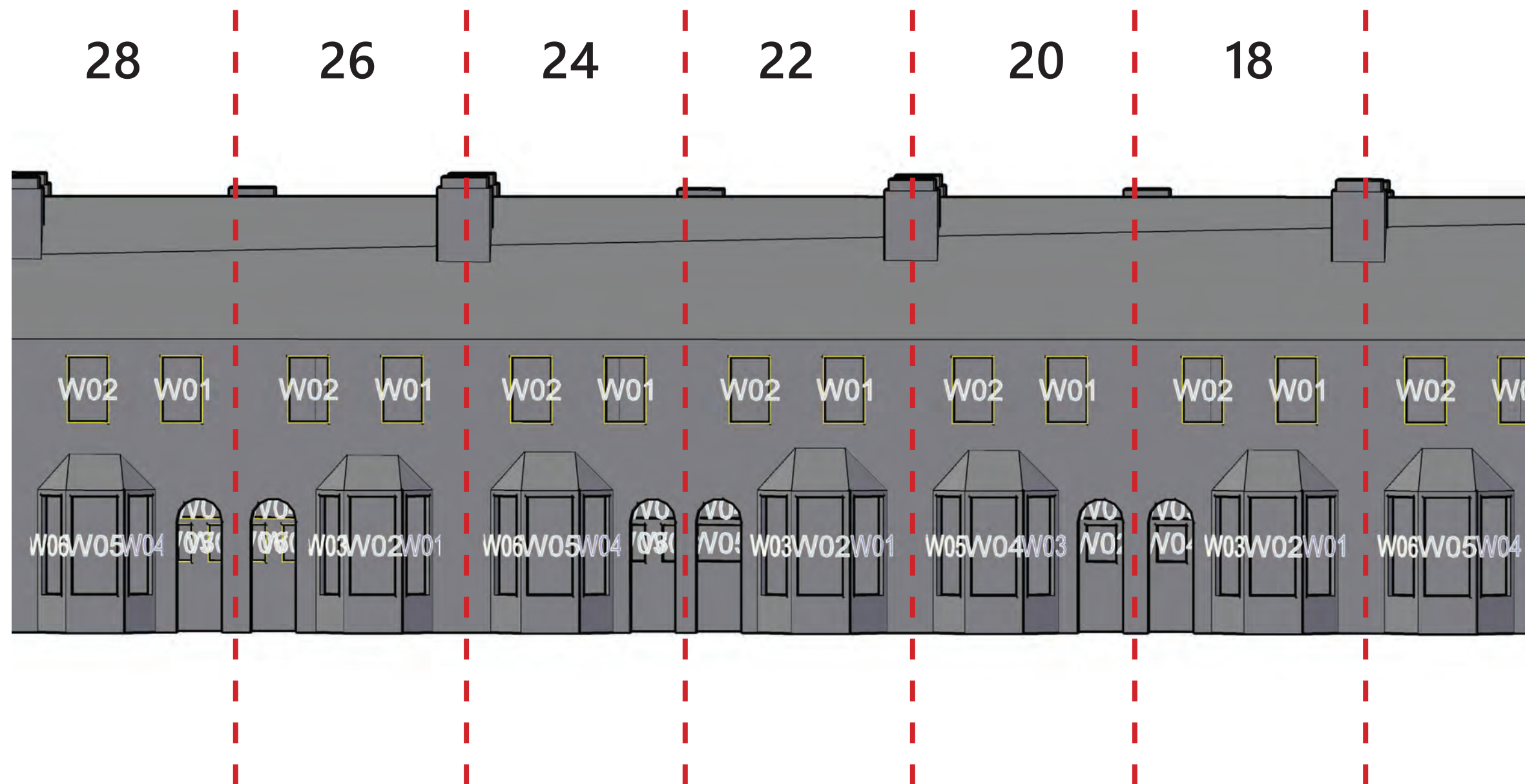
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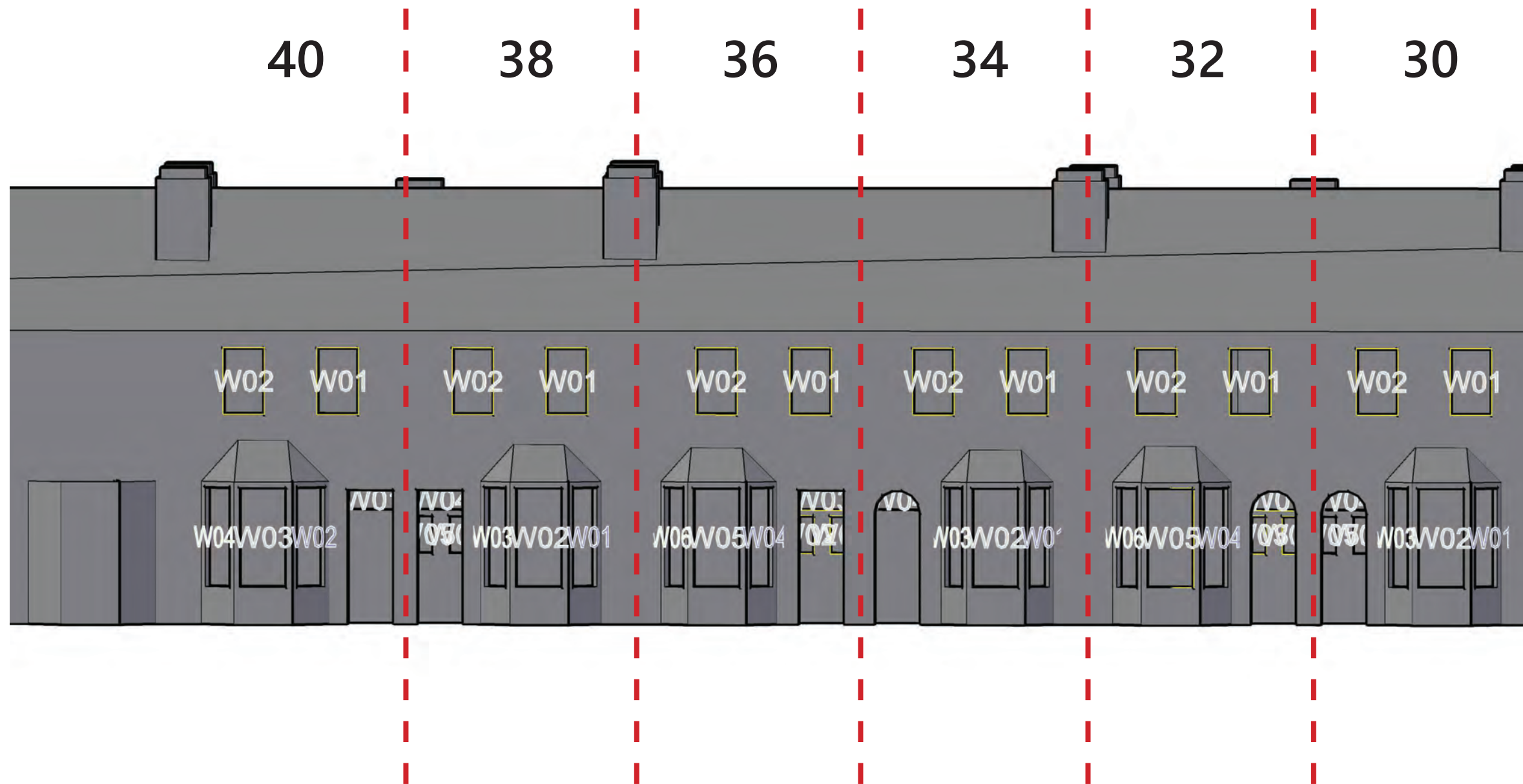
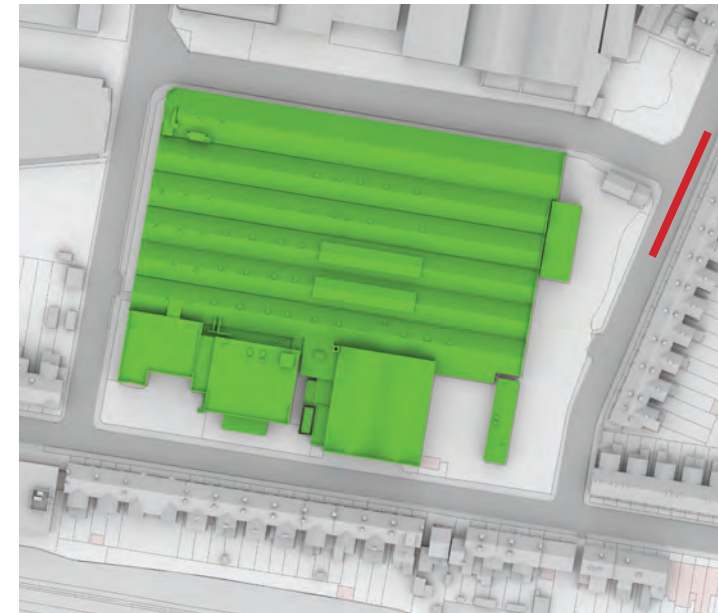
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Project Cox and Wyman Building
Reading

Title 30 to 40 Addison Road
Window Map

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Date 25/09/2017 Rel no. 01

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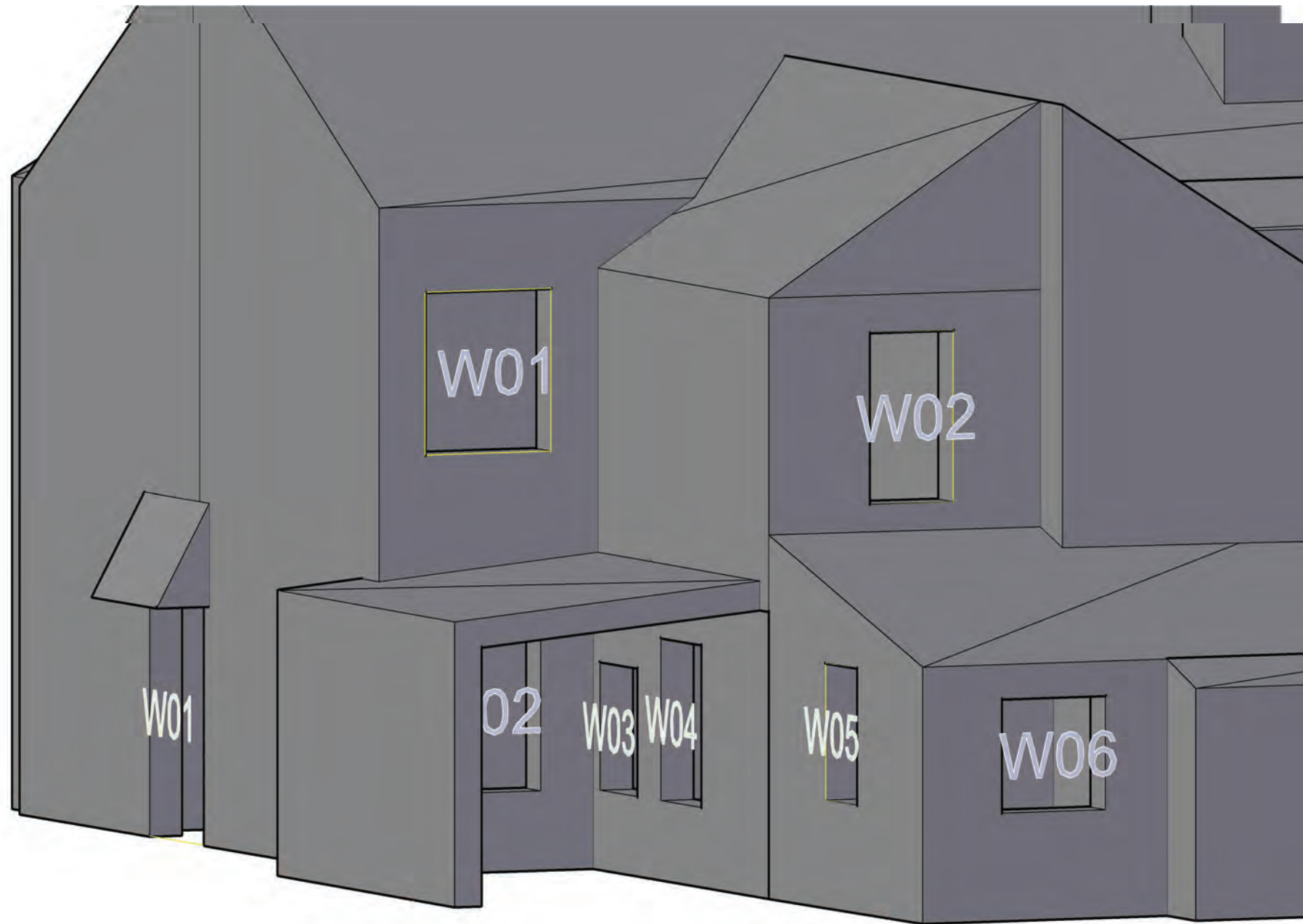
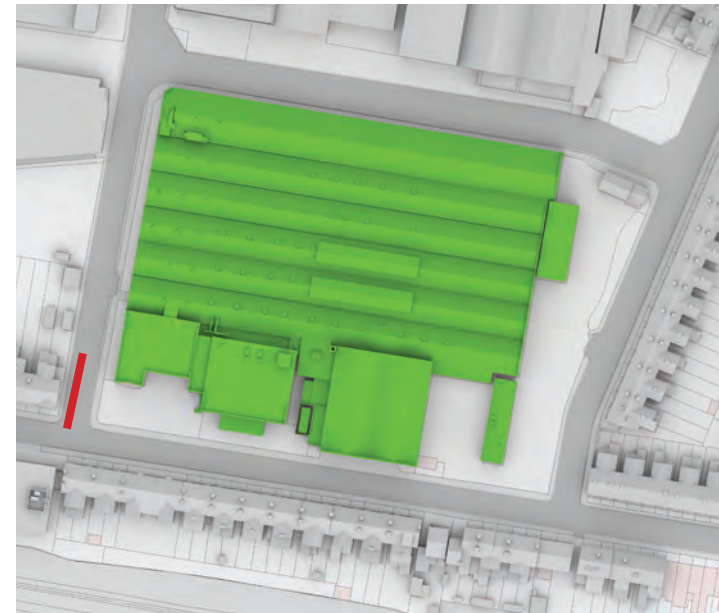
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Project Cox and Wyman Building
Reading

Title 40 Cardiff Road
Window Map

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Date 25/09/2017 Rel no. 01

Drawing no. 2407-WM10

Sources of information

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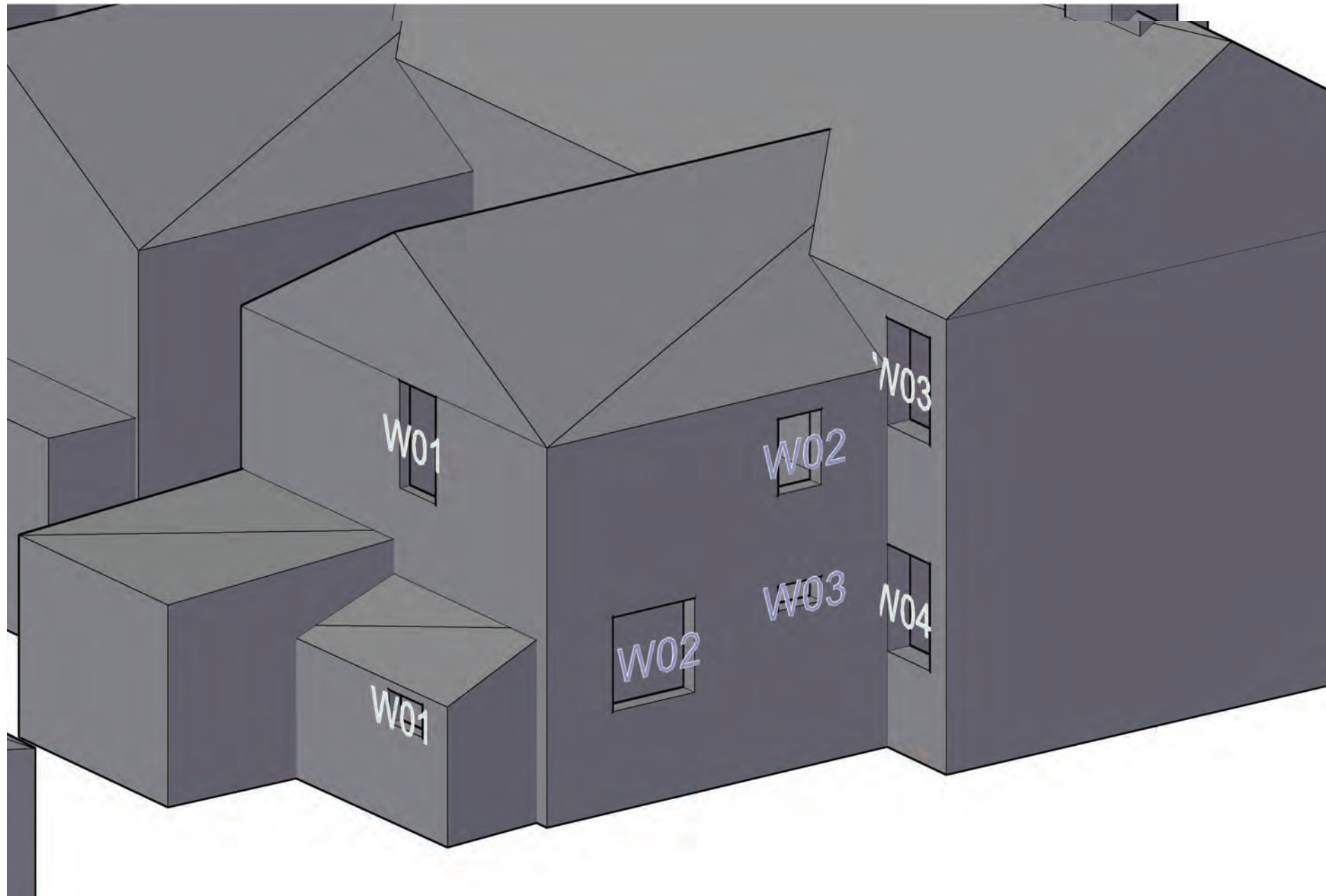
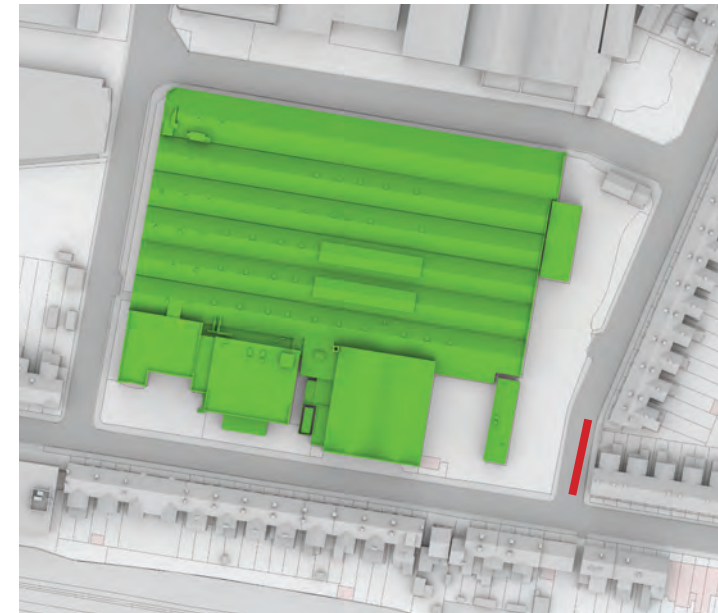
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Project Cox and Wyman Building
Reading

Title 21 Cardiff Road
Window Map

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Appendix 2

**Results of the daylight & sunlight assessments
within neighbouring properties**

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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
	R1	W02-L W02-U		36.8	34.3	2.5	0.9	180.3	178.5	178.5	0.0	1.0	N/A	N/A	N/A	N/A	N/A	N/A
123 Cardiff Road																		
Ground	R2	W04-L W04-U	Living Room	27.1	25.3	1.9	0.9											
	R2	W05-L W05-U		34.0	29.6	4.3	0.9											
	R2	W06-L W06-U		25.7	23.6	2.2	0.9	145.8	145.7	129.7	15.9	0.9	N/A	N/A	N/A	N/A	N/A	N/A
First	R1	W01-L W01-U	Bedroom	36.7	33.9	2.8	0.9											
	R1	W02-L W02-U		36.6	33.6	3.0	0.9	188.9	186.7	186.7	0.0	1.0	N/A	N/A	N/A	N/A	N/A	N/A
1 to 6 Cardiff Mews																		
Ground	R1	W01	Residential	26.5	23.6	2.9	0.9											
	R1	W02		33.7	29.6	4.1	0.9											
	R1	W03		24.6	23.1	1.5	0.9	116.4	116.4	88.3	28.1	0.8	N/A	N/A	N/A	N/A	N/A	N/A
First	R1	W01	Residential	36.5	33.4	3.1	0.9	111.0	108.9	108.9	0.0	1.0	N/A	N/A	N/A	N/A	N/A	N/A
First	R2	W02	Residential	31.7	29.8	1.9	0.9											
	R2	W03		36.3	33.0	3.3	0.9											
	R2	W04		30.4	29.0	1.4	1.0	141.7	141.0	141.0	0.0	1.0	N/A	N/A	N/A	N/A	N/A	N/A
First	R3	W05	Residential	36.0	32.8	3.1	0.9	74.6	74.1	74.1	0.0	1.0	N/A	N/A	N/A	N/A	N/A	N/A
First	R4	W06	Residential	36.1	33.0	3.1	0.9	79.7	79.2	79.2	0.0	1.0	N/A	N/A	N/A	N/A	N/A	N/A
First	R5	W07	Residential	35.7	32.7	3.0	0.9	79.6	79.1	79.1	0.0	1.0	N/A	N/A	N/A	N/A	N/A	N/A
First	R6	W08	Residential	31.9	29.7	2.2	0.9											
	R6	W09		35.7	32.7	3.0	0.9											
	R6	W10		30.5	29.5	1.1	1.0	139.1	138.6	138.6	0.0	1.0	N/A	N/A	N/A	N/A	N/A	N/A

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Address	Room	Window	Room Use	Existing	Proposed	Loss	Proportion	Room Area	Existing	Proposed	Loss	Proportion	Existing APSH		Proposed APSH		Total	Winter
				VSC	VSC		Retained		NSC	NSC		Retained	Total	Winter	Total	Winter	Retained	Retained
87 Cardiff Road	R1	W02		31.6	32.8	-1.2	1.0	178.8	155.5	176.3	-20.9	1.1	N/A	N/A	N/A	N/A	N/A	N/A
	Ground	R2	W02-L W02-U	Living Room	22.0	23.9	-1.9	1.1										
		R2	W03-L W03-U		27.3	28.6	-1.3	1.0										
		R2	W04-L W04-U		23.0	21.4	1.6	0.9	142.1	103.8	118.0	-14.2	1.1	N/A	N/A	N/A	N/A	N/A
First	R1	W01	Bedroom	32.0	32.8	-0.8	1.0											
	R1	W02		32.3	32.8	-0.5	1.0	179.7	162.6	177.1	-14.5	1.1	N/A	N/A	N/A	N/A	N/A	N/A
85 Cardiff Road																		
Ground	R1	W01-L W01-U	Living Room	19.8	21.7	-1.9	1.1											
	R1	W02-L W02-U		28.6	28.6	0.1	1.0											
	R1	W03-L W03-U		26.4	23.8	2.6	0.9	132.3	117.4	109.9	7.5	0.9	N/A	N/A	N/A	N/A	N/A	N/A
First	R1	W01	Bedroom	33.1	32.8	0.3	1.0											
	R1	W02		33.5	32.8	0.7	1.0	181.6	171.2	178.8	-7.6	1.0	N/A	N/A	N/A	N/A	N/A	N/A
83 Cardiff Road																		
Ground	R2	W03-L W03-U	Living Room	25.6	26.0	-0.4	1.0											
	R2	W04-L W04-U		31.2	28.6	2.6	0.9											
	R2	W05-L W05-U		32.5	28.4	4.1	0.9	149.5	149.5	127.6	21.9	0.9	N/A	N/A	N/A	N/A	N/A	N/A
First	R1	W01	Bedroom	34.8	32.8	2.1	0.9											
	R1	W02		34.4	32.8	1.7	1.0	188.8	184.4	185.8	-1.4	1.0	N/A	N/A	N/A	N/A	N/A	N/A
81 Cardiff Road																		

Address	Room	Window	Room Use	Existing VSC	Proposed VSC	Loss	Proportion Retained	Room Area	Existing NSC	Proposed NSC	Loss	Proportion Retained	Existing APSH Total	Proposed APSH Winter	Total Retained	Winter Retained
Ground	R2	W02	Living Room	33.8	29.9	3.9	0.9	266.8	257.0	208.9	48.1	0.8	N/A	N/A	N/A	N/A
	R2	W03		33.3	29.3	4.0	0.9									
	R2	W04		21.4	19.9	1.5	0.9									
	R2	W05		33.5	28.9	4.6	0.9									
	R2	W06		26.2	22.4	3.8	0.9									
First	R1	W01	Bedroom	35.9	33.0	3.0	0.9	105.3	103.6	103.6	0.0	1.0	N/A	N/A	N/A	N/A
First	R2	W02	Bedroom	36.5	33.2	3.3	0.9	131.0	128.8	128.8	0.0	1.0	N/A	N/A	N/A	N/A
75a Cardiff Road																
Ground	R1	W01	Living Room	25.2	20.9	4.3	0.8	206.1	204.3	163.5	40.8	0.8	N/A	N/A	N/A	N/A
	R1	W02		20.3	17.5	2.9	0.9									
	R1	W03		24.4	20.6	3.7	0.8									
First	R1	W01	Bedroom	29.0	26.2	2.9	0.9	161.7	161.2	161.2	0.0	1.0	N/A	N/A	N/A	N/A
	R1	W02		25.0	23.0	2.0	0.9									
75 Cardiff Road																
Ground	R2	W03-L	Living Room	27.9	25.3	2.7	0.9	135.2	135.1	104.5	30.6	0.8	N/A	N/A	N/A	N/A
	R2	W04-L		34.8	28.1	6.7	0.8									
	R2	W05-L		25.9	22.1	3.8	0.9									
First	R1	W01	Bedroom	37.1	32.7	4.4	0.9	189.7	186.2	186.2	0.0	1.0	N/A	N/A	N/A	N/A
	R1	W02		37.2	32.7	4.5	0.9									
73 Cardiff Road																
Ground	R1	W01-L	Living Room	24.1	21.2	2.9	0.9									
	R1	W02-L		35.1	28.3	6.9	0.8									
	R1	W03-L		27.7	24.2	3.5	0.9									

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Address	Room	Window	Room	Existing	Proposed	Loss	Proportion	Room	Existing	Proposed	Loss	Proportion	Existing APSH		Proposed APSH		Total	Winter											
			Use	VSC	VSC		Retained	Area	NSC	NSC		Retained	Total	Winter	Total	Winter	Retained	Retained											
First	R2	W03-U	Bedroom	35.3	32.2	3.1	0.9	160.2	160.1	160.1	0.0	1.0	38	9	33	7	0.9	0.8											
		W04-L																											
	R2	W04-U		29.8	28.1	1.7	0.9																						
		W05-L																											
	R1	W01		37.4	35.2	2.2	0.9																						
		W02																	211.6	206.1	206.1	0.0	1.0	N/A	N/A	N/A	N/A	N/A	N/A
10 Addison Road																													
Ground	R1	W01-L	Living Room	30.3	27.5	2.8	0.9	160.2	160.2	160.2	0.0	1.0	38	8	34	7	0.9	0.9											
		W01-U																											
	R1	W02-L		35.3	32.4	2.8	0.9																						
R1	W02-U	31.1	29.6																1.5	1.0									
	W03-L																												
First	R1	W03-U	Bedroom	37.4	35.3	2.1	0.9												192.0	187.9	187.9	0.0	1.0	N/A	N/A	N/A	N/A	N/A	N/A
		W02						37.4	35.5	2.0	0.9																		
12 Addison Road																													
Ground	R2	W02-L	Living Room	31.3	29.0	2.2	0.9	154.1	154.1	154.1	0.0	1.0	36	8	36	7	1.0	0.9											
		W02-U																											
	R2	W03-L		35.3	33.0	2.3	0.9																						
R2	W03-U	29.9	28.5																1.4	1.0									
	W04-L																												
First	R1	W04-U	Bedroom	37.4	35.6	1.8	1.0												187.6	183.8	183.8	0.0	1.0	N/A	N/A	N/A	N/A	N/A	N/A
		W02						37.5	35.7	1.8	1.0																		
14 Addison Road																													
Ground	R1	W01-L	Living Room	30.0	28.0	2.0	0.9																						
		W01-U																											
R1	W02-L	35.3	33.1	2.2	0.9																								
	W02-U																												

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
	R1	W03-L W03-U		31.1	29.7	1.4	1.0	153.4	153.4	153.4	0.0	1.0	37	8	35	6	0.9	0.8
First	R1	W01	Bedroom	37.5	35.8	1.7	1.0											
	R1	W02		37.5	35.8	1.6	1.0	192.3	188.2	188.2	0.0	1.0	N/A	N/A	N/A	N/A	N/A	N/A
16 Addison Road																		
Ground	R2	W04-L W04-U	Living Room	31.3	29.5	1.8	0.9											
	R2	W05-L W05-U		35.3	33.1	2.1	0.9											
	R2	W06-L W06-U		30.2	28.6	1.6	0.9	152.3	152.2	152.2	0.0	1.0	37	8	34	6	0.9	0.8
First	R1	W01	Bedroom	37.5	35.9	1.6	1.0											
	R1	W02		37.5	35.9	1.6	1.0	192.5	188.2	188.2	0.0	1.0	N/A	N/A	N/A	N/A	N/A	N/A
18 Addison Road																		
Ground	R1	W01-L W01-U	Living Room	30.2	28.5	1.8	0.9											
	R1	W02-L W02-U		35.3	33.0	2.3	0.9											
	R1	W03-L W03-U		31.1	29.4	1.7	0.9	148.8	148.8	148.8	0.0	1.0	37	8	34	6	0.9	0.8
First	R1	W01	Bedroom	37.5	35.8	1.7	1.0											
	R1	W02		37.5	35.8	1.8	1.0	193.5	189.3	189.3	0.0	1.0	N/A	N/A	N/A	N/A	N/A	N/A
20 Addison Road																		
Ground	R2	W03-L W03-U	Living Room	31.4	29.3	2.1	0.9											
	R2	W04-L W04-U		35.3	32.7	2.7	0.9											
	R2	W05-L W05-U		30.0	28.2	1.8	0.9	147.4	147.4	147.4	0.0	1.0	37	8	33	7	0.9	0.9

Address	Room	Window	Room Use	Existing	Proposed	Loss	Proportion	Room	Existing	Proposed	Loss	Proportion	Existing APSH		Proposed APSH		Total	Winter
				VSC	VSC				NSC	NSC			Retained	Retained	Total	Winter		
First	R1	W01	Bedroom	37.5	35.7	1.9	0.9	192.5	188.4	188.4	0.0	1.0	N/A	N/A	N/A	N/A	N/A	N/A
	R1	W02		37.6	35.6	1.9	0.9											
22 Addison Road																		
Ground	R1	W01-L W01-U	Living Room	30.5	28.2	2.3	0.9	151.9	151.9	151.9	0.0	1.0	37	8	34	8	0.9	1.0
	R1	W02-L W02-U		35.3	32.6	2.7	0.9											
	R1	W03-L W03-U		31.2	29.4	1.8	0.9											
First	R1	W01	Bedroom	37.6	35.6	2.0	0.9	192.0	188.0	188.0	0.0	1.0	N/A	N/A	N/A	N/A	N/A	N/A
	R1	W02		37.6	35.6	2.0	0.9											
24 Addison Road																		
Ground	R2	W04-L W04-U	Living Room	31.4	29.0	2.4	0.9	149.1	149.1	149.1	0.0	1.0	38	8	34	8	0.9	1.0
	R2	W05-L W05-U		35.4	32.7	2.7	0.9											
	R2	W06-L W06-U		30.4	28.8	1.6	0.9											
First	R1	W01	Bedroom	37.6	35.6	2.0	0.9	191.1	187.2	187.2	0.0	1.0	N/A	N/A	N/A	N/A	N/A	N/A
	R1	W02		37.6	35.7	1.9	0.9											
26 Addison Road																		
Ground	R1	W01-L W01-U	Living Room	30.5	28.1	2.4	0.9	142.7	142.6	142.6	0.0	1.0	38	8	33	7	0.9	0.9
	R1	W02-L W02-U		35.3	32.8	2.6	0.9											
	R1	W03-L W03-U		31.0	29.6	1.4	1.0											
First	R1	W01	Bedroom	37.6	35.7	1.9	1.0	193.1	189.0	189.0	0.0	1.0	N/A	N/A	N/A	N/A	N/A	N/A
	R1	W02		37.6	35.8	1.8	1.0											

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Address	Room	Window	Room Use	Existing VSC	Proposed VSC	Loss	Proportion Retained	Room Area	Existing NSC	Proposed NSC	Loss	Proportion Retained	Existing APSH		Proposed APSH		Total Retained	Winter Retained											
36 Addison Road	R1	W01-U	Bedroom	35.6	34.2	1.4	1.0	138.5	138.4	138.4	0.0	1.0	36	7	35	8	1.0	1.1											
		W02-L																											
	R1	W02-U		31.3	30.8	0.4	1.0												191.7	187.4	187.4	0.0	1.0	N/A	N/A	N/A	N/A	N/A	N/A
		W03-L																											
	R1	W03-U		37.7	36.6	1.1	1.0												37	8	36	7	1.0	0.9					
		W01																											
R1	W02	37.7	36.7	1.0	1.0	N/A	N/A	N/A	N/A	N/A	N/A																		
38 Addison Road																													
Ground	R2	W04-L	Living Room	31.8	30.4	1.3	1.0	141.6	141.6	141.6	0.0	1.0	37	8	36	7	1.0	0.9											
		W04-U																											
	R2	W05-L		35.9	35.0	0.9	1.0												194.4	189.7	189.7	0.0	1.0	N/A	N/A	N/A	N/A	N/A	N/A
		W05-U																											
R2	W06-L	30.6	30.4	0.1	1.0	37.8	36.9	0.9	1.0	37	8	36	7	1.0	0.9														
	W06-U																												
First	R1	W01	Bedroom	37.8	36.9	0.9	1.0	194.4	189.7	189.7	0.0	1.0	N/A	N/A	N/A	N/A	N/A	N/A											
	R1	W02																	37.8	37.0	0.8	1.0	N/A	N/A	N/A	N/A	N/A	N/A	
40 Addison Road																													
Ground	R2	W01-L	Living Room	31.2	30.2	1.0	1.0	148.0	148.0	148.0	0.0	1.0	37	8	36	7	1.0	0.9											
		W01-U																											
	R1	W02-L		36.0	35.4	0.5	1.0												193.5	189.5	189.5	0.0	1.0	N/A	N/A	N/A	N/A	N/A	N/A
		W02-U																											
R1	W03-L	31.4	31.4	0.0	1.0	32.1	31.4	0.7	1.0	36.1	35.7	0.4	1.0																
	W03-U																												
First	R1	W01	Bedroom	37.8	37.2	0.6	1.0	193.5	189.5	189.5	0.0	1.0	N/A	N/A	N/A	N/A	N/A	N/A											
	R1	W02																	37.8	37.2	0.6	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
	R2	W04-L W04-U		30.0	29.9	0.0	1.0	152.3	152.1	152.1	0.0	1.0	37	7	37	7	1.0	1.0
First	R1	W01	Bedroom	37.8	37.3	0.5	1.0											
	R1	W02		37.8	37.3	0.5	1.0	196.1	191.9	191.9	0.0	1.0	N/A	N/A	N/A	N/A	N/A	N/A
40 Cardiff Road																		
Ground	R1	W01-L W01-U	Residential	28.6	25.2	3.4	0.9	69.6	69.0	63.2	5.8	0.9	46	16	41	16	0.9	1.0
Ground	R2	W02-L W02-U	Residential	1.9	1.8	0.1	0.9	87.5	60.6	56.0	4.6	0.9	N/A	N/A	N/A	N/A	N/A	N/A
Ground	R3	W03-L W03-U	Residential	0.7	0.6	0.1	0.8											
	R3	W04-L W04-U		1.9	2.0	-0.1	1.0	94.2	32.4	39.2	-6.9	1.2	0	0	0	0	0.0	0.0
Ground	R4	W05	Residential	29.7	29.9	-0.2	1.0	62.0	61.7	61.7	0.0	1.0	38	7	40	4	1.1	0.6
	R4	W06		35.3	35.2	0.0	1.0											
First	R1	W01-L W01-U	Residential	31.5	31.5	0.0	1.0	87.5	84.8	84.8	0.0	1.0	N/A	N/A	N/A	N/A	N/A	N/A
First	R2	W02-L W02-U	Residential	36.6	36.5	0.1	1.0	86.5	84.4	84.4	0.0	1.0	N/A	N/A	N/A	N/A	N/A	N/A



Appendix 3

Results of the sunlight amenity assessment

Sources of information

Barton Willmore
24325_Cox&Wyman_Model_060717.
dwg
Received 07/06/2017

24325 - RG-L01D Landscape GA.pdf
24325_A-PP-P10-01-Proposed Site
Plan.dwg
24325_A-PP-P10-02-Proposed Roof
Plan.dwg
Received 25/09/2017

EB7 Ltd
Site Photographs
Ordnance Survey

EB7 Immersive
Master.dwg
Received 24/04/2017

Key:

Hours of sunlight on 21st March

Area of assessment

More than 2 hours of sunlight

Less than 2 hours of sunlight

NORTH



Project Cox and Wyman Building
Reading

Title Sunlight Amenity Study

Drawn ID Checked --

Date 25/09/2017 Rel no. 01

Drawing no. 2407-SA01



Area	Total Area (sq.m)	Area > 2hrs (sq.m)	Area % > 2hr
01	55.85	21.04	37.67
02	54.28	17.68	32.58
03	54.28	17.40	32.05
04	49.83	15.06	30.23
05	54.29	17.11	31.51
06	54.28	16.86	31.06
07	54.28	17.50	31.68
08	49.83	15.07	30.24
09	54.29	17.11	31.51
10	54.28	16.85	31.04
11	54.28	17.19	31.68
12	49.83	15.07	30.23
13	54.29	17.20	31.68
14	54.28	16.85	31.04

Area	Total Area (sq.m)	Area > 2hrs (sq.m)	Area % > 2hr
15	54.29	17.22	31.73
16	49.83	15.07	30.24
17	49.83	14.75	29.61
18	49.83	14.52	29.14
19	49.85	14.88	29.85
20	49.83	15.00	30.10
21	49.83	14.68	29.45
22	49.83	13.93	27.95
23	49.83	12.13	24.34
24	55.38	15.59	28.15
25	53.55	26.19	48.19
26	54.17	31.37	57.91
27	54.16	33.31	61.49
28	50.81	27.51	54.15

Area	Total Area (sq.m)	Area > 2hrs (sq.m)	Area % > 2hr
29	50.31	27.02	53.70
30	54.91	29.69	54.07
31	54.89	29.99	54.63
32	59.17	32.18	54.39
33	58.78	32.10	54.62
34	60.89	36.29	59.61
35	373.85	371.36	99.33
36	433.96	358.31	82.57
37	19.88	0.00	0.00
38	19.09	0.00	0.00
39	19.07	10.14	53.15
40	19.81	11.79	59.50