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CAMDEN WHARF

Daylight and Sunlight Report

Director: Date: Project: JUSTIN BOLTON AUGUST 2016 P1042

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Appendix A- Drawings

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1 <u>Executive Summary</u>

- 1.1 This report has considered the potential daylight and sunlight effects to the surrounding residential properties as a result of the implementation of the proposed Barr Gazetas architect's scheme for the site at Camden Wharf.
- 1.2 The assessments contained within this report have been undertaken in accordance with the BRE report entitled 'Site layout planning for daylight and sunlight: A guide to good practice', more commonly known as "the BRE guidelines".
- 1.3 The report assesses the daylight and sunlight effects of the proposed scheme against the existing site conditions, including neighbouring consents.
- 1.4 Overall, the Barr Gazetas scheme achieves good retained levels of daylight and sunlight amenity to all neighbouring residential receptors and the results are deemed to fall within the application of the BRE guidelines.

2 <u>Introduction</u>

- 2.1 Point 2 Surveyors have been appointed on behalf of Castlehaven Row Ltd to assess the potential daylight and sunlight effects to the surrounding residential properties.
- 2.2 The site is located in the London Borough of Camden. The extents of the current site (drawings P1042-01 to 03) and proposed buildings (drawings P1042-04 to 06) can be found in Appendix A.
- 2.3 This report assesses the potential daylight and sunlight effects as a result of the proposal on the surrounding residential properties or those properties with a residential component.
- 2.4 The calculations in this report have been based on the Barr Gazetas architect's 3D model. The model and surrounds are demonstrated in Plate 01 below.

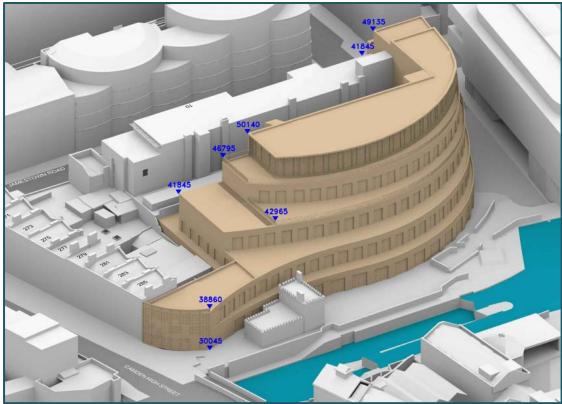


PLATE 01-IMAGE DEMONSTRATING THE PROPOSED SCHEME WITHIN CONTEXTUAL 3D MODEL

3 <u>Methodology</u>

3.1 When assessing any potential effects on the surrounding properties, the BRE guidelines suggest that only those windows that have a reasonable expectation of daylight or sunlight need to be assessed. In particular the BRE guidelines at paragraph 2.2.2 state:

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.

- 3.2 Further to the above statement, it is considered that the vast majority of commercial properties do not have a reasonable expectation of daylight or sunlight. This is because they are generally designed to rely on artificial electric lighting rather than natural light.
- 3.3 If a property is considered to have a reasonable expectation of daylight or sunlight the following methodology to assess the impacts has been used:

Daylighting

- 3.4 It is common to consider the local authorities planning policy in order to establish the basis for which consideration in relation to light should be approached. The following can be used as a quick test to assess the likely effect on existing surrounding properties:
 - a) Project a 25 degree line from the centre of the lowest window on the existing building;
 - b) If the whole of your new development is lower than this line then it is unlikely to have a substantial effect on the daylight enjoyed by occupants in the existing building.
- 3.5 The above test is also known as the 25° angle test but has not been used for this assessment as it does not reflect the differing heights and layouts of the buildings in the local area.
- 3.6 More detailed tests can be undertaken to fully assess the loss of daylight in existing buildings, in particular the use of the Vertical Sky Component (VSC) method of assessment.

The Vertical Sky Component is expressed as a ratio of the maximum value of daylight achievable for a completely unobstructed vertical wall. The maximum value is almost 40%. This is because daylight hitting a window can only come from one direction immediately halving the available light. The value is limited further by the angle of the sun. This is why if the VSC is greater than 27% enough sunlight [SIC] should be reaching the existing window. Any reduction below this level should be kept to minimum.

Windows to some existing rooms may already fail to achieve this target under existing conditions. In these circumstances it is possible to accept a reduction to the existing level of daylight to no less than 80% of its former value.

- 3.7 In summary to the above, a room is considered to continue to receive good levels of daylight if the window can receive a VSC of at least 27%. If the window receives a VSC below 27% in the existing scenario a reduction of less than 0.8 times its former value (20%), as a result of the proposed development, is considered acceptable.
- 3.8 In conjunction with the VSC tests, the BRE guidelines and British Standard 8206-Part2:2008 suggest that the distribution of daylight is assessed using the No Sky Line (NSL) test. This test separates those areas of the working plane that can receive direct skylight and those that cannot.
- 3.9 The BRE guidelines suggest that the daylight distribution test is undertaken to existing surrounding properties when the internal arrangements are known. To assess the impact of any reduction the BRE guidelines suggest:

If, following construction of a new development, the no sky line moves so that the area of the existing room, which does receive direct skylight, is reduced to less than 0.8 times its former value this will be noticeable to the occupants, and more of the room will appear poorly lit.

Sunlighting

3.10 The amount of direct sunlight a window can enjoy is dependent on its orientation and the extent of any external obstructions. For example, a window that faces directly north, no matter what external obstructions are present, will not be able to receive good levels of sunlight throughout the year. However, a window that faces directly south with no obstructions will enjoy very high levels of sunlight throughout the year. As the potential to receive sunlight is dependent on a window's orientation, the BRE guidelines state:

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.

3.11 To consider any sunlight effect to the surrounding properties the BRE guidelines suggest calculating the Annual Probable Sunlight Hours (APSH) at the centre of each window on the outside face of the window wall. The BRE guidelines suggest that:

If this window point can receive more than one quarter of APSH (see section 3.1), including at least 5% of APSH in the winter months between 21st September and 21st March, then the room should still receive enough sunlight.

3.12 If the above criteria is not met, the BRE guidelines suggest calculating the APSH at the window in the existing situation, i.e. before redevelopment. If the reduction of APSH between the existing and proposed situations is less than 0.8 times its former value for either the total APSH or in the winter months; and greater than 4% for the total APSH, then the occupants of the adjoining building are likely to notice the reduction in sunlight.

- 3.13 In assessing the daylight and sunlight to the neighbouring buildings as well as assessing the quality of light within the proposed habitable rooms that make up the residential units, the true existing baseline condition has been observed. This includes all neighbouring buildings and obstructions within the vicinity that could be affected by the scheme proposal and or affect the potential for light entering into the proposed residential rooms within the scheme.
- 3.14 Trees and any other foliage have not been considered as part of the assessments as their size, shape, and density are impossible to predict. The BRE do recognise that certain tree types can be obstructive in allowing light penetration and further provide a transparency (% radiation passing) to apply within the calculation of daylight.
- 3.15 The obstruction produced by trees will in any event be blocking a certain view of the skydome and thus the actual impact produced by testing the changes in light (or view of the skydome) by the scheme can be slightly misleading given that in some instances no view of the existing and proposal will be prevalent and thus no recording of any alteration observed. The results are therefore a clear indication as to what would be available in the event that no trees were present and therefore what the worst case impacts would be by the implementation of the proposal.

4 <u>Surrounding Properties</u>

- 4.1 The site is located in the London Borough of Camden. It is understood that only the following properties are registered as a residential property, or include a residential component:
 - Nos. 269 to 285 (odd) Camden High Street 10 Jamestown Road
- 4.2 A site plan illustrating the position of the above surrounding properties is shown on Plate 02 below. The BRE guide requires that only residential properties are assessed in terms of daylight impacts. The residential receptors in the vicinity of the site with a clear view of the proposed massing are shown in *blue highlight*.



 $\mbox{Plate 01-Plan Showing Residential (blue)}$ and Commercial (red) $\mbox{Properties Surrounding the Site}$

- 4.3 The tabulated results of our daylight & sunlight assessments are included within Appendix B. A detailed explanation of the results for each property is set out in Section 5 of this report.
- 4.4 The remaining surrounding properties are either too far away to be affected by the implementation of the proposed development or understood to be of commercial use and not considered to have the same expectation for daylight or sunlight as those buildings with habitable uses. Detailed assessments have not therefore been undertaken to these properties.

5 Assessment Results for Daylight & Sunlight to Neighbouring Buildings

- 5.1 The following properties are fully compliant with the recommendations of the BRE Guidelines in that their residential habitable rooms will experience no change in their daylighting condition or less than a 20% reduction in both Vertical Sky Component (VSC) and No Sky Line (NSL) with the proposed development in place.
 - Nos. 269 281 (odd) Camden High Street 10 Jamestown Road
 - 285 Camden High Street
- 5.2 The sunlight results demonstrate that all (100%) of the existing neighbouring properties with residential windows facing within 90 degrees of due South meet the recommendations of the BRE Guidelines in that their residential habitable rooms will experience no change in their sunlighting condition or less than a 20% reduction in Annual Probable Sunlight Hours (APSH) with the proposed development in place.
- 5.3 There is one property, 283 Camden High Street, that experiences a further minor alteration to its daylighting levels, which are marginally outside the strict recommendations of the BRE guidelines. The results demonstrate that 2 out of the 4 rooms tested experience reductions in NSL of 20.9% and 30.2% (room refs R1/31 and R2/41). It can be noted the windows serving these rooms are fully compliant (100%) in terms of VSC levels. The rooms will also retain a view of sky to 75% and 64% of their total surface area, which is an indication of good daylight distribution. Overall, the results are considered to fall within the application of the BRE guidelines by virtue of the high VSC levels and good retained daylight coverage within all rooms.

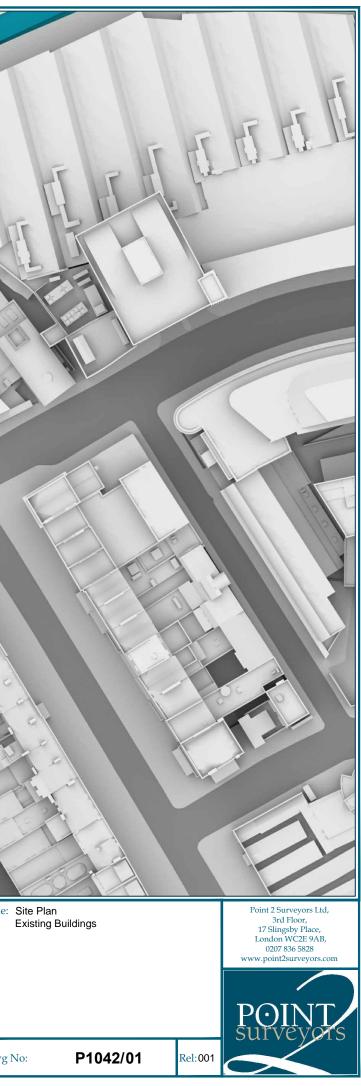
6 <u>Conclusions</u>

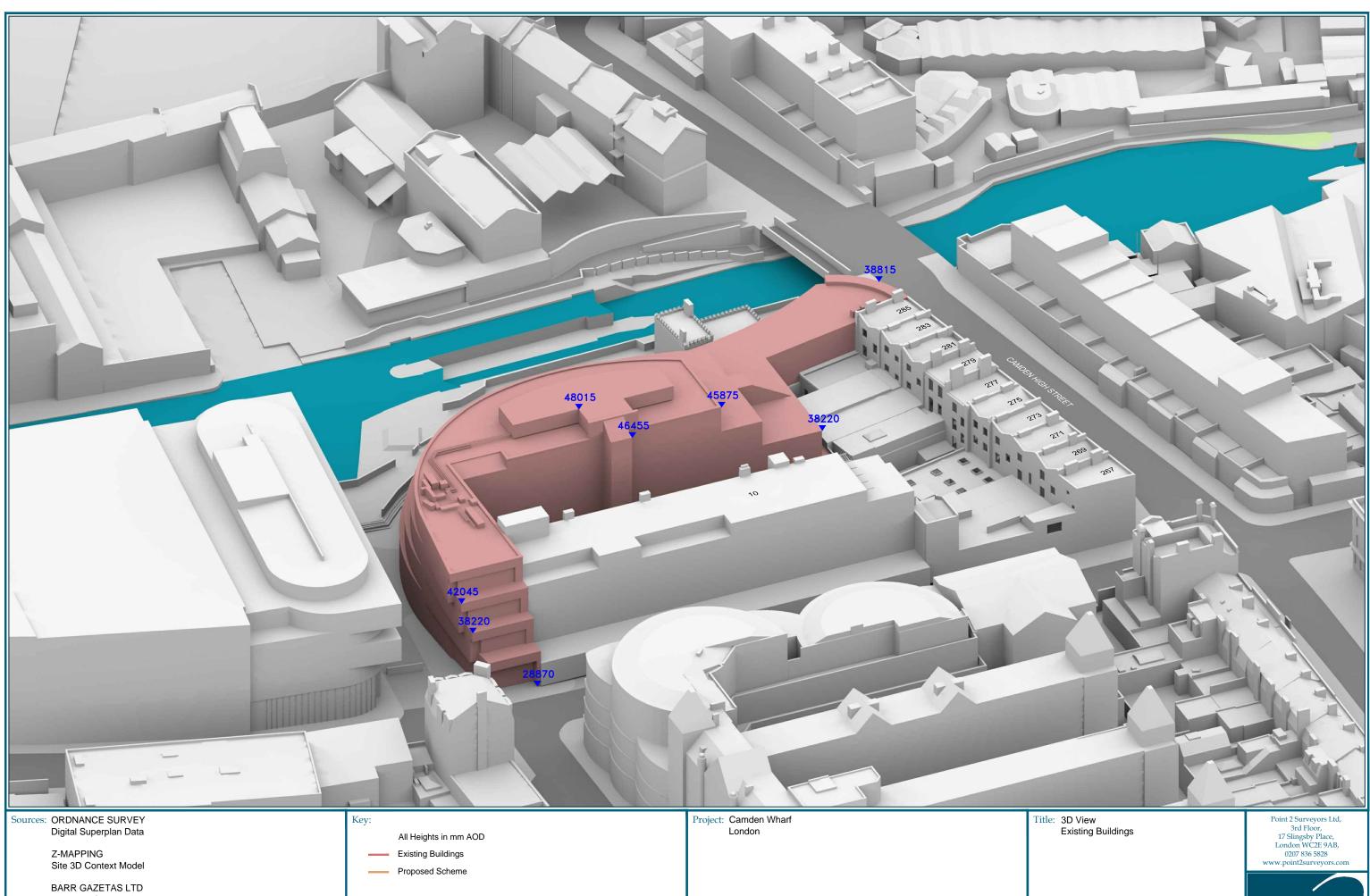
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- 6.3 The report assesses the daylight and sunlight effects of the proposed scheme against the existing site conditions, including neighbouring consents.
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Appendix A – Drawings

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285 283 ev	CANDEN HIGH STREET
281	A PA
	2. 215 213
	21.2
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10 JAMESTOWN ROAD	
NESTOWN	
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Sources: ORDNANCE SURVEY Digital Superplan Data Z-MAPPING Site 3D Context Model BARR GAZETAS LTD Proposed Scheme from 3D Model Camden Wharf.skp Received 18/07/16	Key: Existing Buildings Proposed Scheme	Project: Camden Wharf London			Title
	Scheme Confirmed: - Date :-	Drawn By: DT	Scale: 1:750@A3	Date: JULY 2016	Dwg

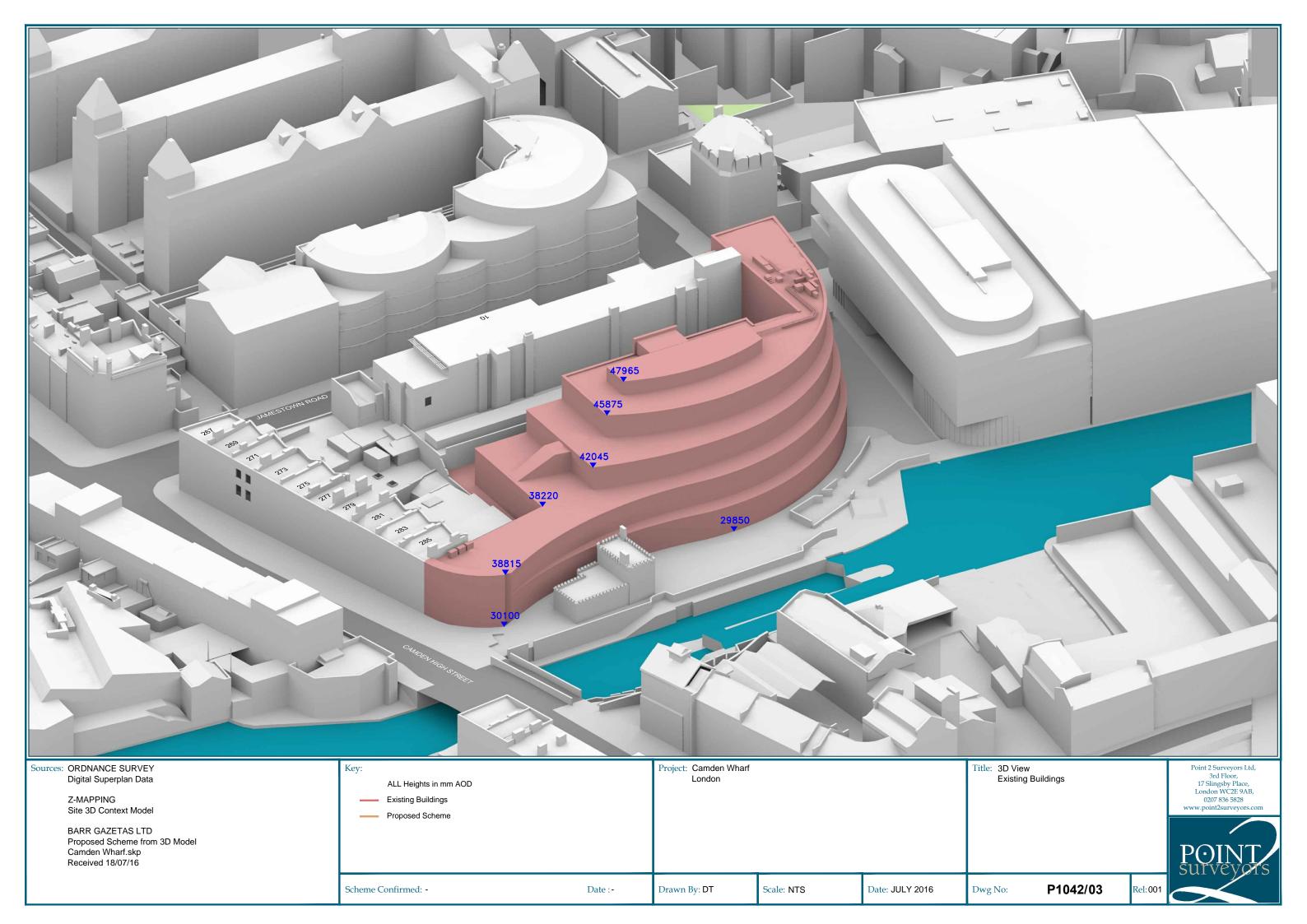




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	Scheme Confirmed: -	Date :-	Drawn By: DT	Scale: NTS	Date: JULY 2016	Dwg

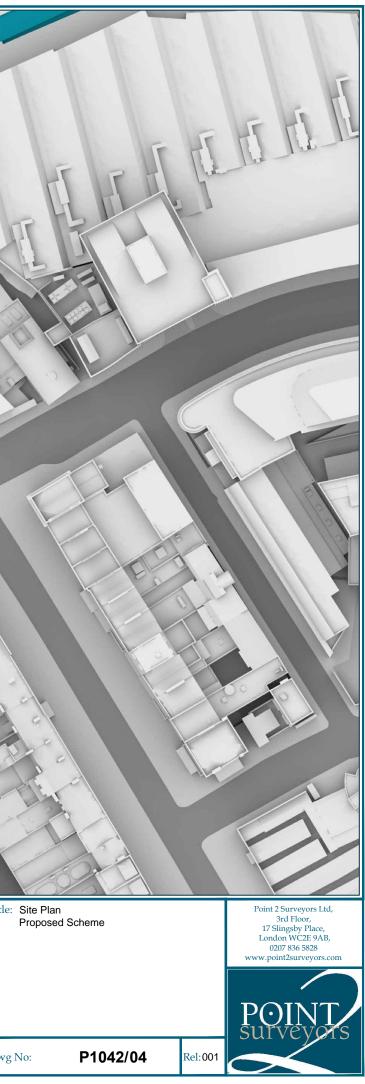
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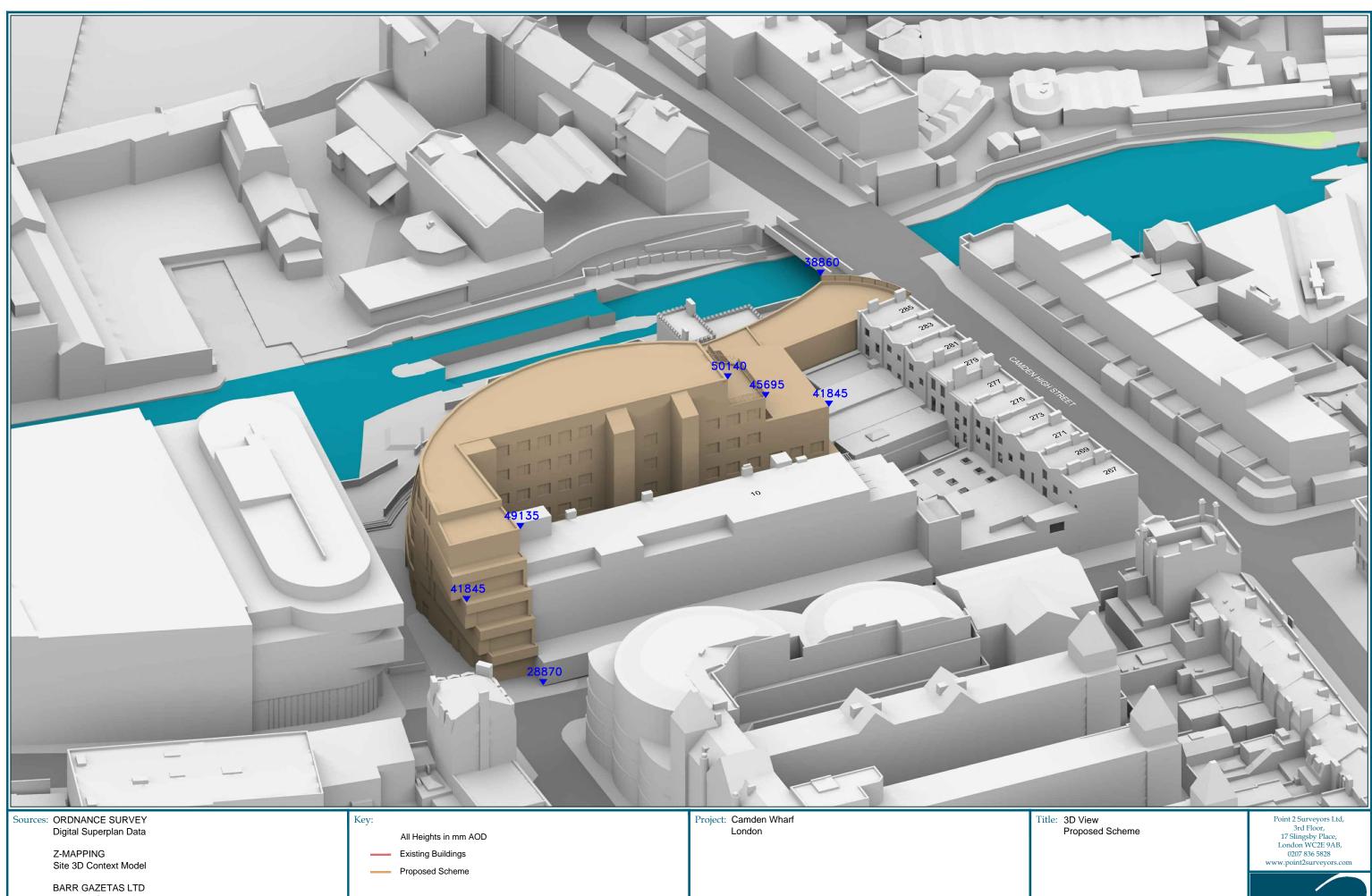
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285 283 PHOLEN HIGH STREET	
	X
	0
211 289	
20 261	
10 JAMESTOWN ROAD	-
STOWN	1
JAMES	1
	2
	/
	~

Sources: ORDNANCE SURVEY Digital Superplan Data Z-MAPPING Site 3D Context Model BARR GAZETAS LTD Proposed Scheme from 3D Model Camden Wharf.skp Received 18/07/16	Key: Existing Buildings Proposed Scheme		Project: Camden Wharf London			Title
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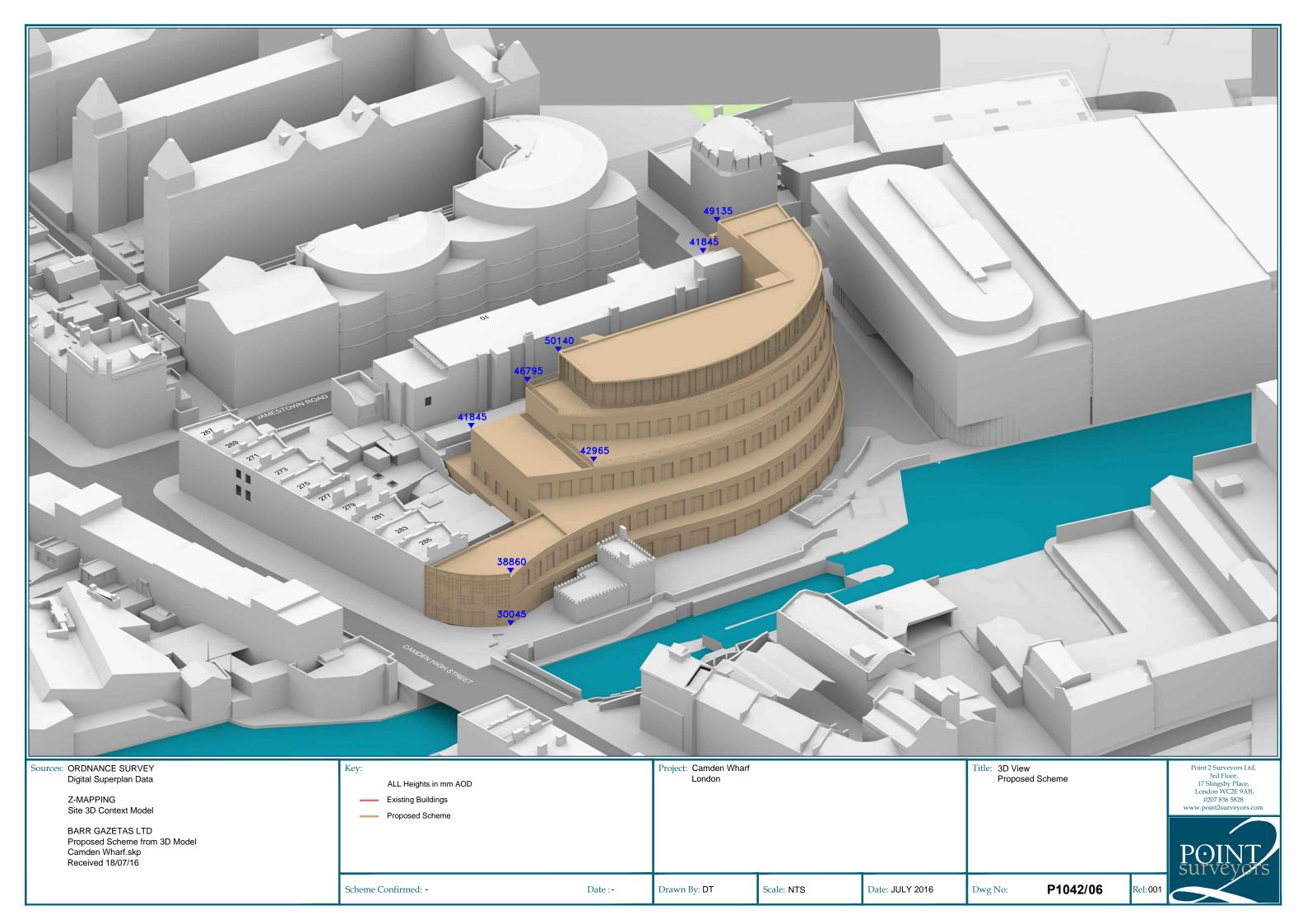
BARR GAZETAS LTD Proposed Scheme from 3D Model Camden Wharf.skp Received 18/07/16

Scheme (Confirmed: -	Date :-	Drawn By: DT	Scale: NTS	Date: JULY 2016	Dwg
_	All Heights in mm AOD Existing Buildings Proposed Scheme					
- 5 -			London			

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Appendix B – Results

Room	Window	EXISTING VSC	PROPOSED VSC	LOSS VSC	%LOSS VSC
285 CAME	DEN HIGH S	TREET			
R1/11	W1/11	21.61	22.40	-0.79	-3.66
R1/12	W1/12	31.00	31.70	-0.70	-2.26
R1/22	W1/22	29.84	29.23	0.61	2.04
283 CAME	DEN HIGH S	TREET			
R1/31	W1/31	28.99	27.45	1.54	5.31
R1/32	W1/32	34.13	32.66	1.47	4.31
R2/41	W1/41	28.91	27.00	1.91	6.61
R2/42	W1/42	33.32	31.69	1.63	4.89
281 CAME	DEN HIGH S	TREET			
R1/51	W1/51	30.42	28.35	2.07	6.80
R1/52	W1/52	33.89	32.19	1.70	5.02
R2/62	W1/62	32.30	30.46	1.84	5.70
279 CAME	DEN HIGH S	TREET			
R1/71	W1/71	30.56	28.66	1.90	6.22
R2/71	W2/71	31.28	29.53	1.75	5.59
R1/72 R1/72	W1/72 W2/72	33.89 34.11	32.38 32.67	1.51 1.44	4.46 4.22
277 CAME	DEN HIGH S	TREET			
R1/79	W1/79	13.03	12.78	0.25	1.92
R1/80	W1/80	23.25	22.19	1.06	4.56
R1/81	W1/81	30.59	28.94	1.65	5.39
R1/82	W1/82	33.33	31.91	1.42	4.26
R1/90	W1/90	15.73	14.41	1.32	8.39
R1/91	W1/91	27.81	26.18	1.63	5.86
R2/92	W1/92	30.66	29.19	1.47	4.79

275 CAMDEN HIGH STREET

Room	Window	EXISTING VSC	PROPOSED VSC	LOSS VSC	%LOSS VSC
R1/101 R1/101	W1/101 W2/101	29.54 29.58	28.14 28.29	1.40 1.29	4.74 4.36
R1/102 R1/102	W1/102 W2/102	32.00 32.14	30.79 31.02	1.21 1.12	3.78 3.48
273 CAME	DEN HIGH S	TREET			
R1/111	W1/111	29.84	28.66	1.18	3.95
R1/112	W1/112	32.77	31.78	0.99	3.02
R2/122	W1/122	31.93	30.95	0.98	3.07
271 CAM	DEN HIGH S	TREET			
R1/131 R1/131 R1/131	W1/131 W2/131 W3/131	30.49 33.13 33.13	29.56 33.13 33.13	0.93 0.00 0.00	3.05 0.00 0.00
R1/132 R1/132 R1/132	W1/132 W2/132 W3/132	33.61 36.14 36.13	32.83 36.14 36.13	0.78 0.00 0.00	2.32 0.00 0.00
R1/142	W1/142	31.46	30.68	0.78	2.48
267 CAME	DEN HIGH S	TREET			
R1/171	W1/171	32.75	32.39	0.36	1.10
R1/172	W1/172	34.26	33.88	0.38	1.11
R1/181 R1/181 R1/181	W1/181 W2/181 W3/181	40.66 52.54 29.52	39.99 51.80 29.52	0.67 0.74 0.00	1.65 1.41 0.00
269 CAME	DEN HIGH S	TREET			
R1/151	W1/151	30.38	29.74	0.64	2.11
R1/152	W1/152	33.61	33.06	0.55	1.64
R1/162	W1/162	32.53	32.01	0.52	1.60
10 JAMES	TOWN ROA	D			
R1/203	W1/203	36.05	33.05	3.00	8.32

DAYLIGHT DISTRIBUTION ANALYSIS PROPOSED SCHEME RECEIVED 18/07/16

Deem/		Drou	New		0/1.000
Room/ Floor	Whole Room	Prev sq ft	New sq ft	Loss sq ft	%Loss
1 1001	Room	3410	34 10	34 10	
285 CAMDI	EN HIGH STRE	ET			
D4/44	440.0	400.0	100.0	0.0	0.0
R1/11 R1/12	110.2 110.2	103.8 106.7	103.6 100.6	0.3 6.1	0.3 5.7
R1/12 R1/22	68.1	67.6	64.0	3.7	5.5
11/22	00.1	07.0	04.0	0.7	0.0
283 CAMDI	EN HIGH STRE	ET			
R1/31	106.1	99.8	79.0	20.9	20.9
R1/32	106.1	101.8	99.0	2.8	2.8
R2/41	71.7	65.5	45.7	19.8	30.2
R2/42	71.7	67.2	54.6	12.6	18.8
281 CAMDI	EN HIGH STRE	ET			
R1/51	72.7	70.6	70.6	0.0	0.0
R1/51	72.7	70.6	70.6	0.0	0.0
R2/62	69.0	68.0	62.8	5.2	7.6
			0_10		
279 CAMDI	EN HIGH STRE	FT			
R1/71	111.8	107.4	106.0	1.4	1.3
R2/71	44.1	42.9	42.9	0.0	0.0
R1/72	183.7	180.8	180.8	0.0	0.0
277 CAMDI	EN HIGH STRE	ET			
R1/79	110.3	63.9	63.9	0.0	0.0
R1/80	118.6	105.3	104.8	0.5	0.5
R1/81	116.9	112.3	112.3	0.1	0.1
R1/82	116.9	112.7	112.7	0.0	0.0
R1/90	65.5	32.4	28.5	4.0	12.3
R1/91	65.5	64.7	64.7	0.0	0.0
R2/92	67.4	66.9	66.9	0.0	0.0
	EN HIGH STRE	CT.			
		. 🗆 I			
R1/101	212.4	206.8	204.9	2.0	1.0
R1/102	212.4	207.0	207.0	0.0	0.0
272 CAMDI	EN HIGH STRE	ET			
		. 🗆 I			
R1/111	106.1	102.5	102.5	0.0	0.0
R1/112	106.1	102.5	102.5	0.0	0.0
R2/122	71.7	70.7	70.7	0.0	0.0

271 CAMDEN HIGH STREET

DAYLIGHT DISTRIBUTION ANALYSIS PROPOSED SCHEME RECEIVED 18/07/16

Room/ Floor	Whole Room	Prev sq ft	New sq ft	Loss sq ft	%Loss
R1/131	330.9	329.1	328.7	0.4	0.1
R1/132	86.4	86.3	86.3	0.0	0.0
R1/142	55.8	52.1	52.1	0.0	0.0
267 CAMD	EN HIGH STRE	EET			
R1/171	43.4	34.1	34.1	0.0	0.0
R1/172	43.4	34.6	31.0	3.6	10.4
R1/181	227.5	201.5	201.5	0.0	0.0
269 CAMD	EN HIGH STRE	EET			
R1/151	86.4	83.5	83.5	0.0	0.0
R1/152	86.4	83.5	83.5	0.0	0.0
R1/162	55.8	54.3	54.3	0.0	0.0
10 JAMES	FOWN ROAD				
R1/203	153.7	127.3	127.3	0.0	0.0

		Ev	Wi	ndow	need			Room Existing Proposed						
Room	Window	Winter APSH	Annual APSH	Winter APSH	posed Annual APSH	Winter %Loss	Annual %Loss	Winter APSH	Annual APSH	Winter APSH	Annual APSH	Winter %Loss	Annual %Loss	
285 CAN	IDEN HIGH	 STREET 												
R1/11	W1/11	20	50	16	48	20.0	4.0	20	50	16	48	20.0	4.0	
R1/12	W1/12	21	60	20	62	4.8	-3.3	21	60	20	62	4.8	-3.3	
R1/22	W1/22	19	54	16	53	15.8	1.9	19	54	16	53	15.8	1.9	
283 CAN	IDEN HIGH	STREET												
R1/31	W1/31	18	56	16	54	11.1	3.6	18	56	16	54	11.1	3.6	
R1/32	W1/32	23	68	21	66	8.7	2.9	23	68	21	66	8.7	2.9	
R2/41	W1/41	15	51	13	49	13.3	3.9	15	51	13	49	13.3	3.9	
R2/42	W1/42	19	60	16	57	15.8	5.0	19	60	16	57	15.8	5.0	
281 CAN	IDEN HIGH	STREET												
R1/51	W1/51	19	59	17	57	10.5	3.4	19	59	17	57	10.5	3.4	
R1/52	W1/52	23	68	19	64	17.4	5.9	23	68	19	64	17.4	5.9	
R2/62	W1/62	20	61	17	58	15.0	4.9	20	61	17	58	15.0	4.9	
279 CAN	IDEN HIGH	STREET												
R1/71	W1/71	19	62	17	60	10.5	3.2	19	62	17	60	10.5	3.2	

		APSH APSH APSH APSH %Lo 18 62 18 61 0.0 23 69 23 69 0.0 23 69 23 68 0.0						Ev	R	oom	neod		
Room	Window	Winter	Annual	Winter	Annual	Winter %Loss	Annual %Loss	EX Winter APSH	Annual APSH	Winter APSH	posed Annual APSH	Winter %Loss	Annual %Loss
Room	Willdow					/02033	/02000	Ι				/02033	/02000
R2/71	W2/71	18	62	18	61	0.0	1.6	18	62	18	61	0.0	1.6
R1/72	W1/72		69		69	0.0	0.0						
R1/72	W2/72	23	69	23	68	0.0	1.4	23	69	23	69	0.0	0.0
277 CAM	DEN HIGH	STREET											
R1/79	W1/79	3	23	3	23	0.0	0.0	3	23	3	23	0.0	0.0
R1/80	W1/80	12	44	12	43	0.0	2.3	12	44	12	43	0.0	2.3
R1/81	W1/81	17	57	17	55	0.0	3.5	17	57	17	55	0.0	3.5
R1/82	W1/82	20	65	20	63	0.0	3.1	20	65	20	63	0.0	3.1
R1/90	W1/90	2	19	2	16	0.0	15.8	2	19	2	16	0.0	15.8
R1/91	W1/91	12	47	12	44	0.0	6.4	12	47	12	44	0.0	6.4
R2/92	W1/92	14	51	14	49	0.0	3.9	14	51	14	49	0.0	3.9
275 CAM	DEN HIGH	I STREET											
R1/101	W1/101	17	58	17	56	0.0	3.4						
R1/101	W2/101	15	54	15	52	0.0	3.7	18	61	18	59	0.0	3.3
R1/102	W1/102	20	63	20	62	0.0	1.6						
R1/102	W2/102	16	55	16	54	0.0	1.8	20	65	20	64	0.0	1.5
273 CAM	DEN HIGH	I STREET											
		I						I					

				ndow									
			isting		posed				isting		posed		
Room	Window	Winter APSH	Annual APSH	Winter APSH	Annual APSH	Winter %Loss	Annual %Loss	Winter APSH	Annual APSH	Winter APSH	Annual APSH	Winter %Loss	Annual %Loss
R1/111	W1/111	18	64	18	61	0.0	4.7	18	64	18	61	0.0	4.7
R1/112	W1/112	23	70	22	68	4.3	2.9	23	70	22	68	4.3	2.9
11,1712		20	10	22	00	4.0	2.0	20	10	22	00	4.0	2.0
R2/122	W1/122	22	68	21	66	4.5	2.9	22	68	21	66	4.5	2.9
271 CAMDEN HIGH STREET													
R1/131	W1/131	21	67	20	65	4.8	3.0						
R1/131	W2/131	4	27	4	27	0.0	0.0						
R1/131	W3/131	4	27	4	27	0.0	0.0	25	93	24	91	4.0	2.2
R1/132	W1/132	23	69	23	69	0.0	0.0						
R1/132	W2/132	4	27	4	27	0.0	0.0						
R1/132	W3/132	4	27	4	27	0.0	0.0	27	95	27	95	0.0	0.0
R1/142	W1/142	21	67	21	66	0.0	1.5	21	67	21	66	0.0	1.5
267 CAM	DEN HIGH	 STREET											
R1/171	W1/171	20	66	20	65	0.0	1.5	20	66	20	65	0.0	1.5
R1/172	W1/172	23	69	23	68	0.0	1.4	23	69	23	68	0.0	1.4
R1/181	W1/181	4	36	4	34	0.0	5.6						
R1/181	W2/181	1	33	1	30	0.0	9.1						
R1/181	W3/181	18	69	18	69	0.0	0.0	18	82	18	80	0.0	2.4
269 CAM	DEN HIGH	STREET											
R1/151	W1/151	20	64	20	64	0.0	0.0	20	64	20	64	0.0	0.0

				ndow			Room							
Room	Window	Ex Winter APSH	isting Annual APSH	Pro Winter APSH	posed Annual APSH	Winter %Loss	Annual %Loss	Ex Winter APSH	isting Annual APSH	Pro Winter APSH	posed Annual APSH		Annual %Loss	
R1/152	W1/152	23	69	23	68	0.0	1.4	23	69	23	68	0.0	1.4	
R1/162	W1/162	21	67	21	66	0.0	1.5	21	67	21	66	0.0	1.5	