

**Technical Report -
Daylight & Sunlight Analysis
Ref: Z49618.1B**

Proposed 50 New Build Apartments

at

Chorlton Baths, Manchester

for

Mosscares St Vincent's Housing Group



LOW CARBON
ENERGY
ASSESSORS



FS 560187

Energy Counsel
Viridor House
No.3 Bolholt Terrace
Bury/Gtr Manchester
BL8 1PP

Tel: +44 (0)161-762 1055
Fax: +44 (0)161-761 1094

Matthew.Gibson@energycounsel.co.uk
www.energycounsel.co.uk

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Approved by:		Matthew Gibson	6 th April 2023

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1.0 Introduction

This report has been prepared to support the submission of a planning application for the proposed development of 50 No. apartments for the over 55's at the former Chorlton Baths site on Manchester Road in Manchester. The new development is to provide new residential accommodation and communal areas within a five-storey building. We have undertaken an assessment of the potential impact in daylight / sunlight to the surrounding properties as a result of the new development, as follows:

- Residential Flats contained within 95 – 129 Manchester Road

This report reviews the potential daylight / sunlight impact from the proposed new build development. In accordance with good practise and planning policy we have therefore reviewed the following against the BRE's daylight and sunlight standards:

- Vertical sky component
- Daylight distribution / no sky line
- Annual probable sunlight hours

Basis of Assessment

It is usual to assess daylight and sunlight in relation to the guidelines set out in the 'Site layout planning for daylight and sunlight, A guide to good practice – BR209 2022'.

The BRE guidelines provide two principal measures of daylight for assessing the impact of a proposal on neighbouring properties – namely Vertical Sky Component (VSC), and No Sky Line (NSL). We have used IES Virtual Environment software to carry out the analysis, specifically the RadianceIES programme. These measures of daylight are discussed in the following report below.

Vertical Sky Component (VSC) - VSC is a measure of the skylight reaching a point from an overcast sky. For existing buildings, the BRE guideline is based on the minimum standard for VSC at a point at the centre of a window, on the outer plane of the wall. The BRE guidelines state that if the VSC at the centre of a window is less than 27%, and it is less than 0.8 times its former value, then the diffuse daylighting of the existing building may be adversely affected.

No Sky Line (NSL) - NSL is a measure of the distribution of daylight within a room. As it maps out the region within a room where light can penetrate directly from the sky, it therefore accounts

for the size of and number of windows by simple geometry. The BRE guidelines suggest the area of the working plane within a room that can receive direct skylight should not be reduced to less than 0.8 times its former value.

Sunlight (APSH) - In relation to sunlight, if a living room of an existing dwelling has a main window facing within 90° of due south, and any part of a new development subtends an angle of more than 25° to the horizontal measured from the centre of the window in a vertical section perpendicular to the window, then the sunlighting of the existing dwelling may be adversely affected. This will be the case if the centre of the window:

- receives less than 25% of annual probable sunlight hours and less than 0.80 times its former annual value; or less than 5% of annual probable sunlight hours between 21 September and 21 March and less than 0.80 times its former value during that period;
- and also has a reduction in sunlight received over the whole year greater than 4% of annual probable sunlight hours.

Trees and shrubs have not been included within the analysis, partly because their exact shape is very hard to predict, and partly because the dappled shade of a tree is more pleasant than the deep shadow of a building or wall. Only where there is a dense belt or group of evergreen planting will this be included within and shading modelling.

We have only assessed occupied rooms, i.e. Living Rooms, Kitchens and Bedrooms, as these are the rooms where daylight and sunlight are most important.

2.0 Executive Summary

We have reviewed the proposals for the new build development against the BRE's criteria.

Section 6.0 of our report shows the proposed massing after development.

We have modelled the massing provided by the existing buildings on site currently (Chorlton Baths) and the proposed design as provided by Buttress Architects. The submitted Site Plan and new building arrangement has not resulted in any difficulties in meeting the BRE criteria, there are still good levels of daylight and sunlight received by the affected windows pre and post-development.

The analysis shows that for the proposed development:

1. **Impact to all of the windows is minimal and fully accords with the BRE VSC criteria** – the VSC to the existing windows comfortably achieves the minimum VSC of 27% in all cases, therefore the diffuse daylighting of the existing buildings has not been adversely affected.
2. **All rooms comfortably achieve the BRE's NSL criteria. In each case there is no loss of 'View of the Sky' from the working plane, therefore within acceptable levels** – the View of the Sky provision has not changed as a result of the new development.
3. **Impact to all of the windows is minimal and fully accords with the BRE APSH criteria** – the proposed APSH is very good due to the orientation of the houses, and all windows achieve the minimum value of 25%, therefore the sunlighting of the existing buildings has not been adversely affected.

Conclusion

We therefore conclude that, in respect of the proposed development, the daylight/sunlight amenity to the existing dwellings on Manchester Road are in accordance with the current BRE BR209 guidance.

3.0 Existing Site

3.1 Location: The area for the proposed development is on the site of the old Chorlton Baths, Chorlton, Manchester and is highlighted by the red line boundary shown in Figure 1.



Figure 1 - Location and surrounding area of proposed Chorlton Baths residential development.

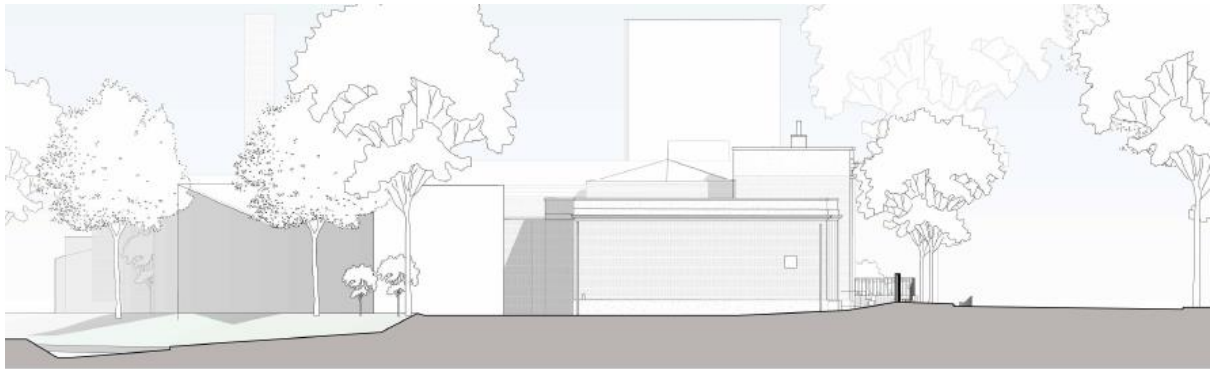
The site is to be accessed off Manchester Road, Chorlton and on the opposite side is the Transport for Greater Manchester Metrolink tramway. The site is surrounded by existing commercial and residential development.

3.2 Existing Site Plan:



3.3 Existing Elevations:





4.1 Proposed Floor Plans:



4.2 Proposed Elevation Visuals:

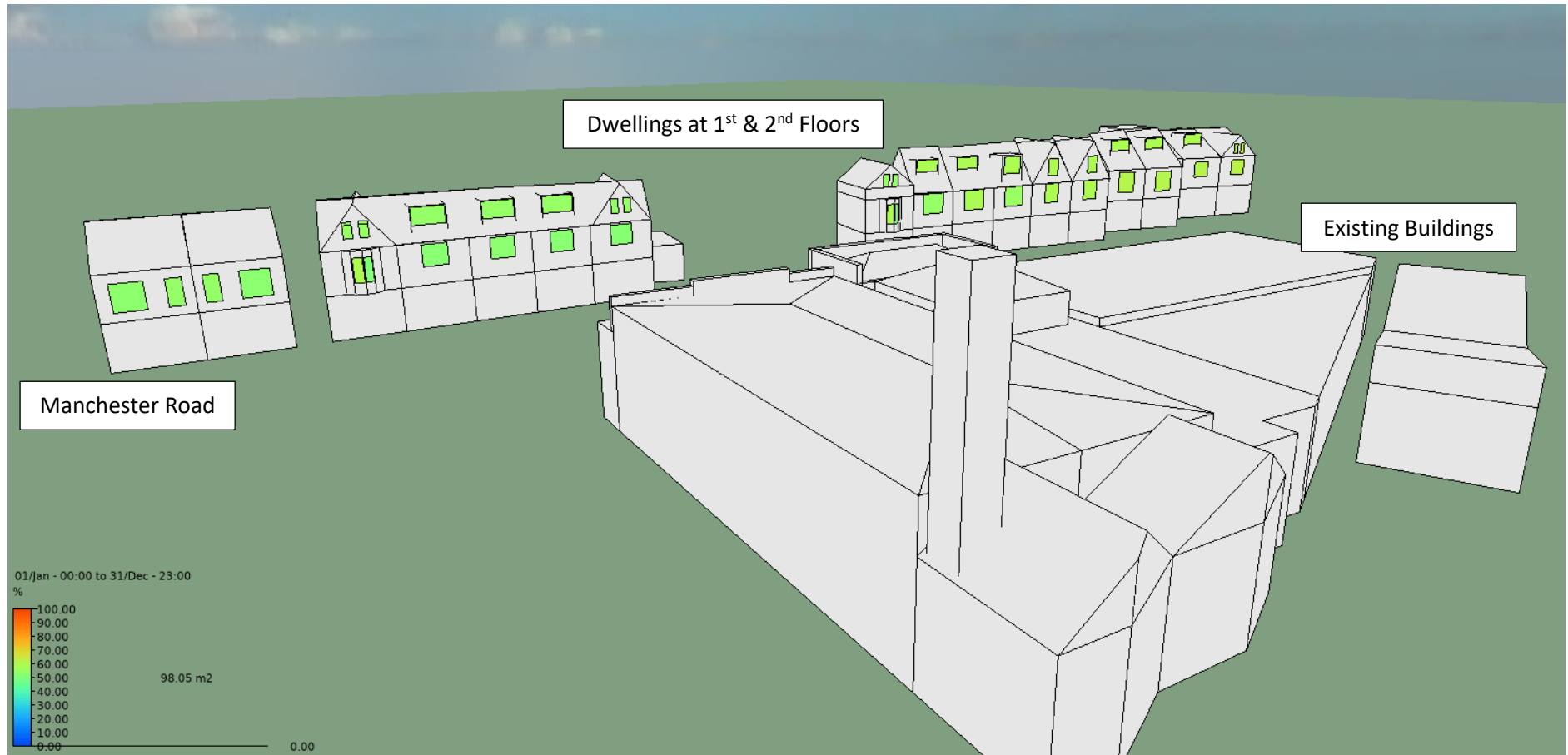


5.0 Image of the Existing Site



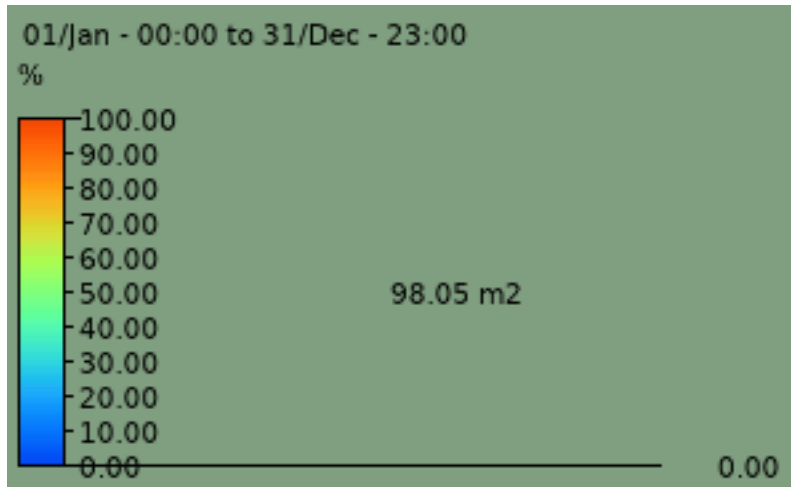
6.0 Daylight and Sunlight Analysis

Existing view of the site from the Southeast, showing the percentage of Annual Probable Sunlight Hours (APSH) for each window.

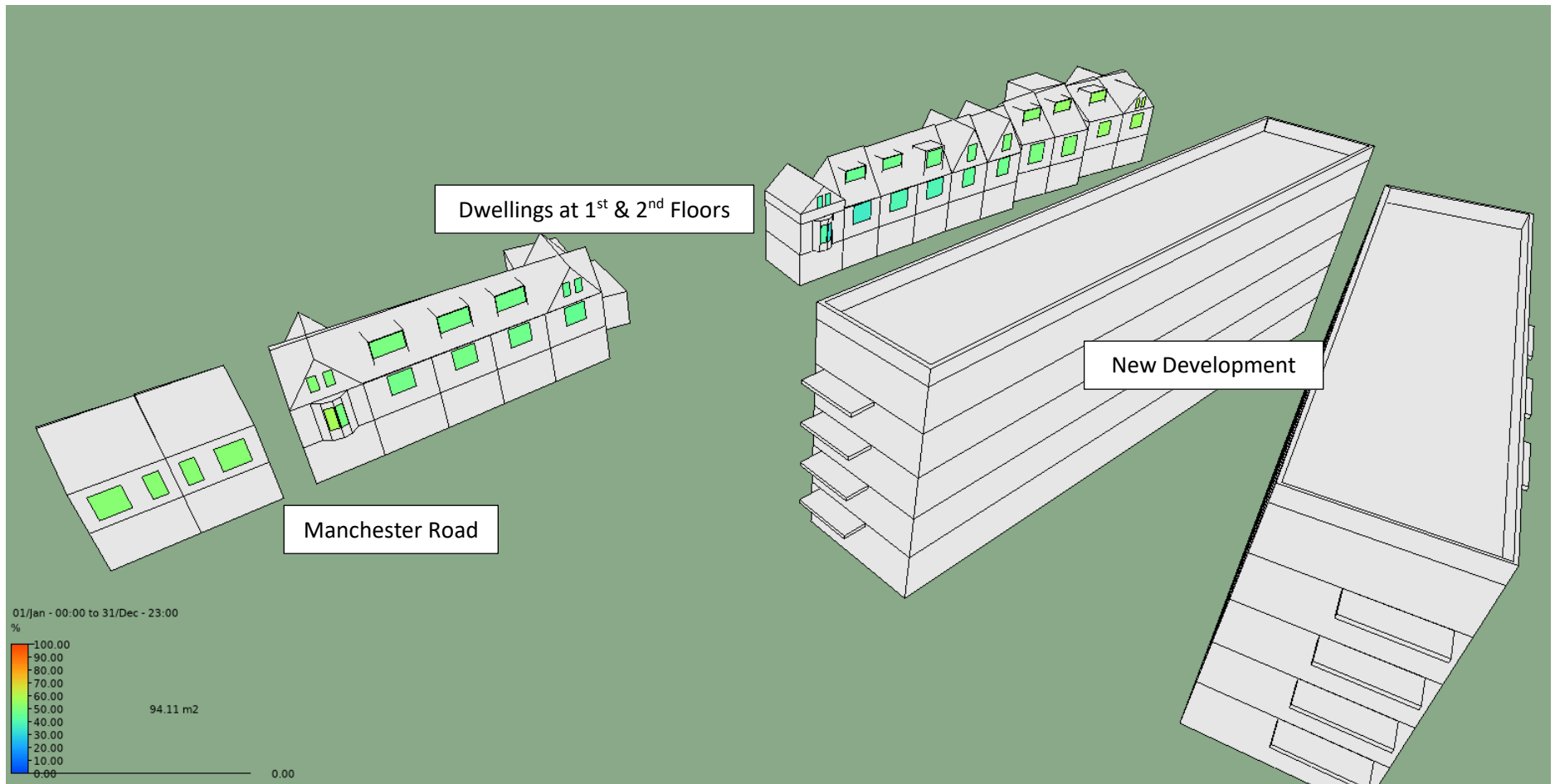


The legend in the bottom left corner of the image shows the number of Annual Probable Sunlight Hours (APSH) that is received by each window.

The warmer the colour, the higher the number of Annual Probable Sunlight Hours that are received by each window.



View of the site from the Southwest, including proposed extension:



Results table to confirm compliance

Location			Vertical Sky Component (VSC)		No-Sky Line (NSL)				Window		Annual Probable Sunlight Hours (APSH)		
Room	Room Use	Window	PROPOSED VSC	PASS/ FAIL	EXISTING % of room	PROPOSED % of room	%Loss	Reduction Factor	Angle from North	Aspect	PROPOSED Winter %	PROPOSED Annual %	PASS/ FAIL
Blossom Florists													
1/1	FF (Left) Dwelling	W1	38.56	PASS	100.00	100.00	0.00	1.00	105.00	E	11.00	51.00	PASS
2/2	FF (Right) Dwelling	W2	38.53	PASS	100.00	100.00	0.00	1.00	105.00	E	11.00	51.00	PASS
99 Reasons													
2/1	FF (Left) Dwelling	W3	38.34	PASS	100.00	100.00	0.00	1.00	105.00	E	11.00	51.00	PASS
2/2	FF (Right) Dwelling	W4	38.24	PASS	100.00	100.00	0.00	1.00	105.00	E	11.00	51.00	PASS
Ruyi Restaurant													
3/1	FF Dwelling	W5 (Bay)	38.36	PASS	100.00	100.00	0.00	1.00	105.00	E	11.00	51.50	PASS
3/3	SF Dwelling	W6	38.21	PASS	100.00	100.00	0.00	1.00	105.00	E	11.00	50.00	PASS
Chorlton Mini Market													
4/1	FF Dwelling	W7	37.51	PASS	100.00	100.00	0.00	1.00	105.00	E	11.00	47.00	PASS
4/2	SF Dwelling	W8	37.94	PASS	100.00	100.00	0.00	1.00	105.00	E	10.50	49.00	PASS
Smoak Coffee													
5/1	FF Dwelling	W9	36.74	PASS	100.00	100.00	0.00	1.00	105.00	E	11.00	48.00	PASS
5/2	SF Dwelling	W10	37.43	PASS	100.00	100.00	0.00	1.00	105.00	E	10.50	48.00	PASS
Henry C													
6/1	FF Dwelling	W11	35.83	PASS	100.00	100.00	0.00	1.00	105.00	E	11.00	46.00	PASS
6/2	SF Dwelling	W12	36.95	PASS	100.00	100.00	0.00	1.00	105.00	E	10.50	47.00	PASS
Oasis Ice Cream													
7/1	FF Dwelling	W13	34.97	PASS	100.00	100.00	0.00	1.00	105.00	E	11.00	44.00	PASS
7/2	SF Dwelling	W14	36.09	PASS	100.00	100.00	0.00	1.00	105.00	E	11.00	44.00	PASS
Mary & Archie													
8/1	FF Dwelling	W15 (Bay)	29.98	PASS	100.00	100.00	0.00	1.00	105.00	E	5.50	36.00	PASS
8/2	SF Dwelling	W16	32.59	PASS	100.00	100.00	0.00	1.00	105.00	E	6.50	39.00	PASS
The Baths Supper Bar													
9/1	FF Dwelling	W17	30.53	PASS	100.00	100.00	0.00	1.00	105.00	E	5.50	35.00	PASS
9/2	SF Dwelling	W18	33.76	PASS	100.00	100.00	0.00	1.00	105.00	E	7.00	45.00	PASS

Z49618.1B Daylight / Sunlight Analysis

Chorlton Baths, Manchester

Location			Vertical Sky Component (VSC)		No-Sky Line (NSL)				Window		Annual Probable Sunlight Hours (APSH)		
Room	Room Use	Window	PROPOSED VSC	PASS/ FAIL	EXISTING % of room	PROPOSED % of room	%Loss	Reduction Factor	Angle from North	Aspect	PROPOSED Winter %	PROPOSED Annual %	PASS/ FAIL
The Font													
10/1	FF (Left) Dwelling	W19	30.92	PASS	100.00	100.00	0.00	1.00	105.00	E	6.00	39.00	PASS
10/2	FF (Right) Dwelling	W20	31.29	PASS	100.00	100.00	0.00	1.00	105.00	E	6.00	38.00	PASS
10/3	SF (Left) Dwelling	W21	34.26	PASS	100.00	100.00	0.00	1.00	105.00	E	7.50	46.00	PASS
10/4	SF (Right) Dwelling	W22	33.89	PASS	100.00	100.00	0.00	1.00	105.00	E	7.50	46.00	PASS
Compfix Internationl													
11/1	FF Dwelling	W23	32.13	PASS	100.00	100.00	0.00	1.00	110.00	E	6.00	43.00	PASS
11/2	SF Dwelling	W24	33.76	PASS	100.00	100.00	0.00	1.00	110.00	E	7.00	47.00	PASS
Chorlton Local													
12/1	FF Dwelling	W25	33.36	PASS	100.00	100.00	0.00	1.00	110.00	E	6.00	45.00	PASS
12/2	SF Dwelling	W26	34.54	PASS	100.00	100.00	0.00	1.00	110.00	E	7.00	49.00	PASS
The Oystercatcher													
13/1	FF Dwelling	W27	34.71	PASS	100.00	100.00	0.00	1.00	110.00	E	6.50	48.00	PASS
13/2	SF Dwelling	W28	36.72	PASS	100.00	100.00	0.00	1.00	110.00	E	8.00	52.00	PASS
Empty Retail 1													
14/1	FF Dwelling	W29	35.50	PASS	100.00	100.00	0.00	1.00	115.00	E/SE	7.00	50.00	PASS
14/2	SF Dwelling	W30	37.16	PASS	100.00	100.00	0.00	1.00	115.00	E/SE	9.00	53.00	PASS
The Thirsty Korean													
15/1	FF Dwelling	W31	36.74	PASS	100.00	100.00	0.00	1.00	115.00	E/SE	8.50	53.00	PASS
15/2	SF Dwelling	W32	37.80	PASS	100.00	100.00	0.00	1.00	115.00	E/SE	9.50	54.00	PASS
Empty Retail 2													
16/1	FF Dwelling	W33	37.41	PASS	100.00	100.00	0.00	1.00	115.00	E/SE	9.00	55.00	PASS
16/2	SF Dwelling	W34	37.91	PASS	100.00	100.00	0.00	1.00	115.00	E/SE	9.50	57.00	PASS