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Dear Mr Goodwin

Teddington Riverside – Internal Daylight and Sunlight

As you are aware this practice has provided detailed daylight and sunlight advice in respect of the Teddington Riverside proposals. We have previously issued full daylight and sunlight studies for the scheme dated February 2014 and an updated and expanded report dated June 2014 providing additional details and widening the scope of our assessments in response to comments received from the Local Authority following the Building Research Establishment's (BRE) technical review the February 2014 study.

Further to our updated June 2014 report further comment was provided to the Borough by the BRE in their letter of July 10th. The bulk of the BRE response relates to internal daylight and sunlight provision within the proposed units and, in particular, focuses upon the internal daylighting provision. Such focus on 'diffuse daylight' is usual as it is this ambient light, as opposed to direct incidence of sun on a window, which provides the amenity required for visual discrimination and dictates whether a space is considered adequately lit or gloomy.

At the outset the exceptionally high compliance rate of the submitted scheme with the internal daylighting targets should be noted. The BRE response recognises that it is appropriate to consider the 1.5% ADF target for Living / Kitchen / Diner arrangements due to focus on daylighting to the main living space. Based on these criteria all bedrooms achieve the target 1.0% ADF and only 7 L/K/D's, of more than 750 rooms assessed, fall slightly below the BRE notwithstanding the limitations often encountered when providing private balcony amenity space.

This exceptionally high degree of over 99% compliance recognises the overall quality of the design and the attention to detail, maximising glazing in sensitive areas and offsetting balconies to avoid internal daylight levels been compromised. Indeed the BRE targets recognise that the provision of balconies is often a trade-off with internal daylight provision. When a 'without balconies' position is considered the scheme fully complies with the BRE guidance when a 1.5% target is applied for L/K/D's.

Scheme Amendments

Despite the very high level of internal daylighting compliance the BRE report identified the 7 rooms where daylight levels fall below the BRE targets. TP Bennett have made a number of further amendments which are summarised in the table below:

Room Reference	Location (Block / Floor)	Changes	Previous ADF	Revised ADF following amendments
R20 / 10	Block A / Ground	Floor area reduced by c, 3sqm	1.44	1.56
R21 / 10	Block A / Ground	Plan form reversed to limit obstructions and room area reduced	1.00	1.67 (Room reference amended to R22/10)
R19 / 21	Block B / 1st	Balcony Centralised to limit obstruction to L/K/D	1.07	1.59
R9 / 41	Block C / 1st	Floor area reduced by c. 4 sqm	1.35	1.45 (1.5 when rounded to 1 decimal place)
R17 / 41	Block C / 1st	Plan form reversed to limit obstructions	1.12	1.97 (room reference amended to R15/42)
R17 / 42	Block C / 2nd	Plan form reversed to limit obstructions	1.2	3.66 (room reference amended to R15/42)
R12 / 30	Block D / Ground	No Change – room compliant when rounded to 1 decimal place	1.47	1.5

The further design changes maximise the daylighting potential to the localised units which previously fell below the BRE targets. The location and nature of these changes are identified below:

Block A - Ground Floor

R19/10 BEDROOM ADF:3.22%

R20/10 LKD ADF:1.44%

R21/10 LKD ADF:1.00%

R22/10 BEDROOM ADF:1.52%

Floor area reduced by c.3 sqm

Plan arrangement reversed to minimise obstructions to L/K/D

Previous Layout

Revised Layout
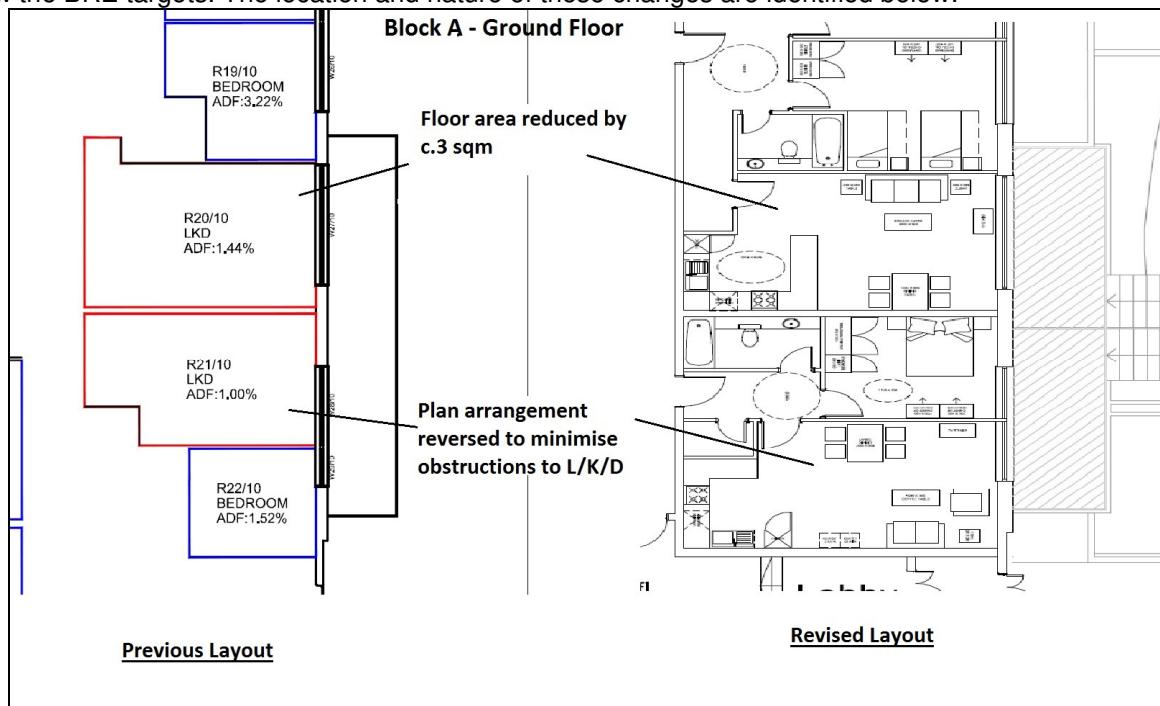
Figure 1: Block A Ground Floor Amendments

Block B 1st Floor

R19/21
LKD

Balcony centralised to minimise obstruction

Previous Layout

Revised Layout
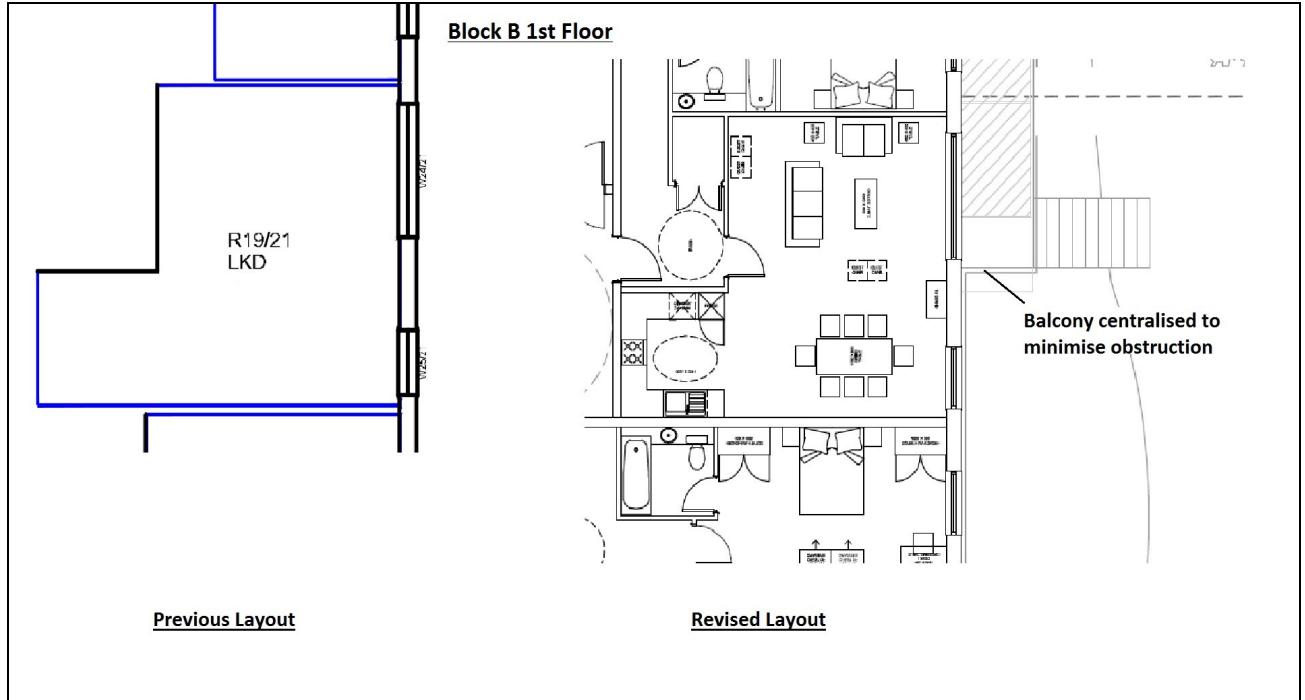
Figure 2: Block B 1st Floor Amendments

Block C - First Floor

R9/41
LKD
ADF:1.35%

**Floor area reduced by c.4 sqm**

Previous Layout

Revised Layout
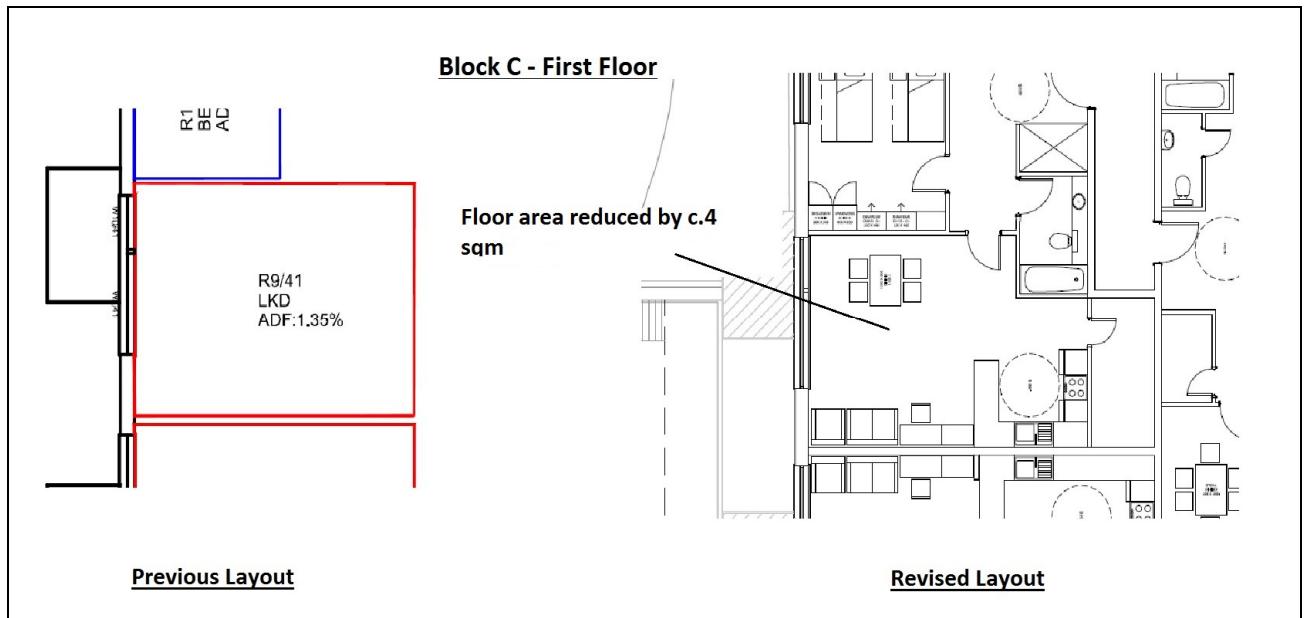
Figure 3: Block C 1st Floor Amendments
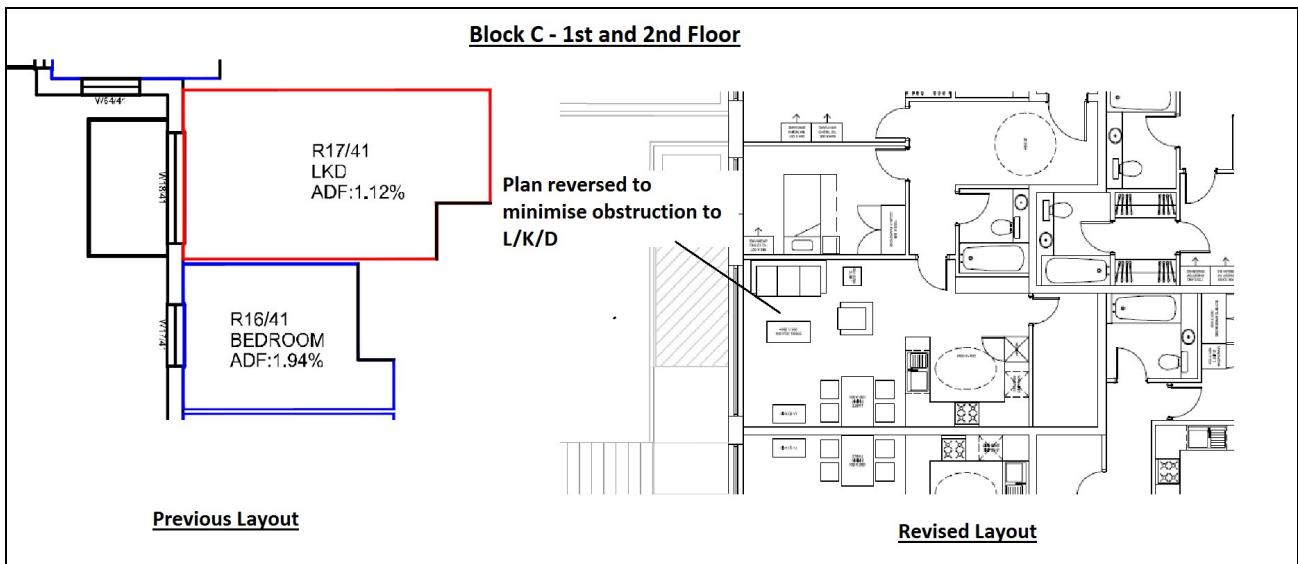
Block C – 1ˢᵗ and 2ⁿᵈ Floor Amendments

The design changes further maximise the daylighting potential to the affected units such that they will exceed or be within an unnoticeable level of tolerance to the BRE targets. A full set of revised internal daylight results, including the effects of balconies, is appended to this letter. Taken in the wider context this full compliance with the BRE targets is an excellent level of amenity for a scheme of this nature. The excellent daylight levels are indicative of the overall quality and considered nature of the design and is wholly in line with the BRE guide and policy DM DC 5 of the London Borough of Richmond Development Management Plan.

Direct Sunlighting

In respect of direct sunlighting to the windows of the units the BRE document notes the inherent constraints in achieving direct sunlight to windows that are east and west facing.

The BRE review acknowledges that improved levels of sunlighting may be achieved to south facing rooms however the opportunities to orientate blocks to be south facing without compromising other aspects of design are limited. As noted in our report, the site layout has been designed to maximise all aspects of amenity with the result that the principal orientation of the blocks runs north-south away from the river. An alternative west-east orientation would increase south facing units but similarly lead to a large area of north facing facades and significant shading to the amenity areas within the site. The BRE report notes that the balconies of the units will receive good levels of amenity and suggests that constraints in respect of direct sunlight to the rooms should be weighed against the merits of the scheme and, we would suggest, the overall high quality of the design. A key element illustrating this overall quality is the exceptional level of compliance in respect of the principle consideration of diffuse daylighting as well as the quality of amenity provided to both private balcony amenity space and the communal landscaped areas. Overall the quality of both daylight and sunlight amenity is considered to be excellent when considered against the site context, layout and factors influencing the design. Again the design is wholly in line with the BRE guide and policy DM DC 5 of the London Borough of Richmond Development Management Plan.

I trust that the above is useful in illustrating the further design responses to the BRE's latest comments and overall excellent amenity levels provided by the scheme. Should you have any queries do get in touch.

Yours sincerely

Jonathan Lonergan
Consultant

Internal Daylight Results – July 2014 Revisions

Room	Roomuse	Window	VSC(%)	ADF(%)	TOTAL ADF(%)
Building A					
R1/10	BEDROOM	W1/10	14.28	1.47	
R1/10	BEDROOM	W2/10	33.73	4.77	6.2
R2/10	LKD	W3/10	33.33	4.44	4.4
R3/10	LKD	W4/10	19.60	1.72	
R3/10	LKD	W5/10	15.91	0.44	2.2
R4/10	BEDROOM	W6/10	23.42	3.51	3.5
R5/10	BEDROOM	W7/10	33.15	6.30	6.3
R6/10	BEDROOM	W8/10	32.94	2.96	3.0
R7/10	LKD	W9/10	19.20	0.84	
R7/10	LKD	W10/10	22.90	1.54	2.4
R8/10	BEDROOM	W11/10	33.33	2.98	3.0
R9/10	BEDROOM	W12/10	34.42	2.21	2.2
R10/10	BEDROOM	W13/10	33.70	2.77	2.8
R11/10	BEDROOM	W14/10	23.82	2.92	
R11/10	BEDROOM	W15/10	36.06	4.38	7.3
R12/10	LKD	W16/10	24.59	2.78	2.8
R13/10	LIVINGROOM	W17/10	24.65	3.04	3.0
R14/10	LKD	W18/10	35.92	2.66	
R14/10	LKD	W19/10	12.57	1.21	3.9
R15/10	BEDROOM	W20/10	20.19	1.30	
R15/10	BEDROOM	W21/10	19.88	1.23	2.5
R16/10	BEDROOM	W22/10	17.81	1.86	1.9
R17/10	BEDROOM	W23/10	7.60	1.58	
R17/10	BEDROOM	W24/10	14.36	1.40	3.0
R18/10	BEDROOM	W25/10	18.54	1.94	1.9
R19/10	BEDROOM	W26/10	18.63	3.22	3.2
R20/10	LKD	W27/10	6.67	1.56	1.6
R21/10	BEDROOM	W28/10	4.19	0.97	1.0

Room	Roomuse	Window	VSC(%)	ADF(%)	TOTAL ADF(%)
R22/10	LKD	W29/10	12.02	1.67	1.7
R1/11	LKD	W1/11	31.58	1.25	
R1/11	LKD	W2/11	20.24	1.81	
R1/11	LKD	W3/11	32.32	1.34	4.4
R2/11	BEDROOM	W4/11	32.46	2.78	2.8
R3/11	LKD	W5/11	16.51	1.78	1.8
R4/11	BEDROOM	W6/11	36.36	4.53	
R4/11	BEDROOM	W47/11	13.42	1.13	5.7
R5/11	BEDROOM	W7/11	36.23	3.47	3.5
R6/11	BEDROOM	W8/11	32.39	2.46	2.5
R7/11	LKD	W9/11	19.26	0.64	
R7/11	LKD	W10/11	23.57	1.74	2.4
R8/11	LKD	W11/11	21.21	2.92	2.9
R9/11	BEDROOM	W12/11	32.61	2.70	2.7
R10/11	BEDROOM	W13/11	35.52	2.55	2.5
R11/11	BEDROOM	W14/11	30.18	4.51	4.5
R12/11	LKD	W15/11	21.41	0.64	
R12/11	LKD	W16/11	24.86	1.35	2.0
R13/11	BEDROOM	W17/11	35.39	1.94	1.9
R14/11	BEDROOM	W18/11	36.18	2.12	2.1
R15/11	BEDROOM	W19/11	35.49	2.91	2.9
R16/11	KITCHEN	W20/11	25.07	1.98	
R16/11	KITCHEN	W21/11	37.10	2.95	4.9
R17/11	LIVINGROOM	W22/11	25.53	3.28	3.3
R18/11	LIVINGROOM	W23/11	25.51	3.09	3.1
R19/11	LKD	W24/11	36.99	2.67	
R19/11	LKD	W25/11	13.71	1.23	3.9
R20/11	BEDROOM	W26/11	22.66	1.36	
R20/11	BEDROOM	W27/11	22.24	1.30	2.7
R21/11	BEDROOM	W28/11	20.56	1.75	1.8

Room	Roomuse	Window	VSC(%)	ADF(%)	TOTAL ADF(%)
R22/11	BEDROOM	W29/11	8.77	1.70	
R22/11	BEDROOM	W30/11	16.83	1.33	3.0
R23/11	BEDROOM	W31/11	18.07	2.85	2.8
R24/11	BEDROOM	W32/11	22.09	2.32	2.3
R25/11	BEDROOM	W33/11	19.20	1.69	1.7
R26/11	LKD	W34/11	7.88	1.51	1.5
R27/11	LKD	W35/11	11.25	1.34	
R27/11	LKD	W36/11	6.88	0.39	1.7
R28/11	BEDROOM	W37/11	20.99	2.34	2.3
R29/11	BEDROOM	W38/11	23.89	1.97	2.0
R30/11	LKD	W39/11	16.30	0.92	
R30/11	LKD	W40/11	11.07	1.24	2.2
R31/11	BEDROOM	W41/11	24.10	2.21	2.2
R32/11	LKD	W42/11	23.90	1.05	
R32/11	LKD	W43/11	11.61	1.12	
R32/11	LKD	W44/11	30.30	1.23	3.4
R33/11	BEDROOM	W45/11	33.57	4.69	4.7
R34/11	BEDROOM	W46/11	33.71	4.70	4.7
R1/12	LKD	W1/12	34.93	1.34	
R1/12	LKD	W2/12	37.96	3.21	
R1/12	LKD	W3/12	37.21	1.51	6.1
R2/12	BEDROOM	W4/12	36.09	3.08	3.1
R3/12	LKD	W5/12	30.70	3.08	3.1
R4/12	BEDROOM	W6/12	37.96	4.74	
R4/12	BEDROOM	W47/12	21.32	1.49	6.2
R5/12	BEDROOM	W7/12	37.82	3.60	3.6
R6/12	BEDROOM	W8/12	37.14	2.77	2.8
R7/12	LKD	W9/12	30.72	0.96	
R7/12	LKD	W10/12	20.20	1.47	2.4
R8/12	LKD	W11/12	23.25	3.07	3.1

Room	Roomuse	Window	VSC(%)	ADF(%)	TOTAL ADF(%)
R9/12	BEDROOM	W12/12	37.37	3.00	3.0
R10/12	BEDROOM	W13/12	37.70	2.62	2.6
R11/12	BEDROOM	W14/12	33.74	4.94	4.9
R12/12	LKD	W15/12	24.50	0.70	
R12/12	LKD	W16/12	39.21	2.09	2.8
R13/12	BEDROOM	W17/12	35.73	1.86	1.9
R14/12	BEDROOM	W18/12	35.75	2.04	2.0
R15/12	BEDROOM	W19/12	35.77	2.80	2.8
R16/12	KITCHEN	W20/12	39.33	3.07	
R16/12	KITCHEN	W21/12	37.71	2.98	6.0
R17/12	LIVINGROOM	W22/12	39.05	5.35	5.4
R18/12	LIVINGROOM	W23/12	39.01	5.04	5.0
R19/12	LKD	W24/12	37.63	2.69	
R19/12	LKD	W25/12	29.74	2.22	4.9
R20/12	BEDROOM	W26/12	25.01	1.39	
R20/12	BEDROOM	W27/12	24.04	1.34	2.7
R21/12	BEDROOM	W28/12	23.24	1.81	1.8
R22/12	BEDROOM	W29/12	25.59	3.50	
R22/12	BEDROOM	W30/12	19.93	1.46	5.0
R23/12	BEDROOM	W31/12	22.81	3.37	3.4
R24/12	BEDROOM	W32/12	26.23	2.57	2.6
R25/12	BEDROOM	W33/12	25.88	2.08	2.1
R26/12	LKD	W34/12	11.67	1.67	1.7
R27/12	LKD	W35/12	9.21	1.04	
R27/12	LKD	W36/12	19.96	0.88	1.9
R28/12	BEDROOM	W37/12	26.80	2.76	2.8
R29/12	BEDROOM	W38/12	26.87	2.12	2.1
R30/12	LKD	W39/12	18.57	1.00	
R30/12	LKD	W40/12	28.99	2.88	3.9

Room	Roomuse	Window	VSC(%)	ADF(%)	TOTAL ADF(%)
R31/12	BEDROOM	W41/12	29.45	2.53	2.5
R32/12	LKD	W42/12	29.74	1.23	
R32/12	LKD	W43/12	30.07	2.68	
R32/12	LKD	W44/12	33.55	1.32	5.2
R33/12	BEDROOM	W45/12	36.58	5.03	5.0
R34/12	BEDROOM	W46/12	36.79	5.06	5.1
Building B					
R1/20	BEDROOM	W1/20	24.36	2.08	2.1
R2/20	BEDROOM	W2/20	24.61	2.29	2.3
R3/20	BEDROOM	W3/20	25.16	1.48	1.5
R4/20	LKD	W4/20	12.26	1.55	1.5
R5/20	BEDROOM	W5/20	25.58	1.90	1.9
R6/20	BEDROOM	W6/20	27.42	1.75	1.8
R7/20	BEDROOM	W7/20	28.31	2.62	2.6
R8/20	BEDROOM	W8/20	28.63	2.09	2.1
R9/20	LIVINGROOM	W9/20	28.60	4.25	
R9/20	LIVINGROOM	W10/20	30.48	1.49	
R9/20	LIVINGROOM	W11/20	11.12	0.63	6.4
R10/20	KITCHEN	W12/20	38.98	3.81	3.8
R11/20	KITCHEN	W13/20	38.75	3.78	3.8
R12/20	LIVINGROOM	W14/20	10.05	0.62	
R12/20	LIVINGROOM	W15/20	28.84	1.44	
R12/20	LIVINGROOM	W16/20	22.13	3.56	5.6
R13/20	BEDROOM	W17/20	23.13	1.76	1.8
R14/20	BEDROOM	W18/20	23.15	1.85	1.8
R15/20	BEDROOM	W19/20	22.95	1.27	1.3
R16/20	BEDROOM	W20/20	21.76	1.38	1.4
R17/20	BEDROOM	W21/20	8.54	1.98	2.0

Room	Roomuse	Window	VSC(%)	ADF(%)	TOTAL ADF(%)
R18/20	LKD	W22/20	7.86	0.92	
R18/20	LKD	W23/20	20.11	0.71	1.6
R19/20	BEDROOM	W24/20	20.77	1.29	1.3
R20/20	BEDROOM	W25/20	20.01	1.91	1.9
R21/20	BEDROOM	W26/20	19.68	1.74	1.7
R22/20	LKD	W27/20	17.41	1.65	
R22/20	LKD	W28/20	15.76	0.57	
R22/20	LKD	W29/20	2.27	0.15	
R22/20	LKD	W30/20	10.56	0.57	2.9
R23/20	LKD	W31/20	10.57	0.56	
R23/20	LKD	W32/20	2.41	0.16	
R23/20	LKD	W33/20	17.46	0.61	
R23/20	LKD	W34/20	22.34	1.96	3.3
R1/21	BEDROOM	W1/21	27.13	1.86	1.9
R2/21	BEDROOM	W2/21	27.72	1.98	2.0
R3/21	BEDROOM	W3/21	28.33	1.68	1.7
R4/21	LKD	W4/21	26.04	0.75	
R4/21	LKD	W5/21	9.35	0.59	1.3
R5/21	BEDROOM	W6/21	10.38	1.14	1.1
R6/21	BEDROOM	W7/21	27.31	1.62	1.6
R7/21	BEDROOM	W8/21	30.19	1.61	1.6
R8/21	BEDROOM	W9/21	30.76	2.26	2.3
R9/21	BEDROOM	W10/21	30.61	2.23	2.2
R10/21	LIVINGROOM	W11/21	7.94	1.55	
R10/21	LIVINGROOM	W12/21	16.31	0.87	
R10/21	LIVINGROOM	W13/21	30.71	1.65	4.1
R11/21	KITCHEN	W14/21	39.15	4.02	4.0
R12/21	KITCHEN	W15/21	38.96	4.01	4.0
R13/21	LIVINGROOM	W16/21	29.84	1.64	
R13/21	LIVINGROOM	W17/21	15.36	0.83	
R13/21	LIVINGROOM	W18/21	2.41	0.83	3.3
R14/21	BEDROOM	W19/21	25.44	1.93	1.9

Room	Roomuse	Window	VSC(%)	ADF(%)	TOTAL ADF(%)
R15/21	BEDROOM	W20/21	25.82	1.97	2.0
R16/21	BEDROOM	W21/21	25.85	1.42	1.4
R17/21	BEDROOM	W22/21	24.61	1.50	1.5
R18/21	BEDROOM	W23/21	11.08	2.13	2.1
R19/21	LKD	W24/21	10.03	0.89	
R19/21	LKD	W25/21	23.08	0.70	1.6
R20/21	BEDROOM	W26/21	23.85	1.47	1.5
R21/21	BEDROOM	W27/21	22.94	1.71	1.7
R22/21	BEDROOM	W28/21	22.27	1.61	1.6
R23/21	LIVINGROOM	W29/21	1.06	0.63	
R23/21	LIVINGROOM	W30/21	6.31	0.48	
R23/21	LIVINGROOM	W31/21	18.85	1.26	2.4
R24/21	KITCHEN	W32/21	24.49	2.81	2.8
R25/21	KITCHEN	W33/21	24.80	2.84	2.8
R26/21	LIVINGROOM	W34/21	20.24	1.30	
R26/21	LIVINGROOM	W35/21	7.06	0.53	
R26/21	LIVINGROOM	W36/21	3.27	0.85	2.7
R1/22	BEDROOM	W1/22	31.13	2.04	2.0
R2/22	BEDROOM	W2/22	31.37	2.17	2.2
R3/22	BEDROOM	W3/22	31.86	1.85	1.8
R4/22	LKD	W4/22	30.71	0.87	
R4/22	LKD	W5/22	18.14	1.34	2.2
R5/22	BEDROOM	W6/22	18.46	2.24	2.2
R6/22	BEDROOM	W7/22	31.71	1.84	1.8
R7/22	BEDROOM	W8/22	33.29	1.74	1.7
R8/22	BEDROOM	W9/22	33.68	2.42	2.4
R9/22	BEDROOM	W10/22	33.77	2.38	2.4
R10/22	LIVINGROOM	W11/22	32.77	4.72	
R10/22	LIVINGROOM	W12/22	30.58	1.50	

Room	Roomuse	Window	VSC(%)	ADF(%)	TOTAL ADF(%)
R10/22	LIVINGROOM	W13/22	11.13	0.63	6.8
R11/22	KITCHEN	W14/22	39.25	4.03	4.0
R12/22	KITCHEN	W15/22	39.12	4.02	4.0
R13/22	LIVINGROOM	W16/22	10.41	0.62	
R13/22	LIVINGROOM	W17/22	29.65	1.47	
R13/22	LIVINGROOM	W18/22	27.66	4.19	6.3
R14/22	BEDROOM	W19/22	29.03	2.10	2.1
R15/22	BEDROOM	W20/22	29.09	2.15	2.1
R16/22	BEDROOM	W21/22	28.98	1.56	1.6
R17/22	BEDROOM	W22/22	27.46	1.65	1.7
R18/22	BEDROOM	W23/22	13.81	1.81	1.8
R19/22	LKD	W24/22	12.91	1.02	
R19/22	LKD	W25/22	26.21	0.77	1.8
R20/22	BEDROOM	W26/22	27.29	1.64	1.6
R21/22	BEDROOM	W27/22	26.62	1.91	1.9
R22/22	BEDROOM	W28/22	26.32	1.79	1.8
R23/22	LIVINGROOM	W29/22	24.03	3.85	
R23/22	LIVINGROOM	W30/22	21.64	1.24	
R23/22	LIVINGROOM	W31/22	3.42	0.33	5.4
R24/22	KITCHEN	W32/22	28.74	3.17	3.2
R25/22	KITCHEN	W33/22	29.03	3.19	3.2
R26/22	LIVINGROOM	W34/22	4.64	0.40	
R26/22	LIVINGROOM	W35/22	23.12	1.31	
R26/22	LIVINGROOM	W36/22	29.08	4.42	6.1
R1/23	BEDROOM	W1/23	34.14	2.22	2.2
R2/23	BEDROOM	W2/23	34.63	2.36	2.4
R3/23	BEDROOM	W3/23	35.09	2.01	2.0
R4/23	LKD	W4/23	32.82	0.90	
R4/23	LKD	W5/23	15.68	1.12	2.0
R5/23	BEDROOM	W6/23	16.12	1.90	1.9

Room	Roomuse	Window	VSC(%)	ADF(%)	TOTAL ADF(%)
R6/23	BEDROOM	W7/23	33.46	1.90	1.9
R7/23	BEDROOM	W8/23	36.01	1.86	1.9
R8/23	BEDROOM	W9/23	36.15	2.56	2.6
R9/23	BEDROOM	W10/23	35.83	2.52	2.5
R10/23	LIVINGROOM	W11/23	11.82	2.04	
R10/23	LIVINGROOM	W12/23	16.40	0.87	
R10/23	LIVINGROOM	W13/23	30.79	1.65	4.6
R11/23	KITCHEN	W14/23	39.41	4.04	4.0
R12/23	KITCHEN	W15/23	39.33	4.03	4.0
R13/23	LIVINGROOM	W16/23	30.34	1.65	
R13/23	LIVINGROOM	W17/23	15.89	0.85	
R13/23	LIVINGROOM	W18/23	7.89	1.53	4.0
R14/23	BEDROOM	W19/23	31.79	2.28	2.3
R15/23	BEDROOM	W20/23	32.15	2.32	2.3
R16/23	BEDROOM	W21/23	32.20	1.70	1.7
R17/23	BEDROOM	W22/23	29.64	1.73	1.7
R18/23	BEDROOM	W23/23	12.45	1.46	1.5
R19/23	LKD	W24/23	11.75	0.84	
R19/23	LKD	W25/23	28.74	0.81	1.6
R20/23	BEDROOM	W26/23	30.92	1.82	1.8
R21/23	BEDROOM	W27/23	30.25	2.11	2.1
R22/23	BEDROOM	W28/23	29.71	1.99	2.0
R23/23	LIVINGROOM	W29/23	5.26	1.12	
R23/23	LIVINGROOM	W30/23	11.30	0.68	
R23/23	LIVINGROOM	W31/23	25.27	1.51	3.3
R24/23	KITCHEN	W32/23	33.13	3.53	3.5
R25/23	KITCHEN	W33/23	33.38	3.55	3.6
R26/23	LIVINGROOM	W34/23	26.51	1.55	
R26/23	LIVINGROOM	W35/23	12.45	0.74	
R26/23	LIVINGROOM	W36/23	9.81	1.82	4.1

Room	Roomuse	Window	VSC(%)	ADF(%)	TOTAL ADF(%)
R1/24	BEDROOM	W1/24	37.92	2.38	2.4
R2/24	BEDROOM	W2/24	37.90	2.54	2.5
R3/24	BEDROOM	W3/24	38.20	2.15	2.2
R4/24	LKD	W4/24	37.62	1.01	
R4/24	LKD	W5/24	24.17	1.66	2.7
R5/24	BEDROOM	W6/24	24.27	2.72	2.7
R6/24	BEDROOM	W7/24	37.89	2.10	2.1
R7/24	BEDROOM	W8/24	38.53	1.96	2.0
R8/24	BEDROOM	W9/24	38.51	2.69	2.7
R9/24	BEDROOM	W10/24	38.59	2.64	2.6
R10/24	LIVINGROOM	W11/24	38.80	5.18	
R10/24	LIVINGROOM	W12/24	32.32	1.51	
R10/24	LIVINGROOM	W13/24	11.13	0.63	7.3
R11/24	KITCHEN	W14/24	39.49	4.05	4.0
R12/24	KITCHEN	W15/24	39.46	4.04	4.0
R13/24	LIVINGROOM	W16/24	10.96	0.63	
R13/24	LIVINGROOM	W17/24	32.06	1.51	
R13/24	LIVINGROOM	W18/24	35.97	4.90	7.0
R14/24	BEDROOM	W19/24	35.62	2.46	2.5
R15/24	BEDROOM	W20/24	35.52	2.51	2.5
R16/24	BEDROOM	W21/24	35.62	1.83	1.8
R17/24	BEDROOM	W22/24	34.92	1.97	2.0
R18/24	BEDROOM	W23/24	21.05	2.46	2.5
R19/24	LKD	W24/24	20.83	1.49	
R19/24	LKD	W25/24	34.33	0.94	2.4
R20/24	BEDROOM	W26/24	34.84	1.99	2.0
R21/24	BEDROOM	W27/24	34.31	2.32	2.3
R22/24	BEDROOM	W28/24	34.29	2.18	2.2

Room	Roomuse	Window	VSC(%)	ADF(%)	TOTAL ADF(%)
R23/24	LIVINGROOM	W29/24	34.20	4.81	
R23/24	LIVINGROOM	W30/24	29.59	1.46	
R23/24	LIVINGROOM	W31/24	8.91	0.56	6.8
R24/24	KITCHEN	W32/24	36.70	3.84	3.8
R25/24	KITCHEN	W33/24	36.87	3.86	3.9
R26/24	LIVINGROOM	W34/24	9.70	0.59	
R26/24	LIVINGROOM	W35/24	30.44	1.49	
R26/24	LIVINGROOM	W36/24	37.97	5.18	7.3
R1/25	BEDROOM	W1/25	39.60	2.47	2.5
R2/25	BEDROOM	W2/25	39.59	2.63	2.6
R3/25	BEDROOM	W3/25	39.60	2.22	2.2
R4/25	LKD	W4/25	39.57	1.04	
R4/25	LKD	W5/25	38.19	2.57	3.6
R5/25	BEDROOM	W6/25	38.20	4.22	4.2
R6/25	BEDROOM	W7/25	39.57	2.15	2.2
R7/25	BEDROOM	W8/25	39.59	2.00	2.0
R8/25	BEDROOM	W9/25	39.60	2.75	2.8
R9/25	BEDROOM	W10/25	39.60	2.70	2.7
R10/25	LIVINGROOM	W11/25	39.61	4.59	
R10/25	LIVINGROOM	W12/25	39.36	1.58	
R10/25	LIVINGROOM	W13/25	37.07	1.84	8.0
R11/25	KITCHEN	W14/25	39.60	4.05	4.0
R12/25	KITCHEN	W15/25	39.59	4.05	4.0
R13/25	LIVINGROOM	W16/25	37.01	1.84	
R13/25	LIVINGROOM	W17/25	39.31	1.58	
R13/25	LIVINGROOM	W18/25	38.62	4.48	7.9
R14/25	BEDROOM	W19/25	38.17	2.62	2.6
R15/25	BEDROOM	W20/25	38.14	2.67	2.7
R16/25	BEDROOM	W21/25	38.41	1.96	2.0
R17/25	BEDROOM	W22/25	38.34	2.10	2.1

Room	Roomuse	Window	VSC(%)	ADF(%)	TOTAL ADF(%)
R18/25	BEDROOM	W23/25	36.61	4.12	4.1
R19/25	LKD	W24/25	36.42	2.50	
R19/25	LKD	W25/25	38.17	1.01	3.5
R20/25	BEDROOM	W26/25	38.16	2.16	2.2
R21/25	BEDROOM	W27/25	37.68	2.52	2.5
R22/25	BEDROOM	W28/25	37.67	2.37	2.4
R23/25	LIVINGROOM	W29/25	38.10	4.49	
R23/25	LIVINGROOM	W30/25	38.97	1.59	
R23/25	LIVINGROOM	W31/25	36.62	1.86	7.9
R24/25	KITCHEN	W32/25	39.30	4.06	4.1
R25/25	KITCHEN	W33/25	39.36	4.06	4.1
R26/25	LIVINGROOM	W34/25	37.01	1.87	
R26/25	LIVINGROOM	W35/25	39.27	1.60	
R26/25	LIVINGROOM	W36/25	39.60	4.66	8.1
Building C					
R1/40	BEDROOM	W1/40	19.27	1.97	2.0
R2/40	BEDROOM	W2/40	20.27	2.21	2.2
R3/40	LKD	W3/40	9.40	1.51	1.5
R4/40	BEDROOM	W4/40	21.07	2.47	2.5
R5/40	LKD	W5/40	10.21	1.62	1.6
R6/40	BEDROOM	W6/40	9.85	3.36	3.4
R7/40	BEDROOM	W7/40	19.83	1.42	1.4
R8/40	LKD	W8/40	16.73	1.53	1.5
R9/40	BEDROOM	W9/40	18.13	2.67	2.7
R10/40	LKD	W10/40	10.35	1.72	1.7
R11/40	BEDROOM	W11/40	11.64	1.31	1.3
R12/40	BEDROOM	W12/40	15.67	1.64	1.6
R13/40	BEDROOM	W13/40	27.35	1.80	1.8

INTERNAL DAYLIGHT ANALYSIS
Internal Analysis for proposal dated 01/08/14

AUG 2014

Room	Roomuse	Window	VSC(%)	ADF(%)	TOTAL ADF(%)
R14/40	BEDROOM	W14/40	29.26	2.48	2.5
R15/40	BEDROOM	W15/40	28.97	2.85	2.9
R16/40	LIVINGROOM	W16/40	19.56	1.92	
R16/40	LIVINGROOM	W17/40	36.33	3.51	5.4
R17/40	KITCHEN	W18/40	25.12	2.82	2.8
R18/40	LKD	W19/40	25.35	2.74	2.7
R19/40	BEDROOM	W20/40	36.36	4.27	
R19/40	BEDROOM	W21/40	22.81	2.62	6.9
R20/40	BEDROOM	W22/40	32.71	2.65	2.6
R21/40	BEDROOM	W23/40	33.42	2.10	2.1
R22/40	BEDROOM	W24/40	32.30	2.81	2.8
R23/40	LKD	W25/40	21.03	1.35	
R23/40	LKD	W26/40	16.99	0.74	2.1
R24/40	BEDROOM	W27/40	29.82	2.49	2.5
R25/40	BEDROOM	W28/40	30.45	2.74	2.7
R26/40	LKD	W29/40	19.40	2.36	2.4
R27/40	BEDROOM	W30/40	29.25	2.77	2.8
R28/40	LKD	W31/40	29.23	1.65	1.6
R29/40	LKD	W32/40	17.42	1.13	
R29/40	LKD	W33/40	17.71	0.60	1.7
R30/40	BEDROOM	W34/40	23.76	2.04	2.0
R31/40	BEDROOM	W35/40	31.62	2.69	2.7
R32/40	BEDROOM	W36/40	30.52	4.63	4.6
R33/40	LKD	W37/40	12.88	1.79	1.8
R34/40	BEDROOM	W38/40	27.45	2.51	2.5
R35/40	BEDROOM	W39/40	29.71	2.53	2.5
R36/40	LKD	W40/40	21.85	2.63	2.6
R37/40	BEDROOM	W41/40	32.69	3.14	3.1

Room	Roomuse	Window	VSC(%)	ADF(%)	TOTAL ADF(%)
R38/40	BEDROOM	W42/40	31.21	2.84	2.8
R39/40	LKD	W43/40	19.25	1.29	
R39/40	LKD	W44/40	26.31	0.99	
R39/40	LKD	W45/40	28.64	1.95	4.2
R40/40	LKD	W46/40	29.08	1.98	
R40/40	LKD	W47/40	27.14	1.02	
R40/40	LKD	W48/40	7.39	0.71	3.7
R1/41	BEDROOM	W1/41	22.76	1.90	1.9
R2/41	BEDROOM	W2/41	22.57	1.99	2.0
R3/41	LKD	W3/41	12.33	1.62	1.6
R4/41	BEDROOM	W4/41	25.53	1.94	1.9
R5/41	BEDROOM	W5/41	26.90	1.96	2.0
R6/41	BEDROOM	W6/41	22.63	1.43	1.4
R7/41	BEDROOM	W7/41	24.50	1.77	1.8
R8/41	LKD	W8/41	11.65	1.99	2.0
R9/41	LKD	W9/41	7.94	0.79	
R9/41	LKD	W10/41	16.21	0.66	1.5
R10/41	BEDROOM	W11/41	23.31	1.63	1.6
R11/41	BEDROOM	W12/41	23.88	1.57	1.6
R12/41	BEDROOM	W13/41	18.38	1.51	1.5
R13/41	BEDROOM	W14/41	20.08	1.73	1.7
R14/41	LKD	W15/41	12.49	1.75	1.7
R15/41	LKD	W16/41	12.77	1.97	2.0
R16/41	BEDROOM	W17/41	20.26	2.22	2.2
R17/41	BEDROOM	W18/41	17.26	1.50	1.5
R18/41	BEDROOM	W19/41	16.59	2.24	
R18/41	BEDROOM	W64/41	13.29	1.12	3.4
R19/41	BEDROOM	W20/41	28.77	2.24	2.2

Room	Roomuse	Window	VSC(%)	ADF(%)	TOTAL ADF(%)
R20/41	BEDROOM	W21/41	30.54	1.63	
R20/41	BEDROOM	W22/41	30.15	1.66	3.3
R21/41	KITCHEN	W23/41	20.16	1.42	
R21/41	KITCHEN	W24/41	36.08	2.55	4.0
R22/41	LIVINGROOM	W25/41	25.34	3.04	3.0
R23/41	LIVINGROOM	W26/41	27.46	2.38	
R23/41	LIVINGROOM	W27/41	24.18	0.91	3.3
R24/41	KITCHEN	W28/41	36.18	2.82	
R24/41	KITCHEN	W29/41	24.17	1.80	4.6
R25/41	BEDROOM	W30/41	35.60	2.61	2.6
R26/41	BEDROOM	W31/41	36.75	1.90	1.9
R27/41	BEDROOM	W32/41	35.23	1.72	1.7
R28/41	LKD	W33/41	23.19	1.20	
R28/41	LKD	W65/41	17.53	0.55	1.8
R29/41	BEDROOM	W34/41	15.50	2.37	2.4
R30/41	BEDROOM	W35/41	32.20	2.42	2.4
R31/41	BEDROOM	W36/41	31.83	2.25	2.3
R32/41	LKD	W37/41	22.13	2.99	3.0
R33/41	BEDROOM	W38/41	33.66	2.23	2.2
R34/41	BEDROOM	W39/41	32.23	2.78	2.8
R35/41	LKD	W40/41	20.05	1.27	
R35/41	LKD	W41/41	19.07	0.66	1.9
R36/41	BEDROOM	W42/41	27.92	3.88	3.9
R37/41	BEDROOM	W43/41	32.24	3.39	3.4
R38/41	BEDROOM	W44/41	33.69	2.59	2.6
R39/41	KITCHEN	W45/41	28.97	2.52	2.5
R40/41	LIVINGROOM	W46/41	20.16	2.09	2.1
R41/41	LIVINGROOM	W47/41	20.42	2.01	2.0
R42/41	KITCHEN	W48/41	30.12	2.53	2.5

Room	Roomuse	Window	VSC(%)	ADF(%)	TOTAL ADF(%)
R43/41	BEDROOM	W49/41	35.75	2.63	2.6
R44/41	BEDROOM	W50/41	36.99	4.02	4.0
R45/41	BEDROOM	W51/41	37.19	3.69	
R45/41	BEDROOM	W52/41	18.81	1.04	4.7
R46/41	BEDROOM	W53/41	28.59	2.14	2.1
R47/41	BEDROOM	W54/41	32.59	2.50	2.5
R48/41	LKD	W55/41	22.76	2.60	2.6
R49/41	BEDROOM	W56/41	32.13	2.62	2.6
R50/41	BEDROOM	W57/41	32.35	2.51	2.5
R51/41	LKD	W58/41	20.87	1.39	
R51/41	LKD	W59/41	30.09	0.93	
R51/41	LKD	W60/41	32.61	2.15	4.5
R52/41	LKD	W61/41	32.82	2.17	
R52/41	LKD	W62/41	30.25	0.95	
R52/41	LKD	W63/41	10.37	0.80	3.9
R1/42	BEDROOM	W1/42	27.34	2.14	2.1
R2/42	BEDROOM	W2/42	27.90	2.34	2.3
R3/42	LKD	W3/42	15.86	1.89	1.9
R4/42	BEDROOM	W4/42	27.87	2.05	2.1
R5/42	BEDROOM	W5/42	30.06	2.14	2.1
R6/42	BEDROOM	W6/42	24.97	1.54	1.5
R7/42	BEDROOM	W7/42	26.82	1.89	1.9
R8/42	LKD	W8/42	13.57	1.93	1.9
R9/42	LKD	W9/42	16.10	1.33	
R9/42	LKD	W10/42	11.58	0.39	1.7
R10/42	BEDROOM	W11/42	25.77	1.77	1.8
R11/42	BEDROOM	W12/42	26.74	1.73	1.7
R12/42	BEDROOM	W13/42	20.52	1.63	1.6

Room	Roomuse	Window	VSC(%)	ADF(%)	TOTAL ADF(%)
R13/42	BEDROOM	W14/42	23.14	1.88	1.9
R14/42	LKD	W15/42	15.08	1.90	1.9
R15/42	LKD	W16/42	27.74	3.66	3.7
R16/42	BEDROOM	W17/42	22.39	2.23	2.2
R17/42	BEDROOM	W18/42	6.03	0.63	0.6
R18/42	BEDROOM	W19/42	18.11	2.32	
R18/42	BEDROOM	W63/42	9.64	0.93	3.3
R19/42	BEDROOM	W20/42	30.35	2.31	2.3
R20/42	BEDROOM	W21/42	31.75	1.67	
R20/42	BEDROOM	W22/42	31.57	1.70	3.4
R21/42	KITCHEN	W23/42	21.16	1.47	
R21/42	KITCHEN	W24/42	37.16	2.60	4.1
R22/42	LIVINGROOM	W25/42	25.57	2.99	3.0
R23/42	LIVINGROOM	W26/42	25.57	3.18	3.2
R24/42	KITCHEN	W27/42	37.16	2.87	
R24/42	KITCHEN	W28/42	24.86	1.84	4.7
R25/42	BEDROOM	W29/42	36.90	2.65	2.7
R26/42	BEDROOM	W30/42	37.81	1.93	1.9
R27/42	BEDROOM	W31/42	36.80	1.76	1.8
R28/42	LKD	W32/42	24.58	1.25	
R28/42	LKD	W64/42	18.47	0.57	1.8
R29/42	BEDROOM	W33/42	16.97	2.51	2.5
R30/42	BEDROOM	W34/42	34.26	2.52	2.5
R31/42	BEDROOM	W35/42	35.69	2.47	2.5
R32/42	LKD	W36/42	24.40	3.18	3.2
R33/42	BEDROOM	W37/42	34.73	2.24	2.2
R34/42	BEDROOM	W38/42	34.60	2.93	2.9
R35/42	LKD	W39/42	22.39	1.37	
R35/42	LKD	W40/42	20.32	0.68	2.0

Room	Roomuse	Window	VSC(%)	ADF(%)	TOTAL ADF(%)
R36/42	BEDROOM	W41/42	29.70	4.05	4.0
R37/42	BEDROOM	W42/42	34.31	3.53	3.5
R38/42	BEDROOM	W43/42	35.99	2.70	2.7
R39/42	KITCHEN	W44/42	33.06	2.80	2.8
R40/42	LIVINGROOM	W45/42	16.84	1.74	1.7
R41/42	LIVINGROOM	W46/42	17.00	1.67	1.7
R42/42	KITCHEN	W47/42	33.74	2.79	2.8
R43/42	BEDROOM	W48/42	37.33	2.72	2.7
R44/42	BEDROOM	W49/42	38.22	4.13	4.1
R45/42	BEDROOM	W50/42	38.37	3.80	
R45/42	BEDROOM	W51/42	19.92	1.07	4.9
R46/42	BEDROOM	W52/42	29.26	2.18	2.2
R47/42	BEDROOM	W53/42	32.09	2.42	2.4
R48/42	LKD	W54/42	24.33	2.69	2.7
R49/42	BEDROOM	W55/42	35.68	2.86	2.9
R50/42	BEDROOM	W56/42	34.54	2.59	2.6
R51/42	LKD	W57/42	22.32	1.45	
R51/42	LKD	W58/42	33.06	1.00	
R51/42	LKD	W59/42	35.91	2.33	4.8
R52/42	LKD	W60/42	35.93	2.33	
R52/42	LKD	W61/42	32.87	1.01	
R52/42	LKD	W62/42	14.06	0.99	4.3
R1/43	BEDROOM	W1/43	33.03	2.46	2.5
R2/43	BEDROOM	W2/43	30.34	2.45	2.4
R3/43	LKD	W3/43	20.20	2.22	2.2
R4/43	BEDROOM	W4/43	33.04	2.35	2.3
R5/43	BEDROOM	W5/43	33.48	2.33	2.3
R6/43	BEDROOM	W6/43	27.52	1.64	1.6

Room	Roomuse	Window	VSC(%)	ADF(%)	TOTAL ADF(%)
R7/43	BEDROOM	W7/43	30.63	2.05	2.1
R8/43	LKD	W8/43	17.54	2.33	2.3
R9/43	LKD	W9/43	13.50	0.99	
R9/43	LKD	W10/43	23.20	0.79	1.8
R10/43	BEDROOM	W11/43	29.79	1.96	2.0
R11/43	BEDROOM	W12/43	29.88	1.89	1.9
R12/43	BEDROOM	W13/43	22.96	1.73	1.7
R13/43	BEDROOM	W14/43	28.13	2.15	2.1
R14/43	LKD	W15/43	17.55	2.11	2.1
R15/43	BEDROOM	W16/43	29.37	2.15	2.1
R16/43	BEDROOM	W17/43	29.52	2.19	2.2
R17/43	LKD	W18/43	13.00	1.41	1.4
R18/43	BEDROOM	W19/43	34.27	4.08	
R18/43	BEDROOM	W64/43	10.89	0.97	5.1
R19/43	BEDROOM	W20/43	32.68	2.39	2.4
R20/43	BEDROOM	W21/43	33.19	1.72	
R20/43	BEDROOM	W22/43	33.65	1.74	3.5
R21/43	KITCHEN	W23/43	36.69	2.45	
R21/43	KITCHEN	W24/43	38.03	2.55	5.0
R22/43	LIVINGROOM	W25/43	39.62	4.98	5.0
R23/43	LIVINGROOM	W26/43	39.62	5.29	5.3
R24/43	KITCHEN	W27/43	38.02	2.81	
R24/43	KITCHEN	W28/43	39.33	2.89	5.7
R25/43	BEDROOM	W29/43	38.32	2.66	2.7
R26/43	BEDROOM	W30/43	38.32	1.94	1.9
R27/43	BEDROOM	W31/43	38.32	1.77	1.8
R28/43	LKD	W32/43	39.32	1.97	
R28/43	LKD	W63/43	19.18	0.58	2.5

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    INTERNAL DAYLIGHT ANALYSIS
Internal Analysis for proposal dated 01/08/14
    AUG 2014

Room	Roomuse	Window	VSC(%)	ADF(%)	TOTAL ADF(%)
R29/43	BEDROOM	W33/43	18.04	2.59	2.6
R30/43	BEDROOM	W34/43	36.03	2.58	2.6
R31/43	BEDROOM	W35/43	35.84	2.40	2.4
R32/43	LKD	W36/43	25.82	3.26	3.3
R33/43	BEDROOM	W37/43	38.30	2.41	2.4
R34/43	BEDROOM	W38/43	36.87	3.03	3.0
R35/43	LKD	W39/43	23.79	1.42	
R35/43	LKD	W40/43	21.65	0.71	2.1
R36/43	BEDROOM	W41/43	30.77	4.14	4.1
R37/43	BEDROOM	W42/43	35.70	3.61	3.6
R38/43	BEDROOM	W43/43	37.34	2.74	2.7
R39/43	KITCHEN	W44/43	32.10	2.67	2.7
R40/43	LIVINGROOM	W45/43	25.11	2.37	2.4
R41/43	LIVINGROOM	W46/43	25.19	2.28	2.3
R42/43	KITCHEN	W47/43	32.46	2.65	2.6
R43/43	BEDROOM	W48/43	38.19	2.75	2.7
R44/43	BEDROOM	W49/43	38.99	4.20	4.2
R45/43	BEDROOM	W50/43	39.09	3.87	
R45/43	BEDROOM	W51/43	21.77	1.14	5.0
R46/43	BEDROOM	W52/43	30.13	2.20	2.2
R47/43	BEDROOM	W53/43	35.55	2.62	2.6
R48/43	LKD	W54/43	24.88	2.72	2.7
R49/43	BEDROOM	W55/43	34.90	2.75	2.7
R50/43	BEDROOM	W56/43	38.20	2.80	2.8
R51/43	LKD	W57/43	38.82	2.45	
R51/43	LKD	W58/43	35.90	1.06	
R51/43	LKD	W59/43	38.62	2.48	6.0
R52/43	LKD	W60/43	38.56	2.48	

Room	Roomuse	Window	VSC(%)	ADF(%)	TOTAL ADF(%)
R52/43	LKD	W61/43	35.60	1.06	
R52/43	LKD	W62/43	33.58	2.18	5.7
Building D					
R1/30	BEDROOM	W1/30	26.06	1.84	1.8
R2/30	BEDROOM	W2/30	27.27	1.91	1.9
R3/30	LKD	W3/30	17.75	1.00	
R3/30	LKD	W4/30	13.80	1.05	2.0
R4/30	BEDROOM	W5/30	28.80	1.64	1.6
R5/30	BEDROOM	W6/30	28.91	1.65	1.7
R6/30	LKD	W7/30	14.00	1.08	
R6/30	LKD	W8/30	14.37	0.86	1.9
R7/30	BEDROOM	W9/30	25.60	1.82	1.8
R8/30	LKD	W10/30	23.82	0.77	
R8/30	LKD	W11/30	11.56	0.88	
R8/30	LKD	W12/30	16.39	0.56	2.2
R9/30	BEDROOM	W13/30	15.52	0.81	
R9/30	BEDROOM	W14/30	3.80	0.76	1.6
R10/30	BEDROOM	W15/30	16.00	1.79	1.8
R11/30	BEDROOM	W16/30	17.35	1.48	1.5
R12/30	LKD	W17/30	12.70	0.80	
R12/30	LKD	W18/30	5.95	0.67	1.5
R13/30	BEDROOM	W19/30	24.60	1.56	1.6
R14/30	BEDROOM	W20/30	24.18	1.61	1.6
R15/30	LKD	W21/30	11.10	0.89	
R15/30	LKD	W22/30	16.85	0.90	1.8
R16/30	BEDROOM	W23/30	25.76	1.84	1.8
R17/30	BEDROOM	W24/30	24.21	1.74	1.7
R18/30	LKD	W25/30	13.09	0.86	
R18/30	LKD	W26/30	34.67	0.88	
R18/30	LKD	W27/30	38.55	2.43	4.2
R19/30	LKD	W28/30	38.78	2.44	

Room	Roomuse	Window	VSC(%)	ADF(%)	TOTAL ADF(%)
R19/30	LKD	W29/30	35.79	0.88	
R19/30	LKD	W30/30	15.33	0.97	4.3
R1/31	BEDROOM	W1/31	29.28	1.98	2.0
R2/31	BEDROOM	W2/31	30.05	2.04	2.0
R3/31	LKD	W3/31	20.86	0.95	
R3/31	LKD	W4/31	16.82	1.30	2.2
R4/31	BEDROOM	W5/31	31.63	1.72	1.7
R5/31	BEDROOM	W6/31	33.33	1.94	1.9
R6/31	BEDROOM	W7/31	31.56	1.94	1.9
R7/31	LKD	W8/31	16.61	1.21	
R7/31	LKD	W9/31	16.63	0.76	2.0
R8/31	BEDROOM	W10/31	28.08	1.96	2.0
R9/31	BEDROOM	W11/31	26.88	1.86	1.9
R10/31	LKD	W12/31	14.32	0.91	
R10/31	LKD	W13/31	18.91	0.55	
R10/31	LKD	W14/31	17.41	1.31	2.8
R11/31	LKD	W15/31	17.20	1.30	
R11/31	LKD	W16/31	17.94	0.53	
R11/31	LKD	W17/31	6.79	0.52	2.4
R12/31	BEDROOM	W18/31	19.15	1.46	1.5
R13/31	BEDROOM	W19/31	20.34	1.53	1.5
R14/31	LKD	W20/31	14.97	0.73	
R14/31	LKD	W21/31	8.43	0.77	1.5
R15/31	BEDROOM	W22/31	24.83	1.62	1.6
R16/31	BEDROOM	W23/31	27.60	1.68	1.7
R17/31	BEDROOM	W24/31	27.04	1.52	1.5
R18/31	LKD	W25/31	13.66	1.12	
R18/31	LKD	W26/31	20.22	0.92	2.0
R19/31	BEDROOM	W27/31	28.34	1.95	2.0
R20/31	BEDROOM	W28/31	27.31	1.86	1.9

Room	Roomuse	Window	VSC(%)	ADF(%)	TOTAL ADF(%)
R21/31	LKD	W29/31	15.69	1.00	
R21/31	LKD	W30/31	35.41	0.89	
R21/31	LKD	W31/31	38.97	2.45	4.3
R22/31	LKD	W32/31	39.12	2.51	
R22/31	LKD	W33/31	36.10	0.91	
R22/31	LKD	W34/31	11.06	0.85	4.3
R1/32	BEDROOM	W1/32	36.10	2.28	2.3
R2/32	BEDROOM	W2/32	32.76	2.16	2.2
R3/32	LKD	W3/32	27.36	1.08	
R3/32	LKD	W4/32	19.61	1.50	2.6
R4/32	BEDROOM	W5/32	34.34	1.83	1.8
R5/32	BEDROOM	W6/32	36.03	2.06	2.1
R6/32	BEDROOM	W7/32	34.15	2.06	2.1
R7/32	LKD	W8/32	19.11	1.36	
R7/32	LKD	W9/32	19.62	0.81	2.2
R8/32	BEDROOM	W10/32	30.78	2.07	2.1
R9/32	BEDROOM	W11/32	32.18	2.12	2.1
R10/32	LKD	W12/32	19.43	1.22	
R10/32	LKD	W13/32	22.98	0.62	
R10/32	LKD	W14/32	20.80	1.50	3.3
R11/32	LKD	W15/32	20.54	1.49	
R11/32	LKD	W16/32	21.95	0.60	
R11/32	LKD	W17/32	12.49	0.84	2.9
R12/32	BEDROOM	W18/32	25.23	1.74	1.7
R13/32	BEDROOM	W19/32	23.98	1.70	1.7
R14/32	LKD	W20/32	18.06	0.78	
R14/32	LKD	W21/32	11.80	0.92	1.7
R15/32	BEDROOM	W22/32	28.15	1.77	1.8
R16/32	BEDROOM	W23/32	30.91	1.82	1.8
R17/32	BEDROOM	W24/32	30.10	1.65	1.6
R18/32	LKD	W25/32	16.40	1.29	
R18/32	LKD	W26/32	27.00	1.07	2.4

Room	Roomuse	Window	VSC(%)	ADF(%)	TOTAL ADF(%)
R19/32	BEDROOM	W27/32	30.98	2.07	2.1
R20/32	BEDROOM	W28/32	34.19	2.17	2.2
R21/32	LKD	W29/32	35.12	2.20	
R21/32	LKD	W30/32	37.36	0.91	
R21/32	LKD	W31/32	39.27	2.46	5.6
R22/32	LKD	W32/32	39.34	2.52	
R22/32	LKD	W33/32	37.67	0.93	
R22/32	LKD	W34/32	37.27	1.95	5.4
R1/33	BEDROOM	W1/33	34.22	2.78	
R1/33	BEDROOM	W30/33	36.23	3.33	6.1
R2/33	BEDROOM	W2/33	25.73	1.59	1.6
R3/33	LKD	W3/33	34.44	1.27	
R3/33	LKD	W4/33	21.79	1.61	2.9
R4/33	BEDROOM	W5/33	36.79	1.92	1.9
R5/33	BEDROOM	W6/33	38.22	2.15	2.1
R6/33	BEDROOM	W7/33	36.52	2.14	2.1
R7/33	LKD	W8/33	21.06	1.47	
R7/33	LKD	W9/33	26.11	0.97	2.4
R8/33	BEDROOM	W10/33	33.18	2.16	2.2
R9/33	BEDROOM	W11/33	36.64	2.28	2.3
R10/33	LKD	W12/33	36.82	2.53	
R10/33	LKD	W13/33	28.74	0.80	
R10/33	LKD	W14/33	26.48	1.99	5.3
R11/33	LKD	W15/33	26.08	1.98	
R11/33	LKD	W16/33	28.06	0.78	
R11/33	LKD	W17/33	31.07	2.23	5.0
R12/33	BEDROOM	W18/33	31.24	1.98	2.0
R13/33	BEDROOM	W19/33	27.95	1.88	1.9
R14/33	LKD	W20/33	24.74	0.94	
R14/33	LKD	W21/33	15.40	1.11	2.1
R15/33	BEDROOM	W22/33	32.16	1.92	1.9

Room	Roomuse	Window	VSC(%)	ADF(%)	TOTAL ADF(%)
R16/33	BEDROOM	W23/33	34.49	1.96	2.0
R17/33	BEDROOM	W24/33	33.59	1.77	1.8
R18/33	LKD	W25/33	18.97	1.44	
R18/33	LKD	W26/33	34.42	1.27	2.7
R19/33	LKD	W27/33	25.43	0.71	
R19/33	LKD	W28/33	32.88	1.77	
R19/33	LKD	W29/33	36.21	2.18	4.7
Building E1					
R1/60	BEDROOM	W1/60	33.47	3.01	3.0
R2/60	KITCHEN	W2/60	21.81	0.41	
R2/60	KITCHEN	W3/60	18.07	1.62	
R2/60	KITCHEN	W4/60	17.21	1.28	3.3
R1/61	LIVINGROOM	W1/61	37.94	2.84	
R1/61	LIVINGROOM	W2/61	37.62	0.61	
R1/61	LIVINGROOM	W3/61	35.35	0.59	4.0
R2/61	BEDROOM	W4/61	31.05	3.18	3.2
R1/62	BEDROOM	W6/62	38.56	3.00	3.0
R2/62	BEDROOM	W7/62	33.93	2.64	2.6
Building E2					
R3/60	KITCHEN	W5/60	18.99	1.28	
R3/60	KITCHEN	W6/60	20.87	1.68	
R3/60	KITCHEN	W7/60	15.27	0.36	3.3
R12/60	BEDROOM	W22/60	32.05	3.00	3.0
R3/61	BEDROOM	W5/61	31.25	3.20	3.2
R12/61	LIVINGROOM	W20/61	22.60	0.48	
R12/61	LIVINGROOM	W21/61	36.21	2.87	3.3
R3/62	BEDROOM	W8/62	33.90	3.45	3.5
R12/62	BEDROOM	W4/62	25.45	0.54	
R12/62	BEDROOM	W5/62	37.85	2.59	3.1
Building E3					
R4/60	KITCHEN	W8/60	15.20	1.21	
R4/60	KITCHEN	W9/60	21.53	1.44	2.7

Room	Roomuse	Window	VSC(%)	ADF(%)	TOTAL ADF(%)
R11/60	BEDROOM	W21/60	33.55	3.02	3.0
R4/61	BEDROOM	W6/61	28.97	3.08	3.1
R11/61	LIVINGROOM	W17/61	38.04	2.92	
R11/61	LIVINGROOM	W18/61	37.72	0.59	
R11/61	LIVINGROOM	W19/61	22.47	0.46	4.0
R4/62	BEDROOM	W9/62	32.72	2.96	3.0
R11/62	LIVINGROOM	W2/62	38.58	2.63	
R11/62	LIVINGROOM	W3/62	38.21	0.62	3.2
Building E4					
R5/60	KITCHEN	W10/60	22.23	1.43	
R5/60	KITCHEN	W11/60	24.76	1.56	
R5/60	KITCHEN	W12/60	13.39	0.32	3.3
R10/60	BEDROOM	W20/60	32.23	3.01	3.0
R5/61	BEDROOM	W7/61	30.08	3.16	3.2
R10/61	LIVINGROOM	W15/61	22.63	0.48	
R10/61	LIVINGROOM	W16/61	36.29	2.87	3.4
R5/62	BEDROOM	W10/62	33.02	2.97	3.0
R10/62	LIVINGROOM	W1/62	37.88	2.59	
R10/62	LIVINGROOM	W11/62	25.41	0.54	3.1
Building E5					
R6/60	KITCHEN	W13/60	16.14	1.49	
R6/60	KITCHEN	W14/60	22.78	1.52	3.0
R9/60	BEDROOM	W19/60	34.70	2.95	2.9
R6/61	BEDROOM	W8/61	28.41	3.06	3.1
R9/61	LIVINGROOM	W13/61	39.06	2.99	
R9/61	LIVINGROOM	W14/61	37.80	0.60	3.6
R6/62	BEDROOM	W14/62	32.19	3.36	3.4
R9/62	BEDROOM	W12/62	38.23	0.62	
R9/62	BEDROOM	W13/62	38.95	2.63	3.2
Building E6					

Room	Roomuse	Window	VSC(%)	ADF(%)	TOTAL ADF(%)
R7/60	KITCHEN	W15/60	22.82	1.60	
R7/60	KITCHEN	W16/60	24.07	1.89	
R7/60	KITCHEN	W17/60	3.78	0.33	3.8
R8/60	BEDROOM	W18/60	34.66	2.94	2.9
R7/61	BEDROOM	W9/61	29.68	3.16	3.2
R8/61	LIVINGROOM	W10/61	29.30	0.47	
R8/61	LIVINGROOM	W11/61	37.80	0.57	
R8/61	LIVINGROOM	W12/61	39.08	2.85	3.9
R7/62	BEDROOM	W16/62	32.55	3.39	3.4
R8/62	BEDROOM	W15/62	38.96	2.74	
R8/62	BEDROOM	W17/62	38.20	0.64	
R8/62	BEDROOM	W18/62	32.23	0.57	3.9
Building E7					
R1/50	LKD	W1/50	22.44	0.87	
R1/50	LKD	W2/50	22.49	0.87	
R1/50	LKD	W3/50	33.86	0.52	
R1/50	LKD	W4/50	35.39	0.32	
R1/50	LKD	W5/50	33.53	0.28	
R1/50	LKD	W6/50	32.43	1.89	4.7
R2/50	BEDROOM	W7/50	30.19	0.52	
R2/50	BEDROOM	W8/50	25.38	1.04	
R2/50	BEDROOM	W9/50	23.85	1.78	3.3
R3/50	BEDROOM	W10/50	23.00	1.57	
R3/50	BEDROOM	W11/50	20.54	0.89	2.5
R4/50	BEDROOM	W12/50	24.61	1.18	1.2
R5/50	LKD	W13/50	21.35	1.03	
R5/50	LKD	W14/50	21.50	1.04	2.1
R6/50	BEDROOM	W15/50	14.13	1.71	1.7
R7/50	BEDROOM	W16/50	21.64	1.91	
R7/50	BEDROOM	W17/50	23.09	1.98	3.9
R8/50	LKD	W18/50	32.25	0.55	
R8/50	LKD	W19/50	30.75	0.32	
R8/50	LKD	W20/50	20.94	0.89	
R8/50	LKD	W21/50	21.22	0.91	2.7
R9/50	LKD	W22/50	21.88	1.19	
R9/50	LKD	W23/50	22.02	1.21	

Room	Roomuse	Window	VSC(%)	ADF(%)	TOTAL ADF(%)
R9/50	LKD	W24/50	32.86	0.71	
R9/50	LKD	W25/50	34.63	0.44	3.6
R10/50	BEDROOM	W26/50	25.80	1.38	1.4
R1/51	LKD	W1/51	26.22	0.96	
R1/51	LKD	W2/51	26.74	0.96	
R1/51	LKD	W3/51	35.41	0.67	
R1/51	LKD	W4/51	35.07	0.29	
R1/51	LKD	W5/51	34.33	1.33	4.2
R2/51	BEDROOM	W6/51	32.48	0.52	
R2/51	BEDROOM	W7/51	28.21	1.07	
R2/51	BEDROOM	W8/51	29.32	2.30	3.9
R3/51	BEDROOM	W9/51	28.68	2.18	
R3/51	BEDROOM	W10/51	23.97	0.97	3.1
R4/51	BEDROOM	W11/51	29.11	1.96	
R4/51	BEDROOM	W12/51	29.74	2.00	4.0
R5/51	BEDROOM	W13/51	30.38	1.70	1.7
R6/51	LKD	W14/51	31.80	1.47	
R6/51	LKD	W15/51	20.27	0.91	
R6/51	LKD	W16/51	15.64	0.76	3.1
R7/51	BEDROOM	W17/51	16.30	0.75	
R7/51	BEDROOM	W18/51	26.21	0.97	
R7/51	BEDROOM	W19/51	23.95	0.42	2.1
R8/51	BEDROOM	W20/51	25.76	0.42	
R8/51	BEDROOM	W21/51	26.51	0.95	
R8/51	BEDROOM	W22/51	34.89	1.17	2.5
R9/51	LKD	W23/51	26.44	1.11	
R9/51	LKD	W24/51	26.53	1.11	
R9/51	LKD	W25/51	34.73	0.77	3.0
R10/51	LKD	W26/51	26.64	0.65	
R10/51	LKD	W27/51	26.06	1.07	
R10/51	LKD	W28/51	26.62	1.08	
R10/51	LKD	W29/51	34.92	0.75	3.6
R11/51	BEDROOM	W30/51	26.71	1.39	1.4
R1/52	LKD	W1/52	39.22	1.45	
R1/52	LKD	W2/52	39.37	1.45	
R1/52	LKD	W3/52	37.82	0.70	
R1/52	LKD	W4/52	36.54	0.30	
R1/52	LKD	W5/52	36.37	1.21	5.1

Room	Roomuse	Window	VSC(%)	ADF(%)	TOTAL ADF(%)
R2/52	BEDROOM	W6/52	34.79	0.55	
R2/52	BEDROOM	W7/52	31.13	1.14	
R2/52	BEDROOM	W8/52	32.12	2.44	4.1
R3/52	BEDROOM	W9/52	31.78	2.33	
R3/52	BEDROOM	W10/52	28.99	1.07	3.4
R4/52	BEDROOM	W11/52	23.49	1.61	
R4/52	BEDROOM	W12/52	29.07	1.78	
R4/52	BEDROOM	W13/52	31.79	1.85	
R4/52	BEDROOM	W14/52	32.28	1.87	7.1
R5/52	BEDROOM	W15/52	33.05	1.79	1.8
R6/52	LKD	W16/52	33.93	1.54	
R6/52	LKD	W17/52	35.75	1.57	
R6/52	LKD	W18/52	32.64	1.49	4.6
R7/52	BEDROOM	W19/52	36.60	1.39	1.4
R8/52	BEDROOM	W20/52	37.34	2.12	2.1
R9/52	LKD	W22/52	37.56	0.68	
R9/52	LKD	W23/52	39.50	1.41	
R9/52	LKD	W24/52	39.50	1.41	
R9/52	LKD	W25/52	37.54	0.68	4.2
R10/52	LKD	W26/52	31.53	0.71	
R10/52	LKD	W27/52	39.23	1.62	
R10/52	LKD	W28/52	39.38	1.62	
R10/52	LKD	W29/52	37.53	0.77	4.7
R11/52	BEDROOM	W30/52	30.57	1.48	1.5