PSN Matter Measurement Mapping & Surveying

SOLAR IMPACT REPORT

36-40A CULWORTH AVENUE, KILLARA



Ref: 4184_CULWORTH

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April 2011



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SOLAR IMPACT REPORT

Client: Dugald Mackenzie and Associates

Site Address:

36, 38,40 and 40A CULWORTH AVENUE KILLARA NSW

Reference: 4184

REVISED DESIGN APRIL 2011

Overview

This report has been prepared in accordance with instructions received from Dugald Mackenzie to assess solar impact of a potential development at the above address

The analysis is carried out with the purpose of determining if the building developed from plans received from Mackenzie Architects provides for sufficient sunlight to at least seventy percent of the proposed units.

The analysis is carried out using three dimensional information extracted from the architectural plans received and noted herein.

The accompanying notes should be referred to for specifics related to this study .







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SEPP 65 Solar Compliance Analysis

Date:	5/04/2011	Project:	36 - 40 Culworth Avenue
File Ref:	4184	Project No:	4184

Note: This analysis is based upon received drawings for redesign of 36 - 40 Culworth Avenue received by email 30/3/11 Survey information and adjoining information as received above

BUILDING CONFIGURATION

Level	Use	Su	n Betwee		Complies Y/N)					
	(Private OS)			Living and Private						
	(Living Area)			Open Space						
BUILDING										
Ground Floor			11	4	36%					
1	POS									N
	LA		STATES STATES	IS INCOMENTS IN THE		R	El andre and	1.50.54		N
2	POS									N
The second second	LA	125-1215-1		el presentation de la se	The Classific Provide	New York	A STORE OF	REAL PROPERTY		N
3	POS									N
and the second second	LA	No. Contraction			Station States and	Distantial Ind	100 March 100	and the second		N
4	POS									N
and the second second	LA	ALCONG ST 1		SA CHER SHE WARDEN TO KING	The West Street Street Street Street	CONTRACTOR OF		ALC: NO		N
6	POS									N
v	LA									N
7	POS									N
/		CONTRACTOR OF			Contra de C					
0	LA					0.00	1000			N
9	POS					900	1200			Y
でたった。	LA			TI NE CONTRACTO		900	1200	Deleter (C		Y
10	POS					900	1200			Y
S. C.	LA			e programme a		900	1200			Y
11	POS					900	1200			Y
	LA		Hard Street			900	1200	Contract of		Y
12	POS					900	1200			Y
	LA			Constant and a second		900	1130			N
13	POS									N
	LA	12 1 10 10		N ROTAL STREET, SHI		1.000			Chart all	N
First Floor			15	11	73%					
14	POS									N
NEW PROPERTY.	LA	10231-012020			THE STREET STREET	POIL SCHOOL	CS STATE	(Contraction)		N
15	POS									N
	LA	10000000000			essential to a total		Sister and			N
16	POS					900	1130	1430	1500	
TAL STREET	LA	Statistical and		C. NEW CONSTRAINTS	(III) AN INCOMENDATION OF	900	1130	1430	1500	
17	POS		-			930	1230	1450		Y
	LA		Selden and solars			930	1230			Y
18	POS					930	1230			Y
10	LA					930	1230			
10	POS				OK 275 In CONTRACTORY 24	930	1230	6269.63		Y
19										Y
	LA				1949-994230-2676925	930	1230			Y
20	POS					930	1230			Y
	LA					1000	1300			Y
8	POS					1000	1300			Y
and the second	LA					1030	1330	100 201		Y
21	POS					1030	1330			Y
Secold Press	LA			H BOARD AND AND		1030	1330			Y
22	POS					900	1200			Y
000000000000	LA		iow examined			900	1200			Y
23	POS					900	1200			Y
Constraints and	LA		Notest and the	R MARINE STORAGE		900	1200		ANY NO	Y
26	POS					900	1200			Y
Contract Sea	LA	Webstern 1		in a state of the second		900	1200			Y
25	POS					900	1200			Y
In the states	LA	No. State	de la constante			900	1200	K (2) (2) (3)		Ŷ
24	POS					900	1200			Y
	LA					900	1130	10000000		N

Second Floor			11	8	73%					
28	POS								N	
大学的 和	LA			a standard failer			10.000	Statistical P	N	282.2
27	POS								N	
	LA	動作品にで	120 385 39 31			COMPANY STATE			N	
29	POS					900	1300		Y	
	LA					900	1300	25.524	Y	
30	POS					900	1300		Y	
Sector Sector	LA	A Contraction of the				900	1300	6	Y	135-3
32	POS					900	1300		Y	
	LA	and the second				930	1300		Y	
33	POS					900	1300		Y	
	LA	a finantika sa				930	1300	HEALTH R	Y	19.00
35	POS					900	1200		Y	1
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	LA	Constanting 7			A CONTRACTOR OF	900	1200	RECEIPTING S	Y	125.88
39	POS					900	1200		Y	
	LA		All she was the		a and a marked	900	1200	2555 A #	Y	
38	POS					900	1200		Y	
	LA	Sector and	A STATE AND A STATE			900	1200		Y	
37	POS					900	1200		Y	
	LA				Contraction of the	900	1130		N	1.55
Third Floor	the second second	A DESCRIPTION	14	11	79%				Sector Street	
41	POS								N	
	LA	A BELSEN	Ser November	a share the		S SIGNARY S			N	
42	POS					900	1400		Y	
and set at	LA	Clark Table		a and censiver and		900	1400		Y	
40	POS					1000	1400		Y	
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31	POS					1000	1400		Y	
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43	POS			1		1000	1400		Y	
-Section -	LA		BROKEN AND READ		a traditional and the second	1000	1400	Statistical Int	Ŷ	10 St 4 St
44	POS					930	1500		Y	
A CONTRACTOR	LA	Real Providences	BEN TENSIN MARK	C PERSONAL STREET		930	1430	Statistical Pro-	Y	
45	POS					930	1500		Y	
	LA	Charles Services	States States and	a service services	a la cale de la cale	930	1430	Alex Alexand and	Y	
34	POS					1000	1500		Y	
Contraction of the	LA	No. Contractor	The second second second	2 CANADA CARANA	a Marke Astronomic To	1000	1430	E Sector of	Y	
46	POS					1100	1500		Y	
CONSTRUCTION OF	LA	Ser and sources	Contractor and and a	A MARKAN PARA AND A	A SCALE STRUCTURE	1100	1430	and the second second	Ŷ	
47	POS					900	1230		Y	
an provinciana and	LA	States and		and the second second	The second second	900	1230	15033201	Y	ST. LAND
49	POS					900	1200		Y	
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57	POS					900	1200		Y	
51	LA		Stream and the second second	S REAL STREET, STRE		900	1200	Statistical and	Y	and the second
48	POS					900	1200		Y	
-10	LA					900	1130		N	and the second
enthouse Le	10000	No. of Concession, Name	6	6	100%	900	1130	International International	JN IN	-
			0	0	100%	000	1500		N.	
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52						900	1500		Y	
E2	LA	CENTER STREET				900	1500		Ŷ	
53	POS				-	900	1500		Y	
EA	LA	<u>1999</u>		a and the second se		900	1500		Y	
54	POS					900	1500		Y	
	LA					900	1500		Y	
55	POS					900	1500		Y	
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	POS					900	1500		Y	
56	LA	Carl Carl Contraction of the second se	A NAME OF A DESCRIPTION			900	1200		Y	

SEPP 65 Solar Compliance Analysis

Date:	5/04/2011	Project: 36 - 40 Culworth Avenue
File Ref:	4184	Project N 4184

Note: This analysis is based upon received drawings for redesign of 36 - 40 Culworth Avenue received by email 30/3/11 Survey information and adjoining information as received above

BUILDING		9		10		11		12		1		2		3
Ground Floor				1				1						
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36 - 40 CULWORTH AVENUE, APRIL 2011

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Second Floor		9		10		11		12		1		2		3
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56	POS													
56	LA POS LA													
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56	POS													

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Conclusion

With regards to plans received via email from Mackenzie and Associates received march 30th, 2011 we confirm that the report is based upon three dimensional computer modelling which incorporates floor layout as per the plans received.

The modelling is based upon AHD levels as provided by Mackenzie Architects and the proposed building is linked to the site information alongwith the building being oriented to True North. A solar access compliance table is enclosed.

This study has been carried out to analyse the level of solar access provided by the proposed development at the abovementioned address.

The assessment criteria used to test the development are as stipulated in SEPP65 with regards to solar access in relation to the proposed units.

SEPP 65 Compliance

Of the 57 units proposed, 40 would meet the minimum requirements providing 70% of the units with suitable solar access thus meeting the required 70% under SEPP 65.

Of the 57 units 17 do not meet the minimum SEPP 65 requirements for solar access. Of these 17 4 units recieve sufficient sun to the private open space but only receive 2.6 hours of sunlight to the living areas, only 4 receive no sun at all being south facing. Five face west and receive moderate to good afternoon sun but later in the afternoon. The remaining 4 are north facing ground floor units which receive insufficient sunlight to the private open space and insufficient amounts of sun to the living areas.

Of the units meeting the minimum solar requirements the majority meet these requirements comfortably.

Notes

The solar analysis has been carried out using the following conditions and constraints:

- 1. Testing for solar effect was based upon a three dimensional computer model of existing and proposed buildings using the information provided. The three dimensional model has been constructed in artificial three dimensional space using levels extracted from plans provided by Mackenzie Architects. Model orientation to true north was determined from plans supplied by Mackenzie Architects. Building heights, wall dimensions, window and balustrading information was determined from plans provided by Mackenzie Architects.
- 2. Survey information including information pertinent to the definition of true north was as received from Mackenzie Architects with true north being taken from Land NSW SIX viewer.
- 3.Computer modelling has been done to the highest possible accuracy available using the information received.
- 4.Accuracy of solar angles is based upon information provided by unvalidated third party sources. Investigations have shown that there is notable variation between predicted solar angles provided by several suppliers which leads to some unreliability with respect to solar impact analysis. Solar Angles used for this analysis have been sourced from US Department of Commerce National Oceanic and Atmospheric Administration (NOAA) Observatory tables and United States Naval Observatory (USNO) which are generally congruent with most international agencies. Using different solar angles may show variations in predicted shadow position proportionately increasing in variance with increased building height.





Measurement Mapping & Surveying

38 - 40 CULWORTH AVENUE, KILLARA



NORTHWESTERN VIEW 09AM JUNE 21





Measurement Mapping & Surveying

38 - 40 CULWORTH AVENUE, KILLARA



NORTHWESTERN VIEW 11AM JUNE 21



NORTH WESTERN VIEW 12PM JUNE 21



Measurement Mapping & Surveying

38 - 40 CULWORTH AVENUE, KILLARA



NORTHWESTERN VIEW 01PM JUNE 21



NORTH WESTERN VIEW 02PM JUNE 21



Measurement Mapping & Surveying

38 - 40 CULWORTH AVENUE, KILLARA



NORTHWESTERN VIEW 01PM JUNE 21



EASTERN VIEW 09AM JUNE 21



Cancel OK

Measurement Mapping & Surveying

38 - 40 CULWORTH AVENUE, KILLARA





Measurement Mapping & Surveying

38 - 40 CULWORTH AVENUE, KILLARA

Color: Intensity (%):

Jun

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Contribution to Ambient (%):

Location and Date Set City... Sydney

+1 hr Daylight Savings

100 2 100

84.75

\$

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67.82

Cancel OK

🗘 min

Note: Open Project Prefe to change Project North.

Project North:





Measurement Mapping & Surveying

38 - 40 CULWORTH AVENUE, KILLARA



EASTERN VIEW 02PM JUNE 21