

## 09 SHADOW ANALYSIS

A detailed study has been prepared to assess the overshadowing impact by the proposed development on the neighbouring sites. Overshadowing diagrams have been prepared for the Autumnal Equinox (March 21), Winter Solstice (June 21), Vernal Equinox (September 21) and Summer Solstice (December 21). This study confirms that the proposed development does not overshadow any living room or attached private open space to a surrounding residential dwelling by more than 3 hours at any time of the year.

In order to assess the overshadowing impact, shadow diagrams were prepared to assess the overshadowing by the proposed by the development. To allow comparison, shadow diagrams were prepared for the existing shadow, the proposed shadow and additional shadow (proposed shadow excluding the existing shadow).

In the first instance, blocks in the surrounding context were identified by a letter and an evaluation was made that identified which of these blocks are potentially overshadowed for 3 hours or more by the proposed development. Lots that have a 'business' zone with existing non-residential uses were excluded. At the Autumnal Equinox (March 21) and Winter Solstice (June 21), Block B is overshadowed 3 hours or more by the proposed development.

At a local scale, each property in Block B was identified and an evaluation was made that identified which lots are potentially overshadowed for 3 hours or more by the proposed development. Lots 707 to 729 Darling Street and 6-8 Waterloo Street have existing non-residential uses and are zoned 'business'.



SHADOW CRITERIA

A overshadowing criteria established by the Leichhardt DCP 2000 is appropriate for a low-rise and low density context and is an unreasonable standard in this case.

In order to establish what is a reasonable overshadowing criteria, the overshadowing criteria of other similar Local Government Areas were considered, including Marrickville Council and Kogarah Council.

The Leichhardt Development Control Plan 2000 shadow criteria is based upon a low-density context of 1-2 storeys and does not anticipate high density development and is therefore inappropriate.

An appropriate shadow criteria has been developed that ensures living rooms and attached private open spaces to neighbouring dwellings maintain a minimum of 3 hours of sunlight access between 9am and 3pm on June 21.

LEICHHARDT COUNCIL  
Leichhardt Development Control Plan 2000

Part B – RESIDENTIAL

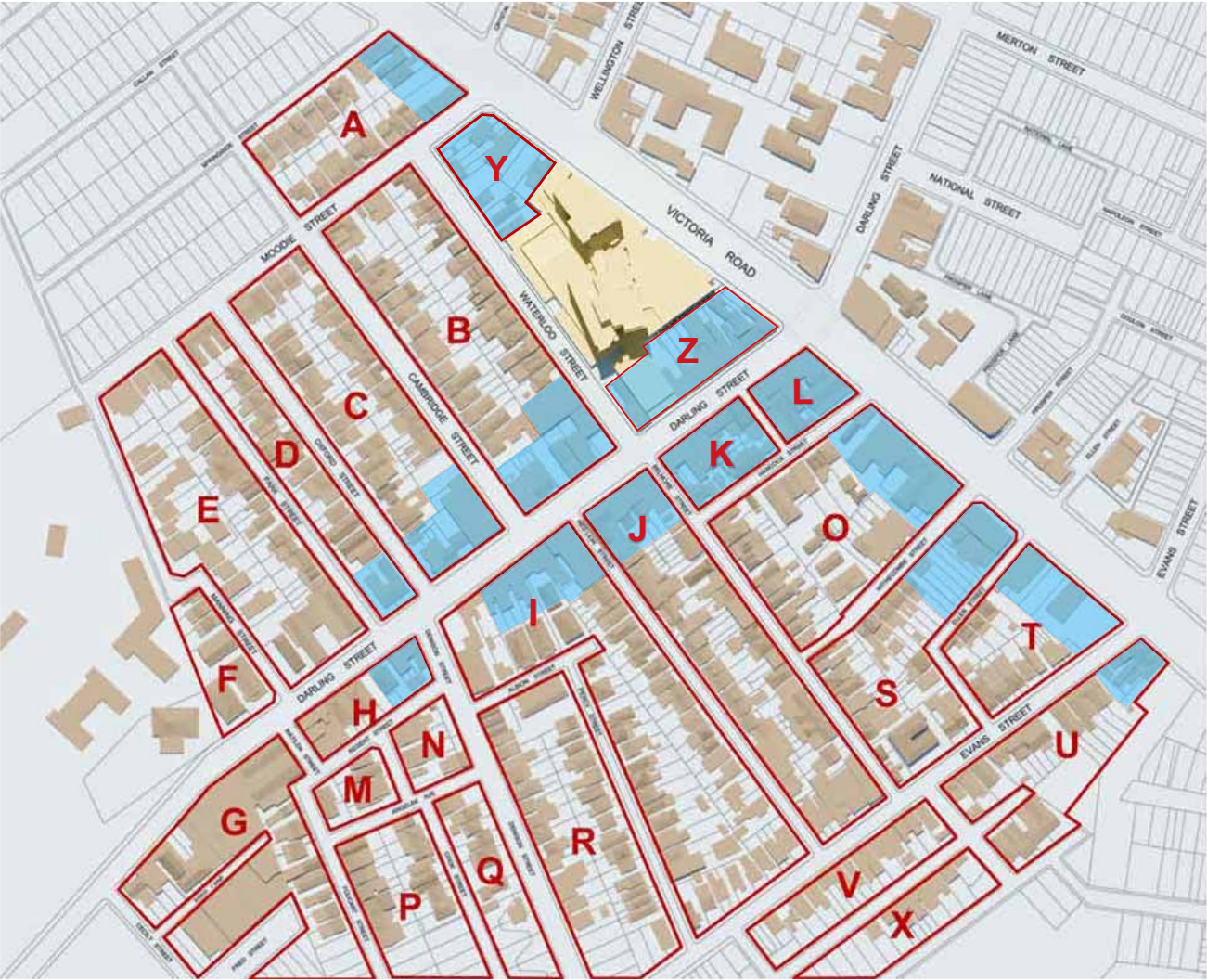
- Design to ensure solar access for a minimum of 3 hours between 9.00 a.m. and 3.00 p.m. At the winter solstice, to the living areas of new dwellings.
- Maintain solar access to existing housing.
- Where an existing adjacent building has an east - west orientation:
  - Maintain solar access to the habitable side rooms for a minimum period of 2 hours between 9.00 a.m. and 3.00 p.m. at the winter solstice.
  - Where less than 2 hours solar access is currently available to the habitable side rooms for existing dwellings, no additional overshadowing shall be permitted.
- Where an existing adjacent building has a north - south orientation:
  - Maintain solar access to the front and rear habitable rooms for a minimum period of 4 hours between 9.00a.m. and 3.00 p.m. at the winter solstice.
- Where solar access already exists to the private open space of adjacent dwellings, ensure it is maintained over a minimum of 50% of the private open space for a minimum period of 3 hours between 9.00 a.m. and 3.00 p.m. at the winter solstice.

PEER REVIEW PANEL SHADOW CRITERIA

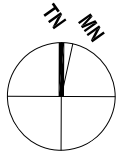
- Maintain not less than 3 hours/day of sunlight throughout the year to 50% of usable private open space adjacent to primary living areas for residential properties affected by the development

Refer to Section 18 - ADRP Report.

The proposal complies strictly with the Peer Review Panel Shadow Criteria as demonstrated in the following schedules and illustrated in the shadow diagrams.



LEGEND  
BUSINESS ZONE



TIME/DATE	BLOCK																									
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	X	Y	Z	
21ST MAR																										
9AM																										
10AM																										
11AM																										
12PM																										
1PM																										
2PM																										
3PM																										
21ST JUNE																										
9AM																										
10AM																										
11AM																										
12PM																										
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3PM																										
21ST SEP																										
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3PM																										
21ST DEC																										
9AM																										
10AM																										
11AM																										
12PM																										
1PM																										
2PM																										
3PM																										

- This table shows:
- Block B is overshadowed and receives 1 hour of sunlight at the autumnal equinox (March 21) and 2 hours of sunlight at the winter solstice (June 21).
  - Block Y is overshadowed but this block is zoned 'business'. Residential dwellings in this block maintain not less than 3 hours/day of sunlight throughout the year to 50% of usable private open space adjacent to primary living areas for residential properties.
  - Block Z is overshadowed but this block is zoned 'business'.

PEER REVIEW PANEL SHADOW CRITERIA

- Maintain not less than 3 hours/day of sunlight throughout the year to 50% of usable private open space adjacent to primary living areas for residential properties affected by the development

NO SHADOW
SHADOW
BUSINESS ZONE
PART BUSINESS ZONE
< 3 HOURS SUNLIGHT TO BLOCK



TIME/DATE	BLOCK B – LOTS – STREET NUMBER																													
	WATERLOO STREET																		DARLING STREET											
	6-8	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48	707	709	711	713	719	721	723	727A	727	729
21ST MAR																														
9AM																														
10AM																														
11AM																														
12PM																														
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3PM																														
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12PM																														
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2PM																														
3PM																														
21ST DEC																														
9AM																														
10AM																														
11AM																														
12PM																														
1PM																														
2PM																														
3PM																														

This table shows:

- Lot 12 is overshadowed and receives 2 hour of sunlight at the winter solstice (June 21). The shadow diagrams illustrate that the dwelling maintains not less than 3 hours/day of sunlight throughout the year to 50% of usable private open space adjacent to primary living areas.
- Block Z is overshadowed but is zoned 'business'.
- Lot 6-8 Waterloo Street and 707 - 729 Darling Street are overshadowed but these lots are zoned 'business'.

#### PEER REVIEW PANEL SHADOW CRITERIA

- Maintain not less than 3 hours/day of sunlight throughout the year to 50% of usable private open space adjacent to primary living areas for residential properties affected by the development

NO SHADOW
SHADOW
BUSINESS ZONE
< 3 HOURS SUNLIGHT TO RESIDENTIAL LOT

TIME/DATE	BLOCK B – LOTS – STREET NUMBER																							
	CAMBRIDGE STREET																				MOODIE STREET			
	5	7	11	13	15	17	19-21	23	25	27	29	31	33	35	37	39	41	43	45	47	6	8	10	16
21ST MAR																								
9AM																								
10AM																								
11AM																								
12PM																								
1PM																								
2PM																								
3PM																								
21ST JUN																								
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21ST DEC																								
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This table shows that all lots along Cambridge Street and Moodie Street all receive more than 3 hours of sunlight at all times of the year.

PEER REVIEW PANEL SHADOW CRITERIA

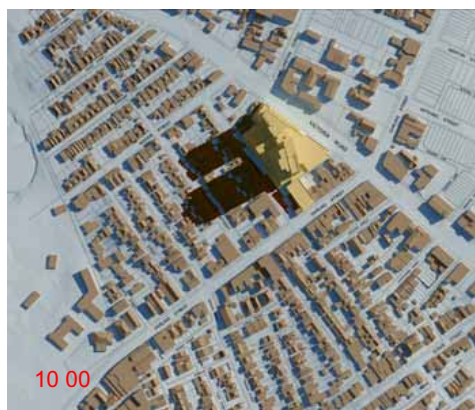
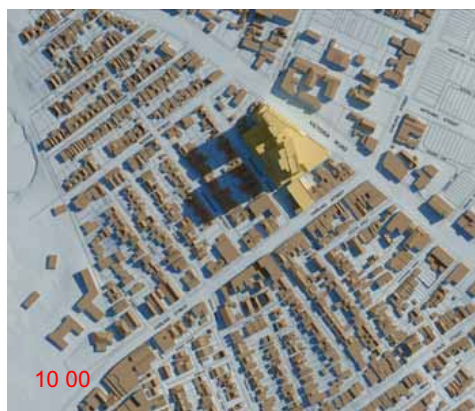
- Maintain not less than 3 hours/day of sunlight throughout the year to 50% of usable private open space adjacent to primary living areas for residential properties affected by the development

NO SHADOW
SHADOW
BUSINESS ZONE
< 3 HOURS SUNLIGHT TO RESIDENTIAL LOT



**Rozelle Village**

DISTANT SHADOWS  
21 MARCH





DISTANT SHADOWS  
21 MARCH



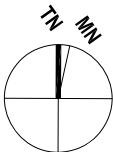
EXISTING SHADOW



PROPOSED SHADOW



ADDITIONAL SHADOW



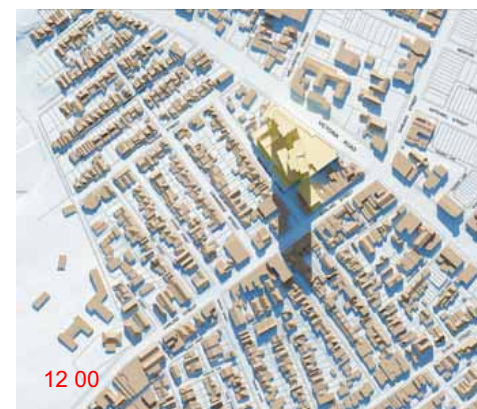


# Rozelle Village

DISTANT SHADOWS

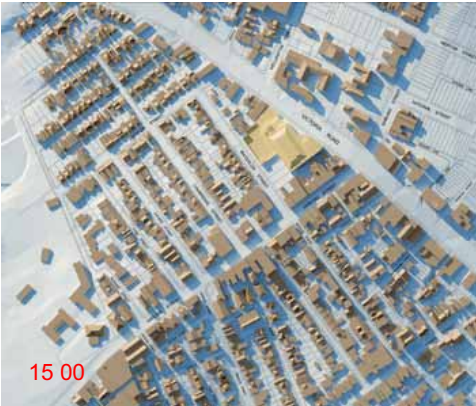
21 JUNE

## 09 SHADOW ANALYSIS

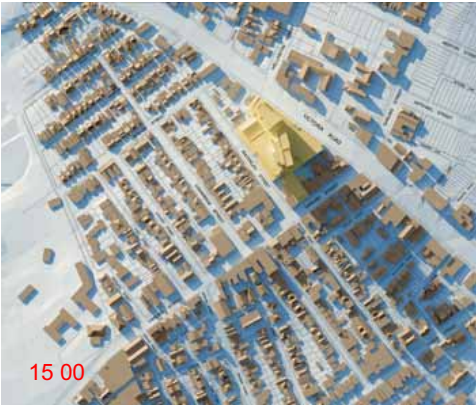




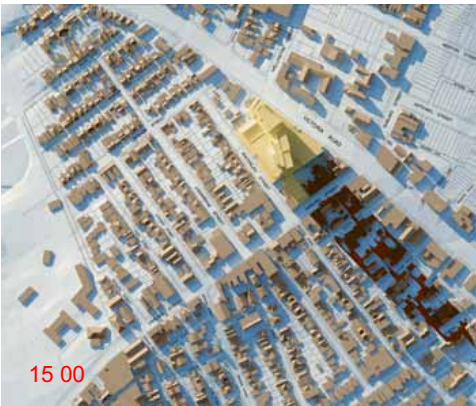
DISTANT SHADOWS  
21 JUNE



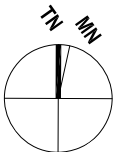
EXISTING SHADOW



PROPOSED SHADOW



ADDITIONAL SHADOW

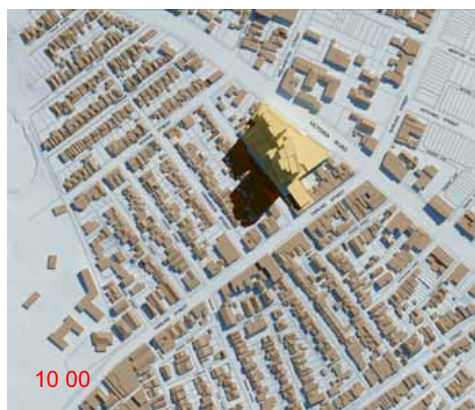
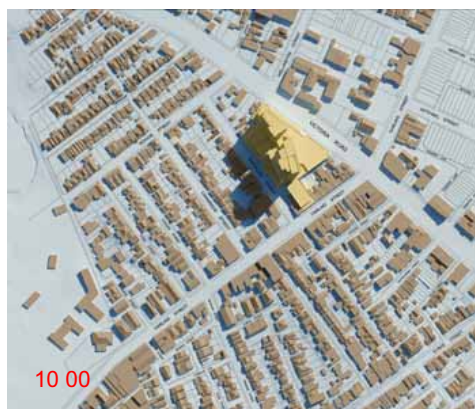




# Rozelle Village

DISTANT SHADOWS  
21 SEPTEMBER

## 09 SHADOW ANALYSIS





DISTANT SHADOWS  
21 SEPTEMBER



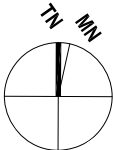
EXISTING SHADOW



PROPOSED SHADOW



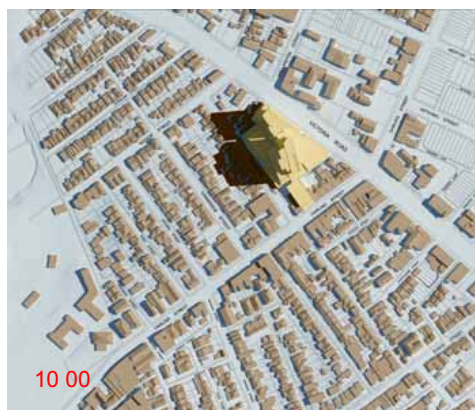
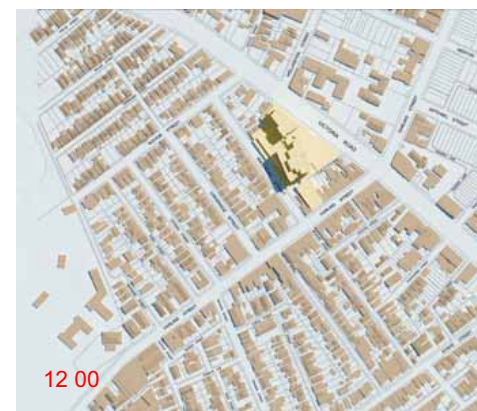
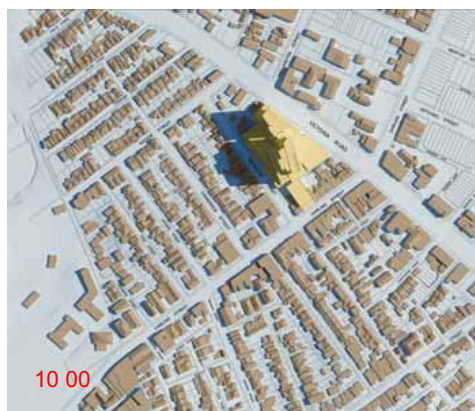
ADDITIONAL SHADOW





**Rozelle Village**

DISTANT SHADOWS  
21 DECEMBER





DISTANT SHADOWS  
21 DECEMBER



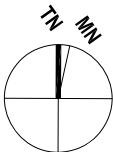
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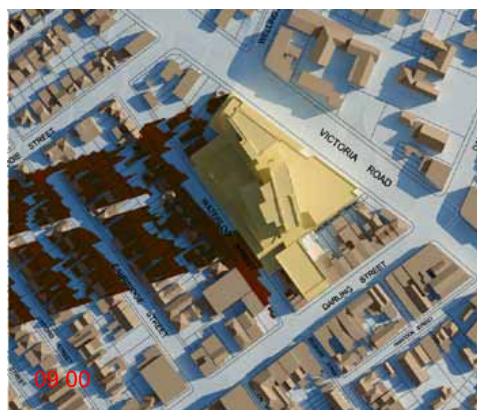
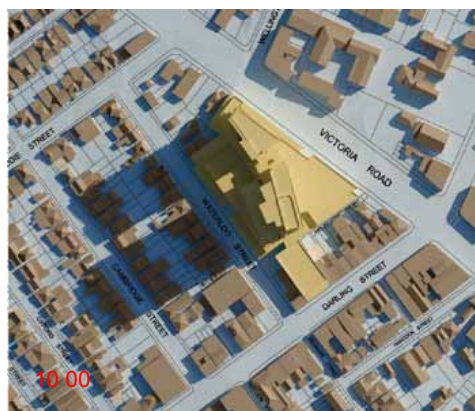
PROPOSED SHADOW



ADDITIONAL SHADOW





**Rozelle Village**LOCAL SHADOWS  
21 MARCH



LOCAL SHADOWS  
21 MARCH



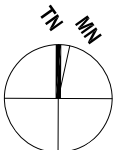
EXISTING SHADOW



PROPOSED SHADOW



ADDITIONAL SHADOW

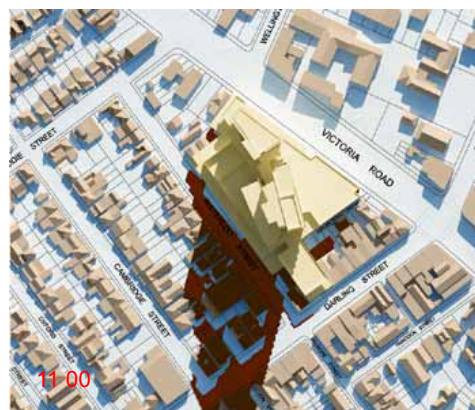
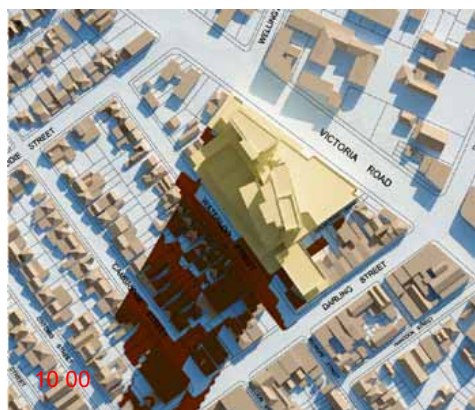




**Rozelle Village**

LOCAL SHADOWS

21 JUNE





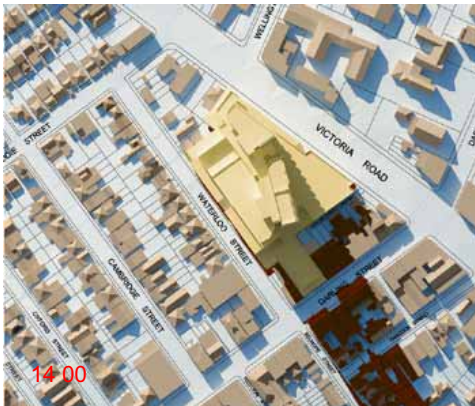
LOCAL SHADOWS  
21 JUNE



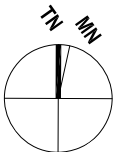
EXISTING SHADOW



PROPOSED SHADOW



ADDITIONAL SHADOW





Rozelle Village

LOCAL SHADOWS  
21 SEPTEMBER

09 SHADOW ANALYSIS





LOCAL SHADOWS  
21 SEPTEMBER

09 SHADOW ANALYSIS



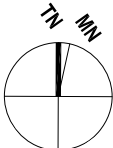
EXISTING SHADOW



PROPOSED SHADOW



ADDITIONAL SHADOW





**Rozelle Village**LOCAL SHADOWS  
21 DECEMBER



LOCAL SHADOWS  
21 DECEMBER



EXISTING SHADOW



PROPOSED SHADOW



ADDITIONAL SHADOW

