Pacific Planning Pty Ltd

Property | Planning | Project Management

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11 July 2018

Mr Robert Toohey
Executive Planner
Burwood Council
Suite 1, Level 2,
1-17 Elsie Street,
BURWOOD NSW 2134

Development Application (DA124/2017)
68-72 Railway Parade and 2, 4-6, 8 & 10 Oxford Street, Burwood

Dear Robert,

I write to you in relation to Development Application (DA124/2017) that seeks approval for a part 6, part 8 and part 10 storey building containing 124 residential units and a ground floor retail premises. The matter was deferred at the Sydney Eastern City Planning Panel on Tuesday 3 July 2018.

I note that the Panel requested amended shadow diagrams prior to reconvening another public meeting. The Panel requested hourly shadow diagrams of the development between 9am and 3pm and to indicate grassed and paved areas on the plans. Further, the Panel sought an indication of the shadow cast by the approved DA 74/2015.

I am therefore pleased to attach the following documentation for consideration by the Panel:

- Attachment 1 - Hourly shadow diagrams of proposed DA 124/2017 (9am to 3pm, winter solstice)
- Attachment 2 - Total solar access coverage to soft landscaping (summer and winter solstice and autumn and spring equinox)
- Attachment 3 - Shadow Analysis Matrix
- Attachment 4 - Hourly shadow diagrams of approved DA 74/2015 (9am to 3pm, winter solstice)
- Attachment 5 - Hourly shadow comparison approved DA 74/2015 and proposed DA 124/2017 (9am to 3pm, winter solstice)
- Attachment 6 - Landscape Impact Assessment, prepared by Geoscapes Landscape Architecture

The following comments are made in relation to the additional material submitted:

Shadow Analysis

It is noted that the Council staff report to the Panel on page 29 states:
"The school playground areas which are located adjacent to the south and partially to the south-east of the site, will be partially overshadowed from midday to 3pm, leaving full morning sunlight and at least 50% of the playground unaffected in the afternoon in mid-winter. These levels of sunlight for adjoining properties is consistent with the 2 hour requirement under the Apartment Design Guide."

The attached shadow diagrams and matrix illustrate the impact of the proposed development on the soft landscaped area of the school, amended to remove hard landscaped area. The findings conclude that at the worst time on the shortest day of the year 43.7% of the schools' soft areas are overshadowed. As per the Council staff report, this means 56.3% of the schools soft landscaped area is in full sunlight in the afternoon in mid-winter.

Shadow Comparison with approved DA

Shadow diagrams that compare the shadow cast by the approved DA 74/2015 and the proposed DA 124/2018 have also been prepared. It is important to note that the approved DA did not include 4-10 Oxford Street which was subsequently acquired, hence the new DA.

The diagrams illustrate the impact and the matrix provides a comparison of the percentage increase in soft landscape area covered by the proposed DA. During the lunchtime period there is a 9% to12% increase in shadow coverage, with the largest increase being at 3pm where an 18.6% increase is experienced. The total however is still at 43.7% coverage as discussed above. It is clear from the diagrams however, that during the lunchtime peak period a significant portion of the soft landscaped area is in sunlight on the shortest day of the year, with the greatest impact not being felt until 3pm. Note sunset this year on 21 June was 4.53pm.

It is also worth noting the benefits of overshadowing to the school soft landscaped play area of an amalgamated site. Should the site have not been consolidated, 4-10 Oxford Street would likely have been developed independently of the remainder of the site. This has a maximum building height of 26 metres or 8 storeys. It is therefore likely that an 8 storey building would have been proposed to the south of the site immediately adjoining the school grounds.

As the block has now been amalgamated, the proponent, in consultation with Council staff and the Panel has been able to reduce the heights immediately to the southern boundary, with the immediate interface being 4 to 6 storeys. This has reduced the physical presence to the school grounds and reduced the overshadowing impacts.

Landscape Impact Assessment

Geoscapes Landscape Architects have been appointed to provide a report of the potential effects of the shadow cast by the proposed building on the soft landscape and play areas of the adjoining Burwood Public School following concerns raised over the impact the shadow cast by a future building would have on the quality of the grass and play spaces.

The Report is attached and in summary concludes:

- The vast majority of grass species within the school playing fields is Kikuyu.

- Kikuyu is generally hard-wearing, establishes quickly and is commonly used in school playing fields.
- It generally requires approximately 6 hours of sunlight per day to survive.
- The existing condition of the playing fields is mixed with several areas of exposed and compacted dirt (see Figure 1 below).
- The majority of the open space playing field will receive 6 or more sunlight hours per day in mid winter.
- There will be some impact to the area immediately adjacent to the southern boundary in winter, which will not achieve the 6 hours of sunlight per day. This section is illustrated in Figure 2.

Figure 1: Condition of part of playing field

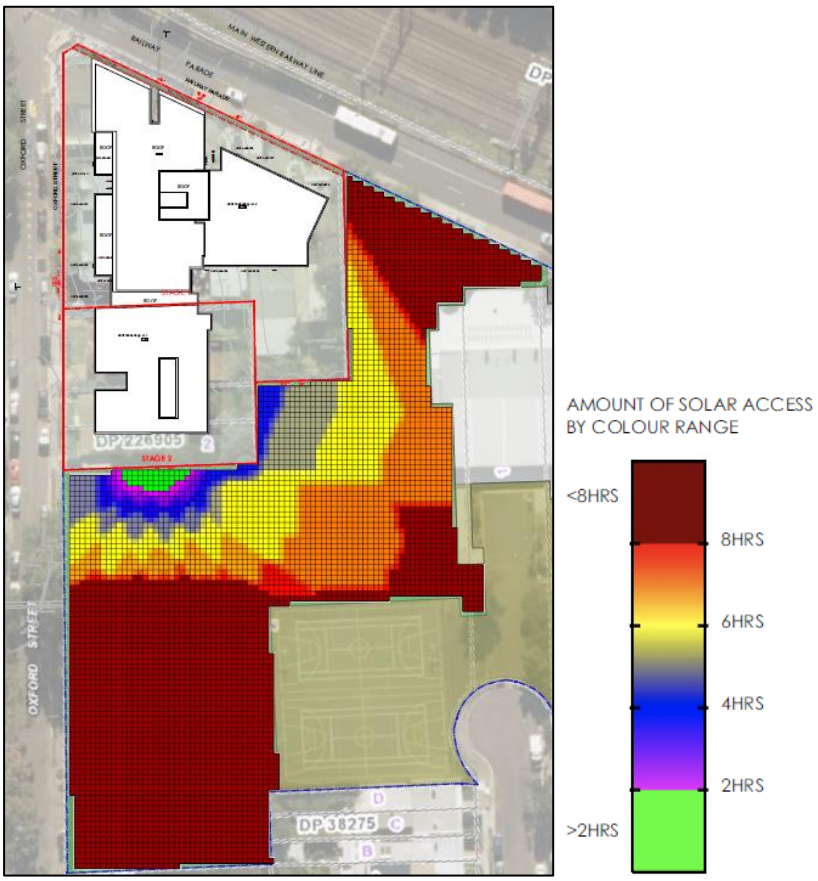


Figure 2: Mid winter hourly sunlight analysis

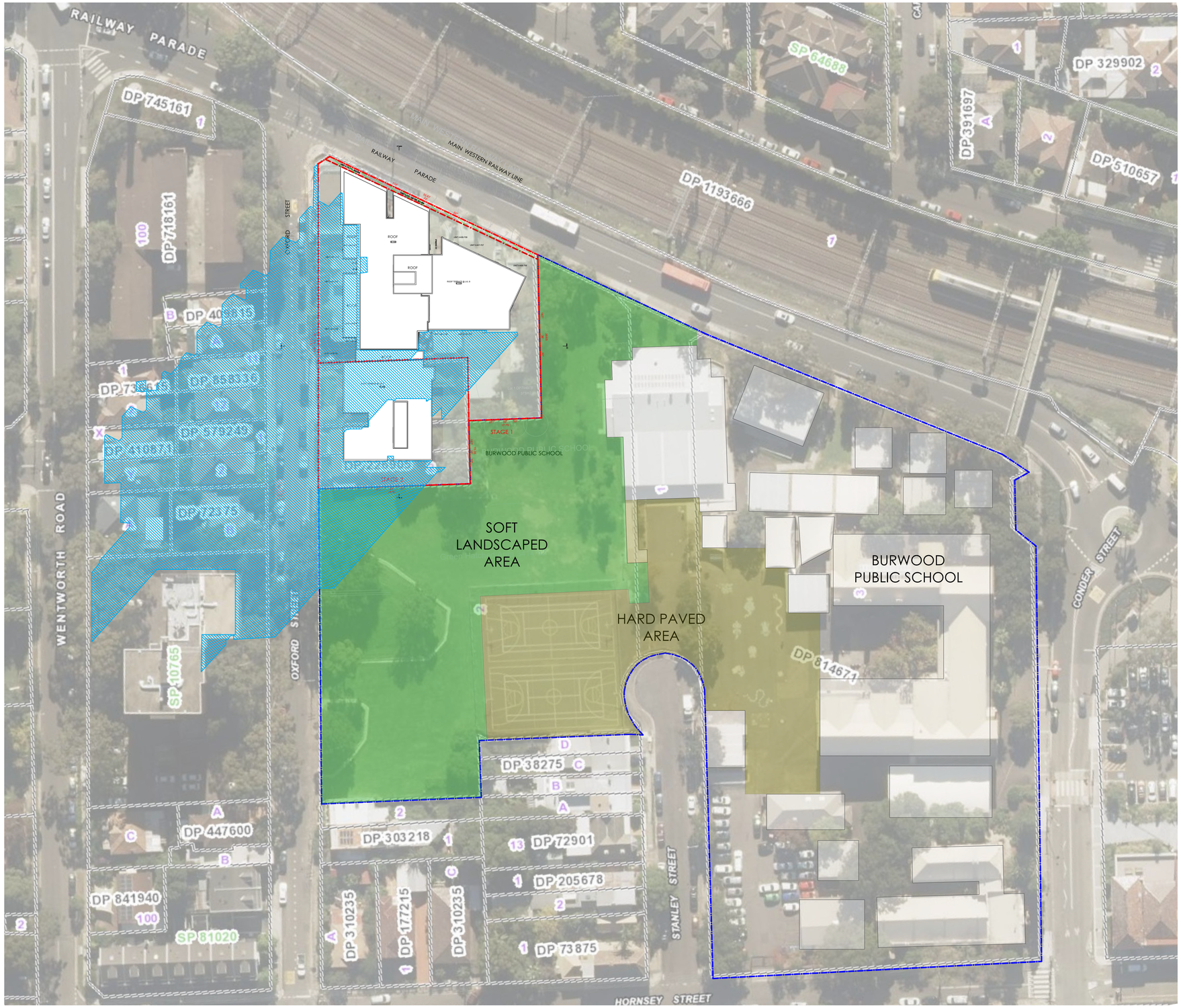
The soft landscape solar analysis diagrams illustrate that for the majority of the year most of the school's grassed play areas receive greater than 8 hours of sunlight per day. In the middle of winter there is a small section that will receive less than 2 hours within a few metres of the southern boundary of the development. The majority of the grassed area and primary grassed open play space will receive the minimum of 6 hours of sunlight in the middle of winter to ensure the established grass can survive.

Therefore, this additional analysis demonstrates that the majority of the grassed play areas receive sunlight in the middle of winter to provide sun access for children and ensure the survival of grassed areas.

If you have any questions or require any further information, please do not hesitate to contact me on 0437 521 110.

Yours sincerely

James Mathews
Planning Director
Pacific Planning



METHOD USED
SKETCHUP 2017
RENDERING CAD SOFTWARE

- Shadow cast by amended DA 24 04 2018
- Burwood Public School Boundary
- Burwood Public School Soft Landscape open space
- Burwood Public School Hard Paved open space

TOTAL M^2 of Soft Landscape open space
Burwood Public School: 5369 m^2

TOTAL M^2 of Hard Paved Landscape open space
Burwood Public School: 3248 m^2

TOTAL Burwood Public School open space:
8567 m^2

9AM, 21ST JUNE - WINTER SOLSTICE

M^2 of Soft Landscape open space
shaded by the amended DA: 355 m^2

% of Soft Landscape open space
shaded by amended DA: 6.6 %

M^2 of Hard Paved open space
shaded by the amended DA: 0 m^2

% of Hard Paved open space
shaded by amended DA: 0 %

% of total open space
shaded by amended DA: 4.1 %

PROPOSED AMENDED DA SHADOW DIAGRAM
9AM, 21ST JUNE - WINTER SOLSTICE

aleksandar design group

Architect
Aleksandar Design Group
52 Kellett Street, Potts Point NSW 2011
aleksandardesigngroup.com.au
nominated architect: aleksandar jelicic registration no. 7167

Client: X-SEALANT

Address: 68-72 RAILWAY PDE, 2 & 2A OXFORD ST & 4-10 OXFORD ST, BURWOOD

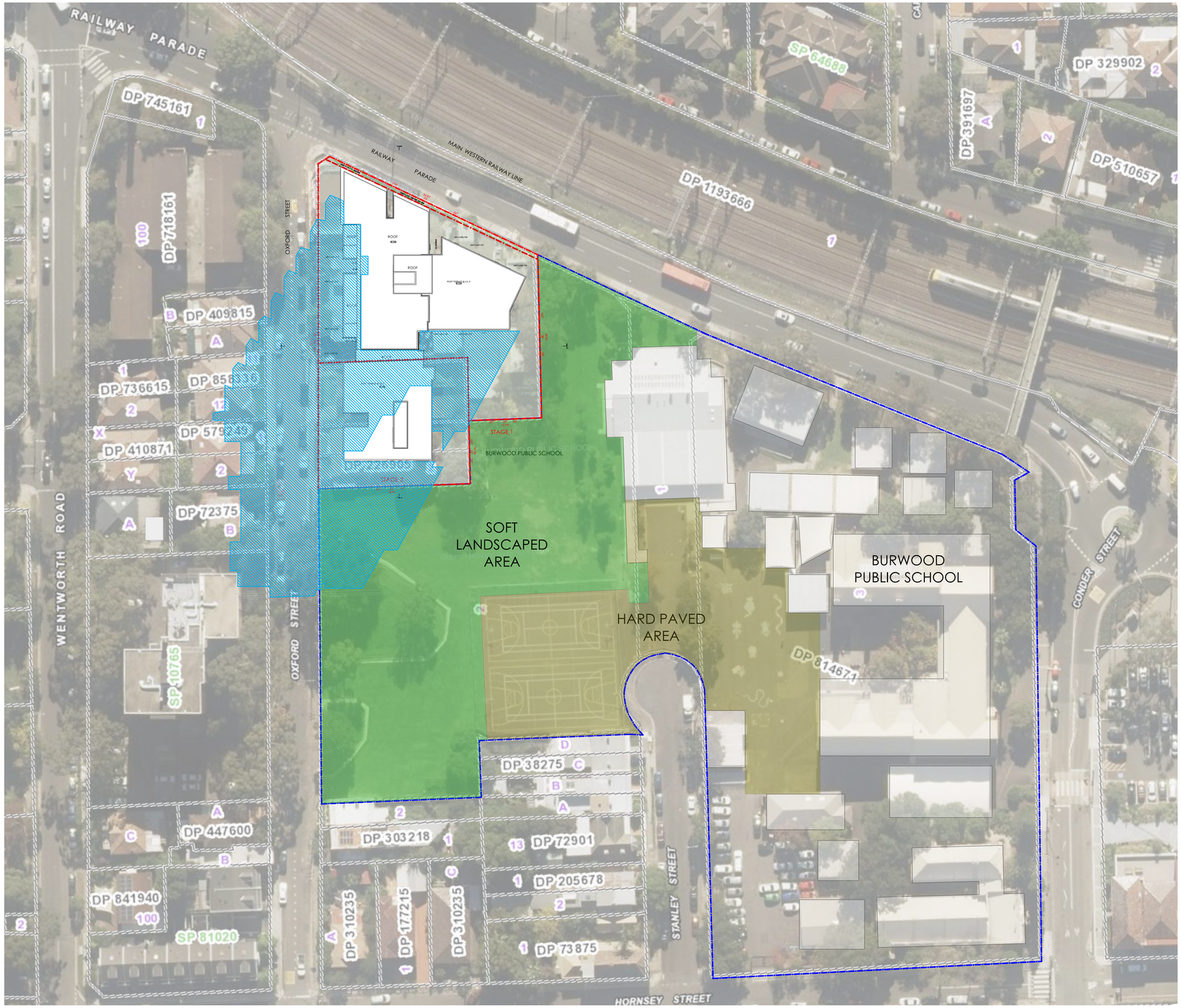
Revision

D	AMENDED FOR DEFERRAL	6/7/18
C	FOR 3/7/18 COUNCIL MEETING	29/6/18
B	AMENDED FOR COUNCIL	24/4/18
A	FOR DA SUBMISSION	19/9/17

Title: SHADOW DIAGRAMS PROPOSED DA 9AM 21ST JUNE WINTER SOLSTICE

Scale: 1:500 @ A1
Drawn By: JL
Checked By: AJ

Project No. 17001
Drawing No. DA13a
Revision



PROPOSED AMENDED DA SHADOW DIAGRAM
10AM, 21ST JUNE - WINTER SOLSTICE

METHOD USED
SKETCHUP 2017
RENDERING CAD SOFTWARE

- Shadow cast by amended DA 24 04 2018
- Burwood Public School Boundary
- Burwood Public School Soft Landscape open space
- Burwood Public School Hard Paved open space

TOTAL M^2 of Soft Landscape open space
Burwood Public School: 5369 m^2

TOTAL M^2 of Hard Paved Landscape open space
Burwood Public School: 3248 m^2

TOTAL Burwood Public School open space:
8567 m^2

10AM, 21ST JUNE - WINTER SOLSTICE

M^2 of Soft Landscape open space shaded by the amended DA: 477 m^2

% of Soft Landscape open space shaded by amended DA: 8.9 %

M^2 of Hard Paved open space shaded by the amended DA: 0 m^2

% of Hard Paved open space shaded by amended DA: 0 %

% of total open space shaded by amended DA: 5.5 %

Architect
aleksandar design group
Aleksandar Design Group
52 Kellett Street, Potts Point NSW 2011
aleksandardesigngroup.com.au
nominated architect: aleksandar jelicic registration no. 7167

Client: X-SEALANT

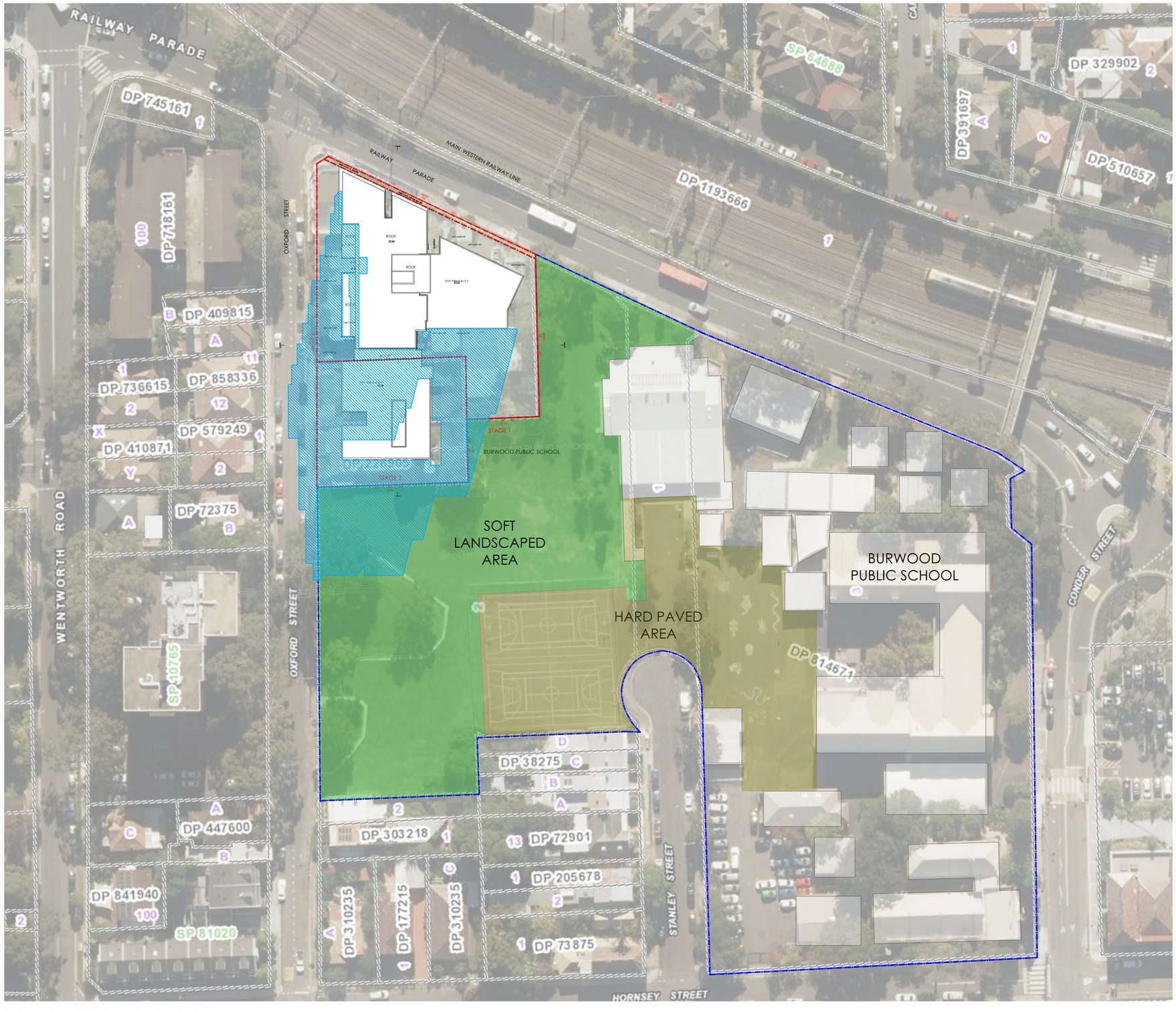
Address: 68-72 RAILWAY PDE, 2 & 2A OXFORD ST & 4-10 OXFORD ST, BURWOOD

Revision		
D	AMENDED FOR DEFERRAL	6/7/18
C	FOR 3/7/18 COUNCIL MEETING	29/6/18
B	AMENDED FOR COUNCIL	24/4/18
A	FOR DA SUBMISSION	19/9/17

Title: SHADOW DIAGRAMS PROPOSED DA 10AM 21ST JUNE WINTER SOLSTICE

Scale: 1:500 @ A1
Drawn By: JL
Checked By: AJ

Project No. 17001
Drawing No. DA13b
Revision



METHOD USED
SKETCHUP 2017
RENDERING CAD SOFTWARE

- Shadow cast by amended DA 24 04 2018
- Burwood Public School Boundary
- Burwood Public School Soft Landscape open space
- Burwood Public School Hard Paved open space

TOTAL M^2 of Soft Landscape open space
Burwood Public School: 5369 m^2

TOTAL M^2 of Hard Paved Landscape open space
Burwood Public School: 3248 m^2

TOTAL Burwood Public School open space:
8567 m^2

11AM, 21ST JUNE - WINTER SOLSTICE

M^2 of Soft Landscape open space shaded by the amended DA: 624 m^2

% of Soft Landscape open space shaded by amended DA: 11.6 %

M^2 of Hard Paved open space shaded by the amended DA: 0 m^2

% of Hard Paved open space shaded by amended DA: 0 %

% of total open space shaded by amended DA: 7.2 %

PROPOSED AMENDED DA SHADOW DIAGRAM
11AM, 21ST JUNE - WINTER SOLSTICE

Architect
aleksandar design group
Aleksandar Design Group
52 Kellett Street, Potts Point NSW 2011
aleksandardesigngroup.com.au
nominated architect: aleksandar jelicic registration no. 7167

Client: X-SEALANT

Address: 68-72 RAILWAY PDE, 2 & 2A OXFORD ST & 4-10 OXFORD ST, BURWOOD

Revision		
D	AMENDED FOR DEFERRAL	6/7/18
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B	AMENDED FOR COUNCIL	24/4/18
A	FOR DA SUBMISSION	19/9/17

Title: SHADOW DIAGRAMS PROPOSED DA 11AM 21ST JUNE WINTER SOLSTICE

Scale: 1:500 @ A1
Drawn By: JL
Checked By: AJ

Project No. 17001
Drawing No. DA13c
Revision

METHOD USED
SKETCHUP 2017
RENDERING CAD SOFTWARE

- Shadow cast by amended DA 24 04 2018
- Burwood Public School Boundary
- Burwood Public School Soft Landscape open space
- Burwood Public School Hard Paved open space

TOTAL M^2 of Soft Landscape open space
Burwood Public School: 5369 m^2

TOTAL M^2 of Hard Paved Landscape open space
Burwood Public School: 3248 m^2

TOTAL Burwood Public School open space:
8567 m^2

12PM, 21ST JUNE - WINTER SOLSTICE

M^2 of Soft Landscape open space shaded by the amended DA: 799 m^2

% of Soft Landscape open space shaded by amended DA: 14.9 %

M^2 of Hard Paved open space shaded by the amended DA: 0 m^2

% of Hard Paved open space shaded by amended DA: 0 %

% of total open space shaded by amended DA: 9.3 %

PROPOSED AMENDED DA SHADOW DIAGRAM
12PM, 21ST JUNE - WINTER SOLSTICE

Architect
aleksandar design group
Aleksandar Design Group
52 Kellett Street, Potts Point NSW 2011
aleksandardesigngroup.com.au
nominated architect: aleksandar jelicic registration no. 7167

Client: X-SEALANT

Address: 68-72 RAILWAY PDE, 2 & 2A OXFORD ST & 4-10 OXFORD ST, BURWOOD

Revision

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C	FOR 3/7/18 COUNCIL MEETING	29/6/18
B	AMENDED FOR COUNCIL	24/4/18
A	FOR DA SUBMISSION	19/9/17

Title: SHADOW DIAGRAMS PROPOSED DA 12PM 21ST JUNE WINTER SOLSTICE

Scale: 1:500 @ A1
Drawn By: JL
Checked By: AJ

Project No. 17001
Drawing No. DA13d
Revision

PROPOSED AMENDED DA SHADOW DIAGRAM
1PM, 21ST JUNE - WINTER SOLSTICE

METHOD USED
SKETCHUP 2017
RENDERING CAD SOFTWARE

- Shadow cast by amended DA 24 04 2018
- Burwood Public School Boundary
- Burwood Public School Soft Landscape open space
- Burwood Public School Hard Paved open space

TOTAL M^2 of Soft Landscape open space
Burwood Public School: 5369 m^2

TOTAL M^2 of Hard Paved Landscape open space
Burwood Public School: 3248 m^2

TOTAL Burwood Public School open space:
8567 m^2

1PM, 21ST JUNE - WINTER SOLSTICE

M^2 of Soft Landscape open space shaded by the amended DA: 1208 m^2

% of Soft Landscape open space shaded by amended DA: 22.5 %

M^2 of Hard Paved open space shaded by the amended DA: 0 m^2

% of Hard Paved open space shaded by amended DA: 0 %

% of total open space shaded by amended DA: 14 %

Architect
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Aleksandar Design Group
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aleksandardesigngroup.com.au
nominated architect: aleksandar jelicic registration no. 7167

Client: X-SEALANT

Address: 68-72 RAILWAY PDE, 2 & 2A OXFORD ST & 4-10 OXFORD ST, BURWOOD

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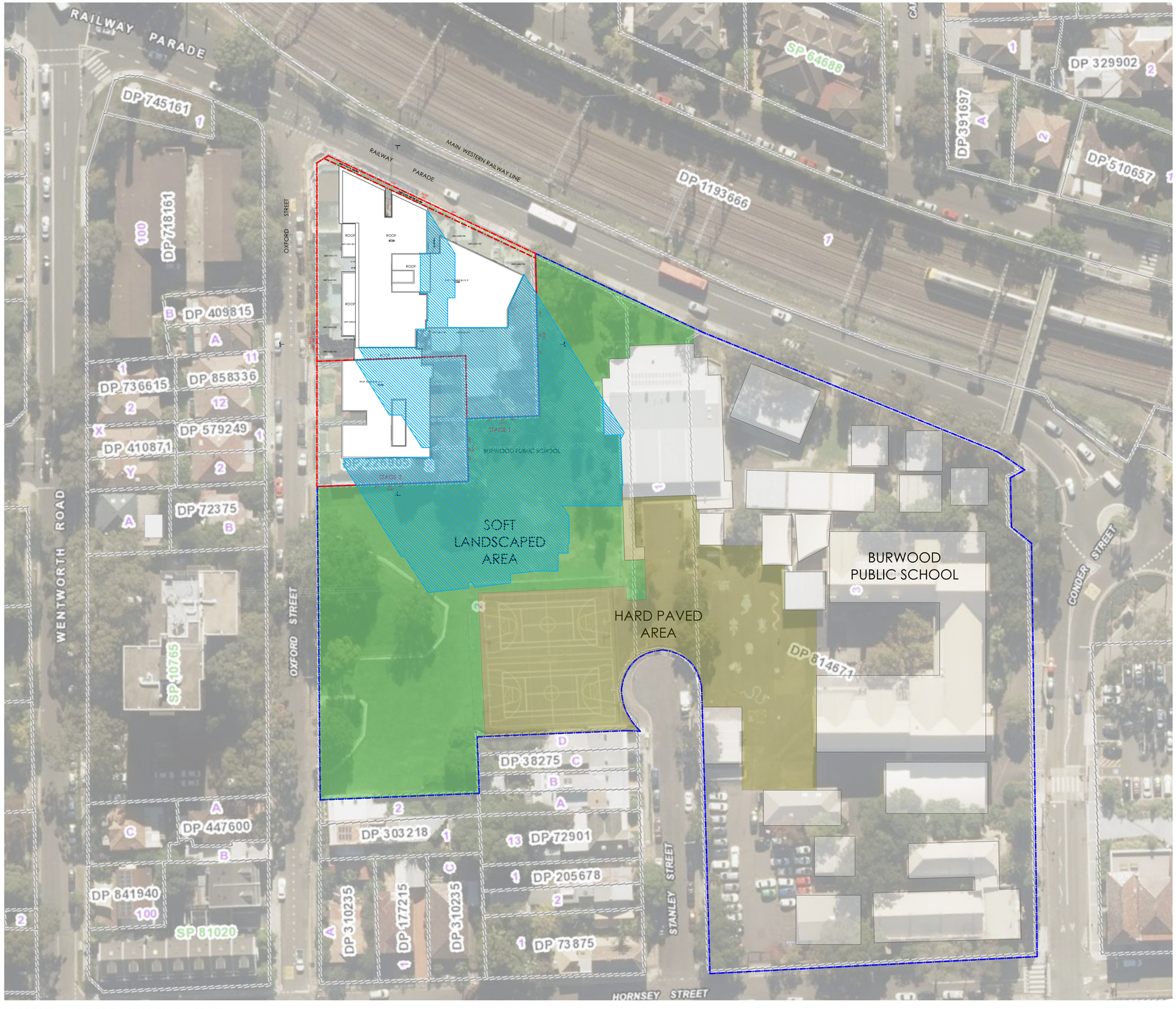
B	AMENDED FOR COUNCIL	24/4/18
A	FOR DA SUBMISSION	19/9/17

Title: SHADOW DIAGRAMS PROPOSED DA 1PM 21ST JUNE WINTER SOLSTICE

Scale: 1:500 @ A1
Drawn By: JL
Checked By: AJ
Project No.: 17001
Drawing No.: DA13e
Revision



METHOD USED
SKETCHUP 2017
RENDERING CAD SOFTWARE

- Shadow cast by amended DA 24 04 2018
- Burwood Public School Boundary
- Burwood Public School Soft Landscape open space
- Burwood Public School Hard Paved open space

TOTAL M^2 of Soft Landscape open space Burwood Public School:	5369	m^2
TOTAL M^2 of Hard Paved Landscape open space Burwood Public School:	3248	m^2
TOTAL Burwood Public School open space:	8567	m^2

2PM, 21ST JUNE - WINTER SOLSTICE

M^2 of Soft Landscape open space shaded by the amended DA:	1977	m^2
% of Soft Landscape open space shaded by amended DA:	36.8	%
M^2 of Hard Paved open space shaded by the amended DA:	0	m^2
% of Hard Paved open space shaded by amended DA:	0	%
% of total open space shaded by amended DA:	22.9	%

PROPOSED AMENDED DA SHADOW DIAGRAM
2PM, 21ST JUNE - WINTER SOLSTICE

aleksandar design group
Architect
Aleksandar Design Group
52 Kellett Street, Potts Point NSW 2011
aleksandardesigngroup.com.au
nominated architect: aleksandar jelicic registration no. 7167

Client: X-SEALANT

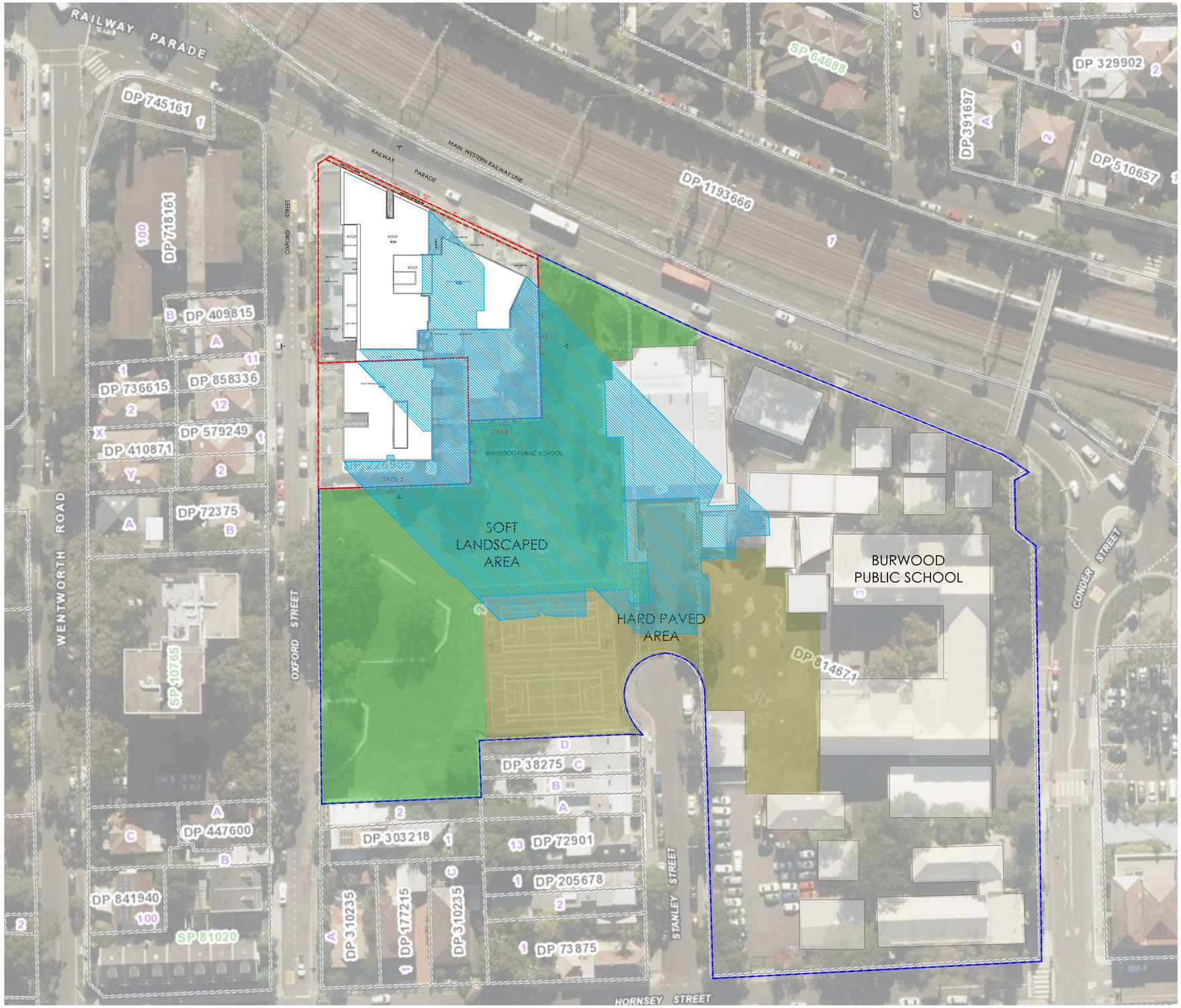
Address: 68-72 RAILWAY PDE, 2 & 2A OXFORD ST & 4-10 OXFORD ST, BURWOOD

Revision		
D	AMENDED FOR DEFERRAL	6/7/18
C	FOR 3/7/18 COUNCIL MEETING	29/6/18
B	AMENDED FOR COUNCIL	24/4/18
A	FOR DA SUBMISSION	19/9/17

Title: SHADOW DIAGRAMS PROPOSED DA 2PM 21ST JUNE WINTER SOLSTICE

Scale: 1:500 @ A1
Drawn By: JL
Checked By: AJ

Project No. 17001
Drawing No. DA13f
Revision



METHOD USED
SKETCHUP 2017
RENDERING CAD SOFTWARE

- Shadow cast by amended DA 24 04 2018
- Burwood Public School Boundary
- Burwood Public School Soft Landscape open space
- Burwood Public School Hard Paved open space

TOTAL M^2 of Soft Landscape open space
Burwood Public School: 5369 m^2

TOTAL M^2 of Hard Paved Landscape open space
Burwood Public School: 3248 m^2

TOTAL Burwood Public School open space:
8567 m^2

3PM, 21ST JUNE - WINTER SOLSTICE

M^2 of Soft Landscape open space
shaded by the amended DA: 2346 m^2

% of Soft Landscape open space
shaded by amended DA: 43.7 %

M^2 of Hard Paved open space
shaded by the amended DA: 742 m^2

% of Hard Paved open space
shaded by amended DA: 22.8 %

% of total open space
shaded by amended DA: 35.8 %

PROPOSED AMENDED DA SHADOW DIAGRAM
3PM, 21ST JUNE - WINTER SOLSTICE

Architect
aleksandar design group
Aleksandar Design Group
52 Kellett Street, Potts Point NSW 2011
aleksandardesigngroup.com.au
nominated architect: aleksandar jelicic registration no. 7167

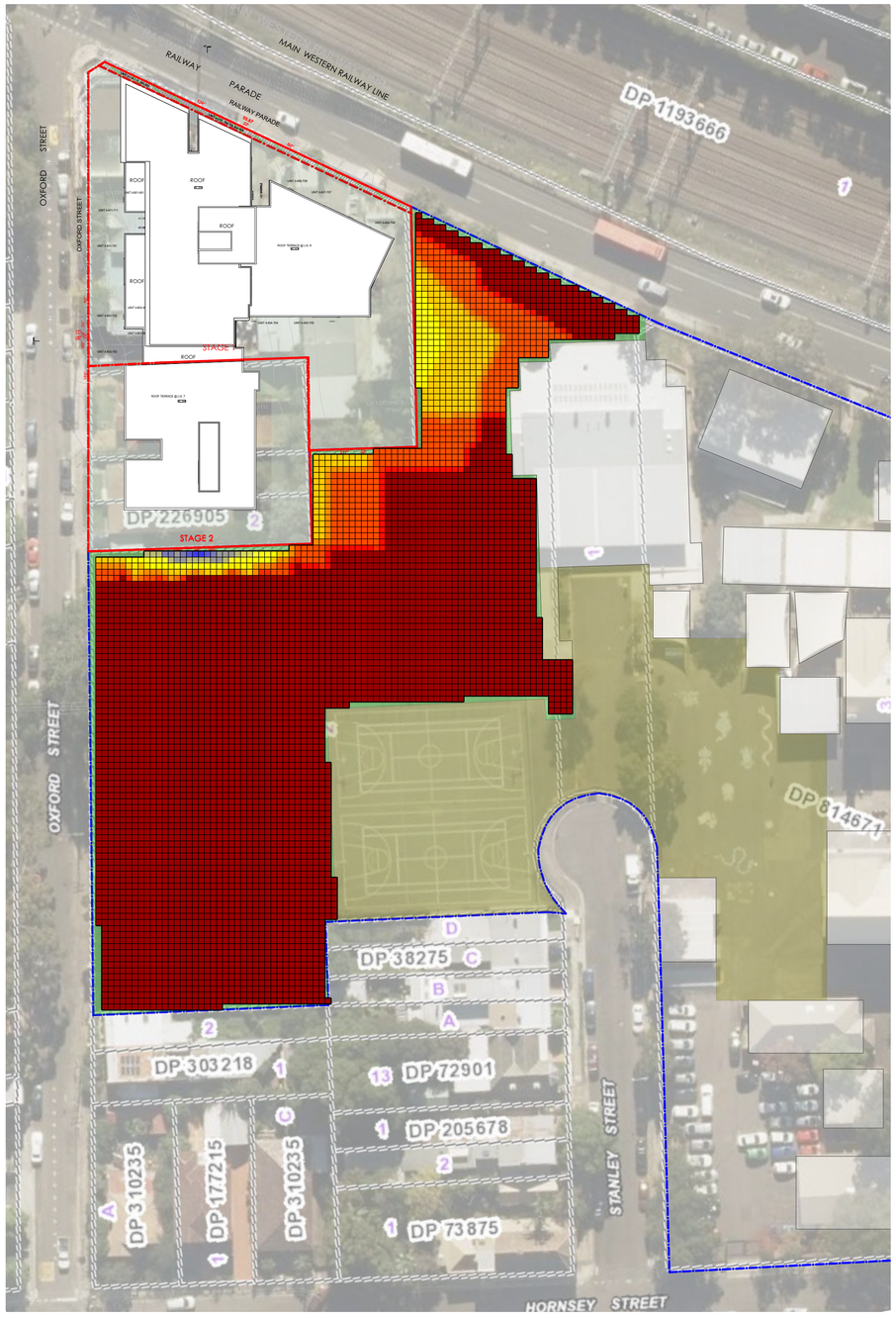
Client: X-SEALANT

Address: 68-72 RAILWAY PDE, 2 & 2A OXFORD ST & 4-10 OXFORD ST, BURWOOD

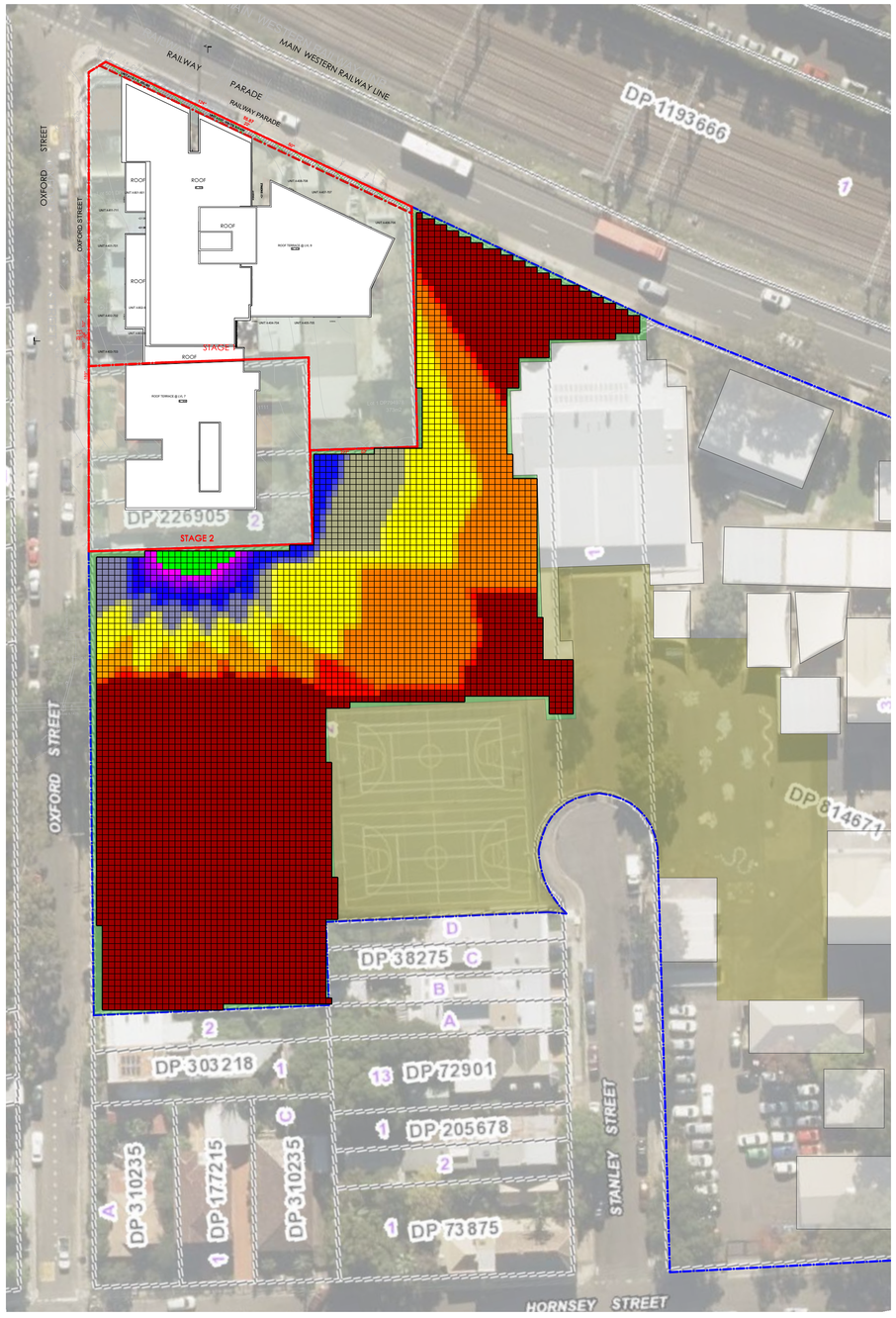
Revision		
D	AMENDED FOR DEFERRAL	6/7/18
C	FOR 3/7/18 COUNCIL MEETING	29/6/18
B	AMENDED FOR COUNCIL	24/4/18
A	FOR DA SUBMISSION	19/9/17

Title: SHADOW DIAGRAMS PROPOSED DA 3PM 21ST JUNE WINTER SOLSTICE

Scale: 1:500 @ A1
Drawn By: JL
Checked By: AJ
Project No.: 17001
Drawing No.: DA13g
Revision



DATE ASSESSED: 21ST MARCH, MID AUTUMN
TIME ASSESSED: 07:00 TO 17:00 (10 HOURS)



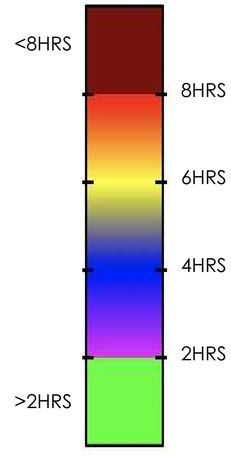
DATE ASSESSED: 21ST JUNE, MID WINTER
TIME ASSESSED: 07:00 TO 17:00 (10 HOURS)

METHOD USED:
SKETCHUP 2017 + EXTENSION SUNHOURS

AREA ANALYSED LIMITED TO SOFT LANDSCAPE OPEN SPACE OF ADJACENT SITE BURWOOD PUBLIC SCHOOL

GRID APPROXIMATELY 1m x 1m

AMOUNT OF SOLAR ACCESS BY COLOUR RANGE



Site Boundary

Burwood Public School

Architect
aleksandar design group
Aleksandar Design Group
52 Kellett Street, Potts Point NSW 2011
aleksandardesigngroup.com.au
nominated architect: aleksandar jelicic registration no. 7167

Client: X-SEALANT

Address: 68-72 RAILWAY PDE, 2 & 2A OXFORD ST & 4-10 OXFORD ST, BURWOOD

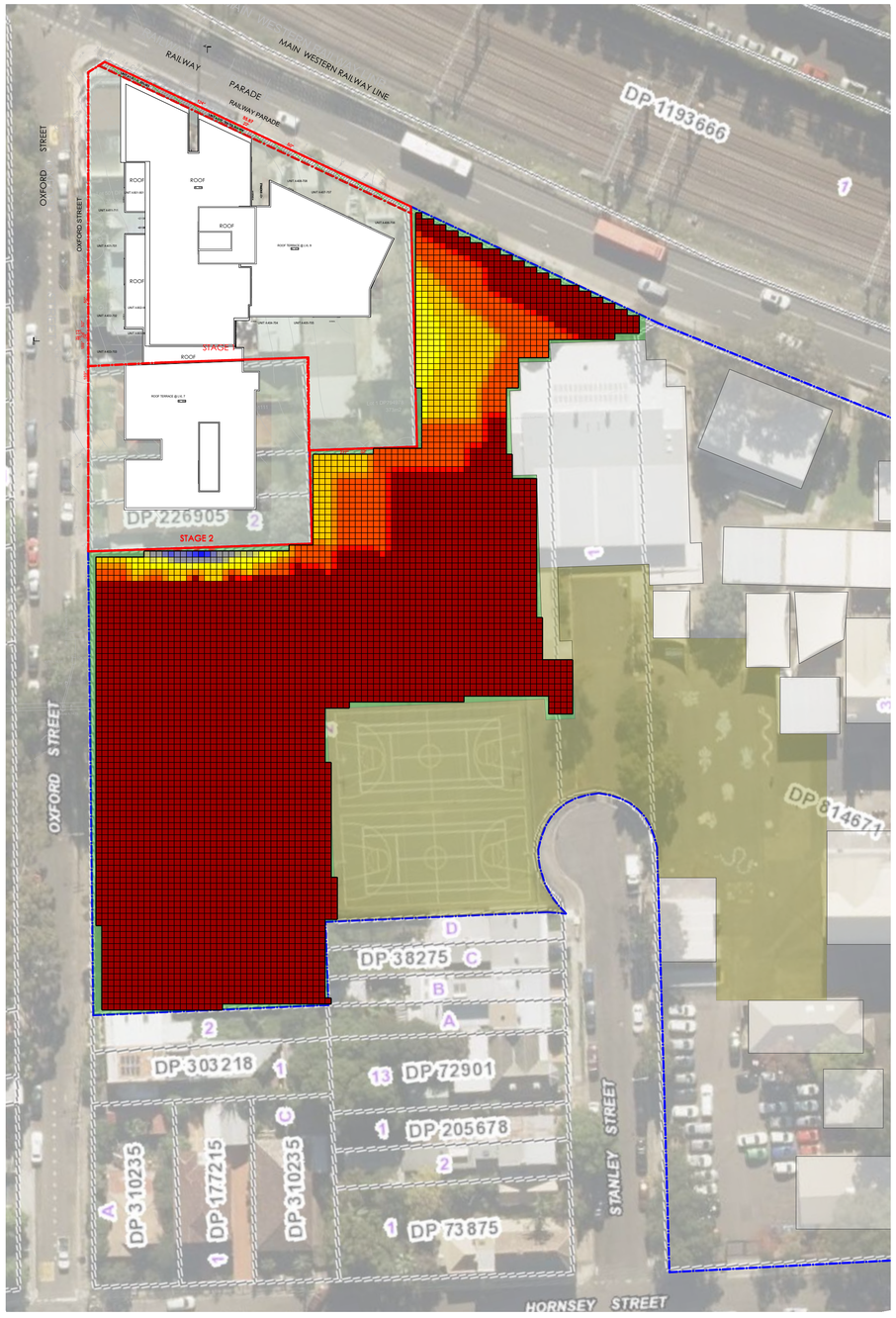
Revision

D	AMENDED FOR DEFERRAL	6/7/18
C	FOR 3/7/18 COUNCIL MEETING	29/6/18
B	AMENDED FOR COUNCIL	24/4/18
A	FOR DA SUBMISSION	19/9/17

Title: OVERSHADOWING ANALYSIS OF SOFT LANDSCAPE OPEN SPACE

Scale: 1:500 @ A1
Drawn By: JL
Checked By: AJ

Project No. 17001
Drawing No. DA18a
Revision



DATE ASSESSED: 23RD SEPTEMBER, MID SPRING
TIME ASSESSED: 07:00 TO 17:00 (10 HOURS)

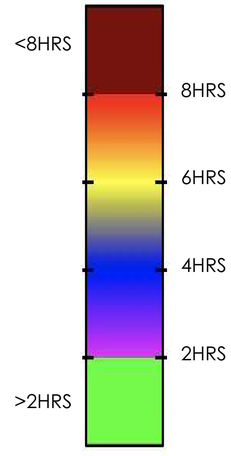
DATE ASSESSED: 22ND DECEMBER, MID SUMMER
TIME ASSESSED: 07:00 TO 17:00 (10 HOURS)

METHOD USED:
SKETCHUP 2017 + EXTENSION SUNHOURS

AREA ANALYSED LIMITED TO SOFT LANDSCAPE OPEN SPACE OF ADJACENT SITE BURWOOD PUBLIC SCHOOL

GRID APPROXIMATELY 1m x 1m

AMOUNT OF SOLAR ACCESS
BY COLOUR RANGE



Site Boundary

Burwood Public School

aleksandar design group
Architect
Aleksandar Design Group
52 Kellett Street, Potts Point NSW 2011
aleksandardesigngroup.com.au
nominated architect: aleksandar jelicic registration no. 7167

Client: X-SEALANT

Address: 68-72 RAILWAY PDE, 2 & 2A OXFORD ST & 4-10 OXFORD ST, BURWOOD

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B	AMENDED FOR COUNCIL	24/4/18
A	FOR DA SUBMISSION	19/9/17

Title: OVERSHADOWING ANALYSIS OF SOFT LANDSCAPE OPEN SPACE

Scale: 1:500 @ A1
Drawn By: JL
Checked By: AJ

Project No. 17001
Drawing No. DA18b
Revision

OVERSHADOWING IMPACT ONTO BURWOOD PUBLIC SCHOOL OPEN SPACE IN JUNE 21ST, WINTER SOLSTICE

SOFT LANDSCAPE OPEN AREA	**5369**	M2
HARD LANDSCAPE OPEN AREA	**3248**	M2
TOTAL OPEN AREA	**8617**	M2

	SOFT LANDSCAPE IMPACT M2		SOFT LANDSCAPE IMPACT %	HARD LANDSCAPE IMPACT M2		HARD PAVED LANDSCAPE IMPACT %	TOTAL % IMPACT ON TOTAL OPEN AREA	AMENDED DA % CHANGE ON SOFT LANDSCAPE	AMENDED DA % CHANGE ON HARD PAVED LANDSCAPE	AMENDED DA % CHANGE ON TOTAL OPEN SPACE
APPROVED DA 74-2015										
21 June 9:00	142	M2	2.6%	0	M2	0%	1.6%			
21 June 10:00	167	M2	3.1%	0	M2	0%	1.9%			
21 June 11:00	151	M2	2.8%	0	M2	0%	1.8%			
21 June 12:00	265	M2	4.9%	0	M2	0%	3.1%			
21 June 13:00	572	M2	10.7%	0	M2	0%	6.6%			
21 June 14:00	1141	M2	21.3%	0	M2	0%	13.2%			
21 June 15:00	1349	M2	25.1%	270	M2	8.3%	18.8%			
AMENDED DA 2018 04 27 OVERSHADOWING								AMENDED DA % CHANGE ON SOFT LANDSCAPE	AMENDED DA % CHANGE ON HARD PAVED LANDSCAPE	AMENDED DA % CHANGE ON TOTAL OPEN SPACE
21 June 9:00	355	M2	6.6%	0	M2	0%	4.1%	+ 4.0%	+ 0.0%	+ 2.5%
21 June 10:00	477	M2	8.9%	0	M2	0%	5.5%	+ 5.8%	+ 0.0%	+ 3.6%
21 June 11:00	624	M2	11.6%	0	M2	0%	7.2%	+ 8.8%	+ 0.0%	+ 5.5%
21 June 12:00	799	M2	14.9%	0	M2	0%	9.3%	+ 9.9%	+ 0.0%	+ 6.2%
21 June 13:00	1208	M2	22.5%	0	M2	0%	14.0%	+ 11.8%	+ 0.0%	+ 7.4%
21 June 14:00	1977	M2	36.8%	0	M2	0%	22.9%	+ 15.6%	+ 0.0%	+ 9.7%
21 June 15:00	2346	M2	43.7%	742	M2	22.8%	35.8%	+ 18.6%	+ 14.5%	+ 17.0%

Architect
Aleksandar Design Group
52 Kellett Street, Potts Point NSW 2011
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nominated architect: aleksandar jelicic registration no. 7167

Client: X-SEALANT

Address: 68-72 RAILWAY PDE, 2 & 2A OXFORD ST & 4-10 OXFORD ST, BURWOOD

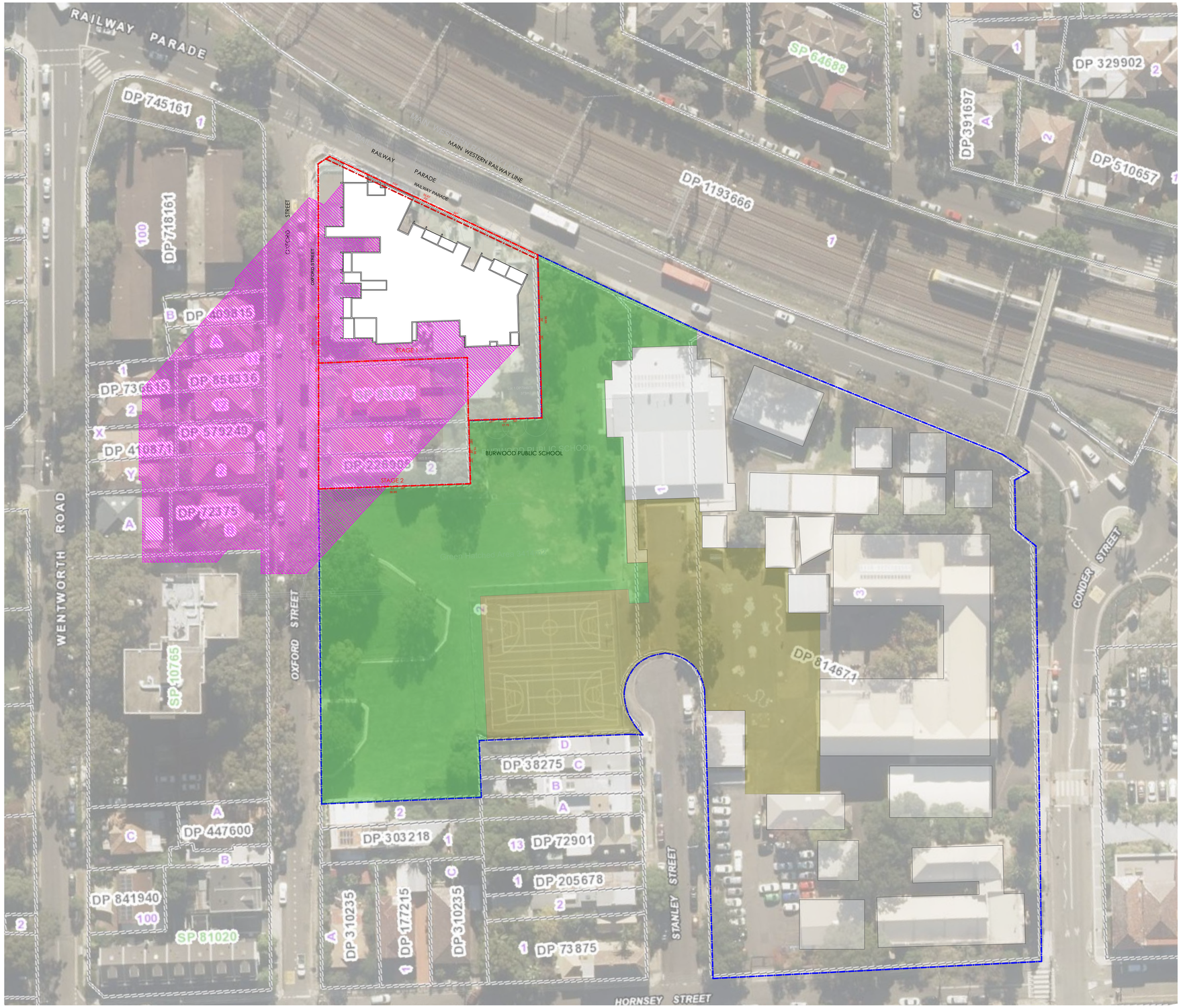
Revision

D	AMENDED FOR DEFERRAL	6/7/18
C	FOR 3/7/18 COUNCIL MEETING	29/6/18
B	AMENDED FOR COUNCIL	24/4/18
A	FOR DA SUBMISSION	19/9/17

Title: SHADOW ANALYSIS MATRIX

Scale: 1:500 @ A1
Drawn By: JL
Checked By: AJ

Project No. 17001
Drawing No. / Revision: DA19



METHOD USED
SKETCHUP 2017
RENDERING CAD SOFTWARE

- Shadow cast by the Approved DA 74-2015
- Burwood Public School Boundary
- Burwood Public School Soft Landscape open space
- Burwood Public School Hard Paved open space

TOTAL M^2 of Soft Landscape open space
Burwood Public School: 5369 m^2

TOTAL M^2 of Hard Paved Landscape open space
Burwood Public School: 3248 m^2

TOTAL Burwood Public School open space:
8567 m^2

9AM, 21ST JUNE - WINTER SOLSTICE

M^2 of Soft Landscape open space
shaded by the approved DA 74-2015: 142 m^2

% of Soft Landscape open space
shaded by approved DA 74-2015: 2.6 %

M^2 of Hard Paved open space
shaded by the approved DA 74-2015: 0 m^2

% of Hard Paved open space
shaded by approved DA 74-2015: 0 %

% of total open space
shaded by approved DA 74-2015: 1.6 %

APPROVED DA 74-2015 SHADOW DIAGRAM
9AM, 21ST JUNE - WINTER SOLSTICE

Architect
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52 Kellett Street, Potts Point NSW 2011
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nominated architect: aleksandar jelicic registration no. 7167

Client: X-SEALANT

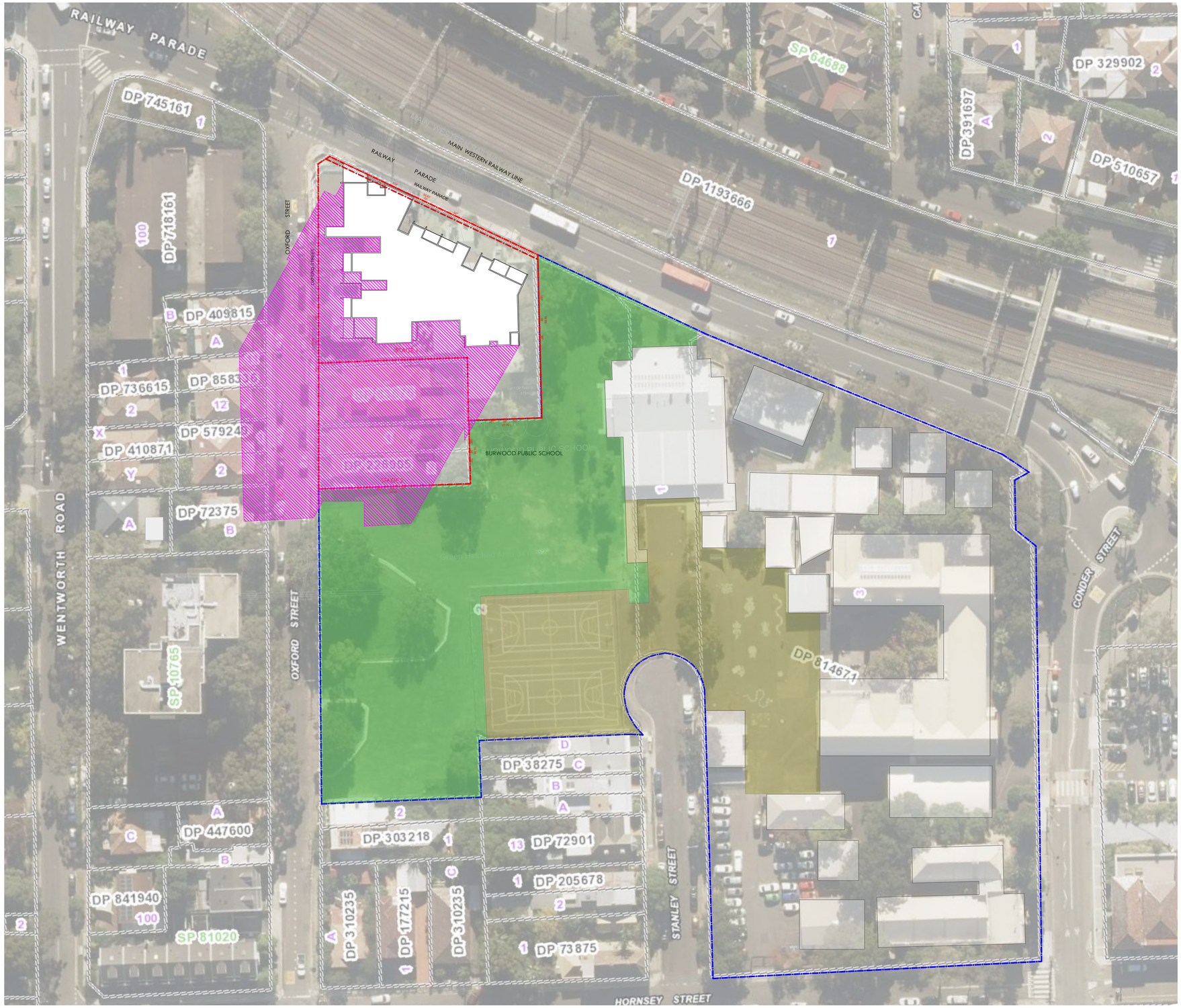
Address: 68-72 RAILWAY PDE, 2 & 2A OXFORD ST & 4-10 OXFORD ST, BURWOOD

Revision		
D	AMENDED FOR DEFERRAL	6/7/18
C	FOR 3/7/18 COUNCIL MEETING	29/6/18
B	AMENDED FOR COUNCIL	24/4/18
A	FOR DA SUBMISSION	19/9/17

Title: SHADOW DIAGRAMS APPROVED DA 9AM 21ST JUNE WINTER SOLSTICE

Scale: 1:500 @ A1
Drawn By: JL
Checked By: AJ

Project No. 17001
Drawing No. / Revision: DA16a



APPROVED DA 74-2015 SHADOW DIAGRAM
10AM, 21ST JUNE - WINTER SOLSTICE

METHOD USED
SKETCHUP 2017
RENDERING CAD SOFTWARE

- Shadow cast by the Approved DA 74-2015
- Burwood Public School Boundary
- Burwood Public School Soft Landscape open space
- Burwood Public School Hard Paved open space

TOTAL M^2 of Soft Landscape open space
Burwood Public School: 5369 m^2

TOTAL M^2 of Hard Paved Landscape open space
Burwood Public School: 3248 m^2

TOTAL Burwood Public School open space:
8567 m^2

10AM, 21ST JUNE - WINTER SOLSTICE

M^2 of Soft Landscape open space
shaded by the approved DA 74-2015: 167 m^2

% of Soft Landscape open space
shaded by approved DA 74-2015: 3.1 %

M^2 of Hard Paved open space
shaded by the approved DA 74-2015: 0 m^2

% of Hard Paved open space
shaded by approved DA 74-2015: 0 %

% of total open space
shaded by approved DA 74-2015: 1.9 %

Architect
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nominated architect: aleksandar jelicic registration no. 7167

Client: X-SEALANT

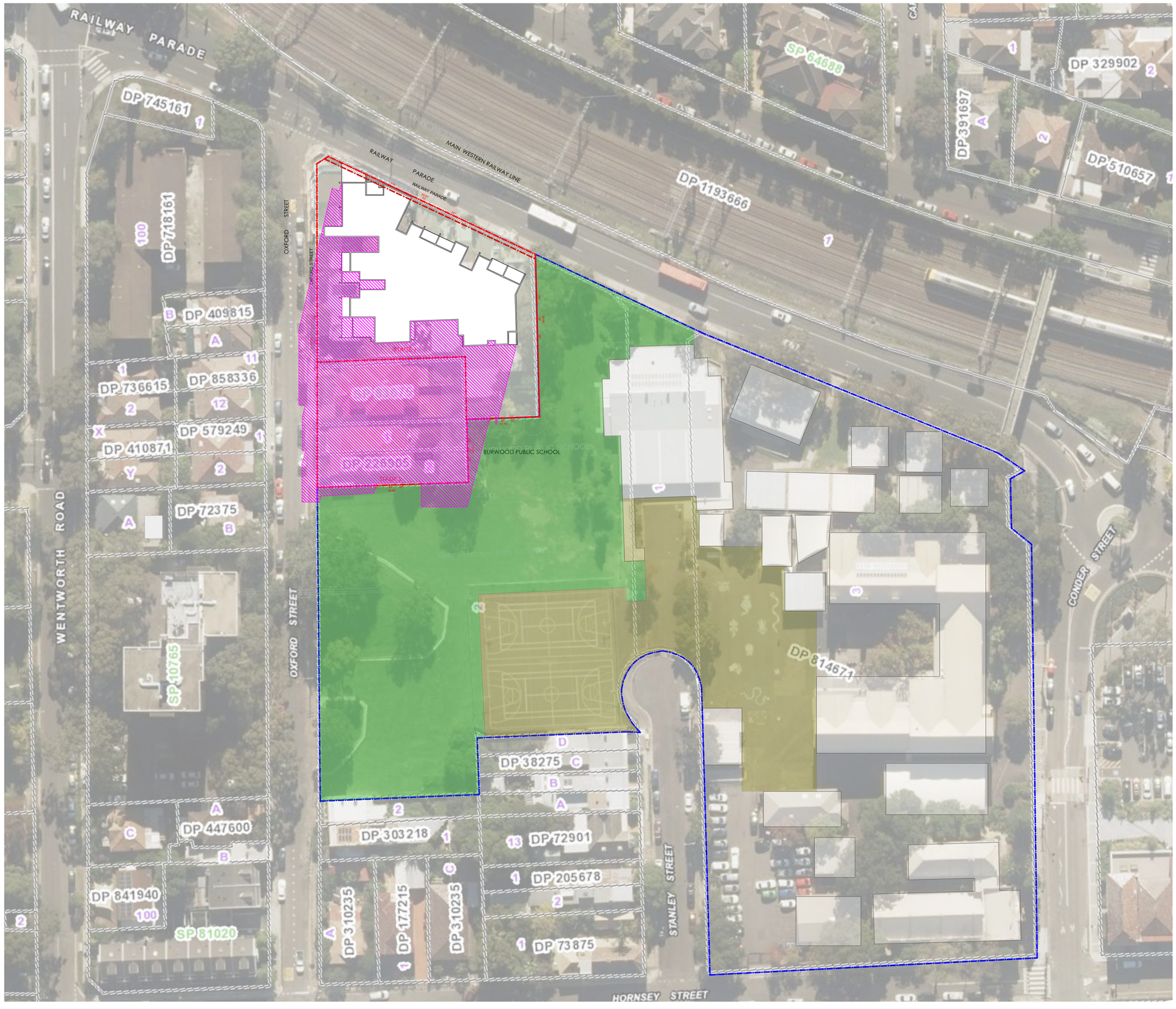
Address: 68-72 RAILWAY PDE, 2 & 2A OXFORD ST & 4-10 OXFORD ST, BURWOOD

Revision		
D	AMENDED FOR DEFERRAL	6/7/18
C	FOR 3/7/18 COUNCIL MEETING	29/6/18
B	AMENDED FOR COUNCIL	24/4/18
A	FOR DA SUBMISSION	19/9/17

Title: SHADOW DIAGRAMS APPROVED DA 10AM 21ST JUNE WINTER SOLSTICE

Scale: 1:500 @ A1
Drawn By: JL
Checked By: AJ

Project No. 17001
Drawing No. DA16b
Revision



METHOD USED
SKETCHUP 2017
RENDERING CAD SOFTWARE

- Shadow cast by the Approved DA 74-2015
- Burwood Public School Boundary
- Burwood Public School Soft Landscape open space
- Burwood Public School Hard Paved open space

TOTAL M^2 of Soft Landscape open space
Burwood Public School: 5369 m^2

TOTAL M^2 of Hard Paved Landscape open space
Burwood Public School: 3248 m^2

TOTAL Burwood Public School open space:
8567 m^2

11AM, 21ST JUNE - WINTER SOLSTICE

M^2 of Soft Landscape open space
shaded by the approved DA 74-2015: 151 m^2

% of Soft Landscape open space
shaded by approved DA 74-2015: 2.8 %

M^2 of Hard Paved open space
shaded by the approved DA 74-2015: 0 m^2

% of Hard Paved open space
shaded by approved DA 74-2015: 0 %

% of total open space
shaded by approved DA 74-2015: 1.8 %

APPROVED DA 74-2015 SHADOW DIAGRAM
11AM, 21ST JUNE - WINTER SOLSTICE

Architect
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Aleksandar Design Group
52 Kellett Street, Potts Point NSW 2011
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nominated architect: aleksandar jelicic registration no. 7167

Client: X-SEALANT

Address: 68-72 RAILWAY PDE, 2 & 2A OXFORD ST & 4-10 OXFORD ST, BURWOOD

Revision		
D	AMENDED FOR DEFERRAL	6/7/18
C	FOR 3/7/18 COUNCIL MEETING	29/6/18
B	AMENDED FOR COUNCIL	24/4/18
A	FOR DA SUBMISSION	19/9/17

Title: SHADOW DIAGRAMS APPROVED DA 11AM 21ST JUNE WINTER SOLSTICE

Scale: 1:500 @ A1
Drawn By: JL
Checked By: AJ

Project No. 17001
Drawing No. DA16c
Revision

METHOD USED
SKETCHUP 2017
RENDERING CAD SOFTWARE

- Shadow cast by the Approved DA 74-2015
- Burwood Public School Boundary
- Burwood Public School Soft Landscape open space
- Burwood Public School Hard Paved open space

TOTAL M^2 of Soft Landscape open space
Burwood Public School: 5369 m^2

TOTAL M^2 of Hard Paved Landscape open space
Burwood Public School: 3248 m^2

TOTAL Burwood Public School open space:
8567 m^2

12PM, 21ST JUNE - WINTER SOLSTICE

M^2 of Soft Landscape open space
shaded by the approved DA 74-2015: 265 m^2

% of Soft Landscape open space
shaded by approved DA 74-2015: 4.9 %

M^2 of Hard Paved open space
shaded by the approved DA 74-2015: 0 m^2

% of Hard Paved open space
shaded by approved DA 74-2015: 0 %

% of total open space
shaded by approved DA 74-2015: 3.1 %

APPROVED DA 74-2015 SHADOW DIAGRAM
12PM, 21ST JUNE - WINTER SOLSTICE

Architect
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nominated architect: aleksandar jelicic registration no. 7167

Client: X-SEALANT

Address: 68-72 RAILWAY PDE, 2 & 2A OXFORD ST & 4-10 OXFORD ST, BURWOOD

Revision		
D	AMENDED FOR DEFERRAL	6/7/18
C	FOR 3/7/18 COUNCIL MEETING	29/6/18
B	AMENDED FOR COUNCIL	24/4/18
A	FOR DA SUBMISSION	19/9/17

Title: SHADOW DIAGRAMS APPROVED DA 12PM 21ST JUNE WINTER SOLSTICE

Scale: 1:500 @ A1
Drawn By: JL
Checked By: AJ

Project No. 17001
Drawing No. DA16d
Revision

METHOD USED
SKETCHUP 2017
RENDERING CAD SOFTWARE

- Shadow cast by the Approved DA 74-2015
- Burwood Public School Boundary
- Burwood Public School Soft Landscape open space
- Burwood Public School Hard Paved open space

TOTAL M^2 of Soft Landscape open space
Burwood Public School: 5369 m^2

TOTAL M^2 of Hard Paved Landscape open space
Burwood Public School: 3248 m^2

TOTAL Burwood Public School open space:
8567 m^2

1PM, 21ST JUNE - WINTER SOLSTICE

M^2 of Soft Landscape open space
shaded by the approved DA 74-2015: 572 m^2

% of Soft Landscape open space
shaded by approved DA 74-2015: 10.7 %

M^2 of Hard Paved open space
shaded by the approved DA 74-2015: 0 m^2

% of Hard Paved open space
shaded by approved DA 74-2015: 0 %

% of total open space
shaded by approved DA 74-2015: 6.6 %

APPROVED DA 74-2015 SHADOW DIAGRAM
1PM, 21ST JUNE - WINTER SOLSTICE

Architect
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nominated architect: aleksandar jelicic registration no. 7167

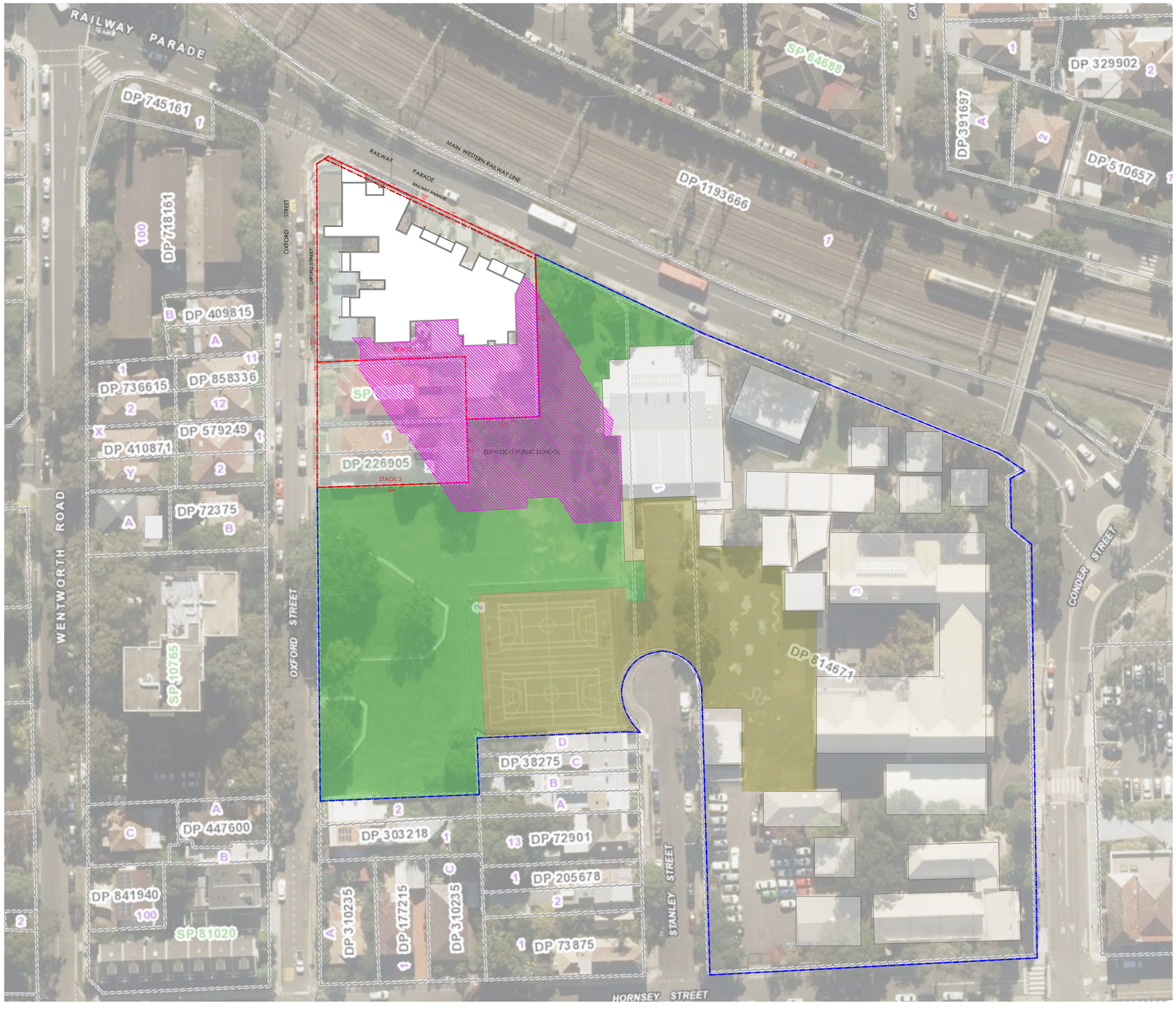
Client: X-SEALANT

Address: 68-72 RAILWAY PDE, 2 & 2A OXFORD ST & 4-10 OXFORD ST, BURWOOD

Revision		
D	AMENDED FOR DEFERRAL	6/7/18
C	FOR 3/7/18 COUNCIL MEETING	29/6/18
B	AMENDED FOR COUNCIL	24/4/18
A	FOR DA SUBMISSION	19/9/17

Title: SHADOW DIAGRAMS APPROVED DA 1PM 21ST JUNE WINTER SOLSTICE

Scale: 1:500 @ A1
Drawn By: JL
Checked By: AJ
Project No.: 17001
Drawing No.: DA16e
Revision



METHOD USED
SKETCHUP 2017
RENDERING CAD SOFTWARE

Shadow cast by the Approved DA 74-2015

Burwood Public School Boundary

Burwood Public School Soft Landscape open space

Burwood Public School Hard Paved open space

TOTAL M^2 of Soft Landscape open space
Burwood Public School: 5369 m^2

TOTAL M^2 of Hard Paved Landscape open space
Burwood Public School: 3248 m^2

TOTAL Burwood Public School open space:
8567 m^2

2PM, 21ST JUNE - WINTER SOLSTICE

M^2 of Soft Landscape open space
shaded by the approved DA 74-2015: 1141 m^2

% of Soft Landscape open space
shaded by approved DA 74-2015: 21.3 %

M^2 of Hard Paved open space
shaded by the approved DA 74-2015: 0 m^2

% of Hard Paved open space
shaded by approved DA 74-2015: 0 %

% of total open space
shaded by approved DA 74-2015: 13.2 %

APPROVED DA 74-2015 SHADOW DIAGRAM
2PM, 21ST JUNE - WINTER SOLSTICE

Architect
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nominated architect: aleksandar jelicic registration no. 7167

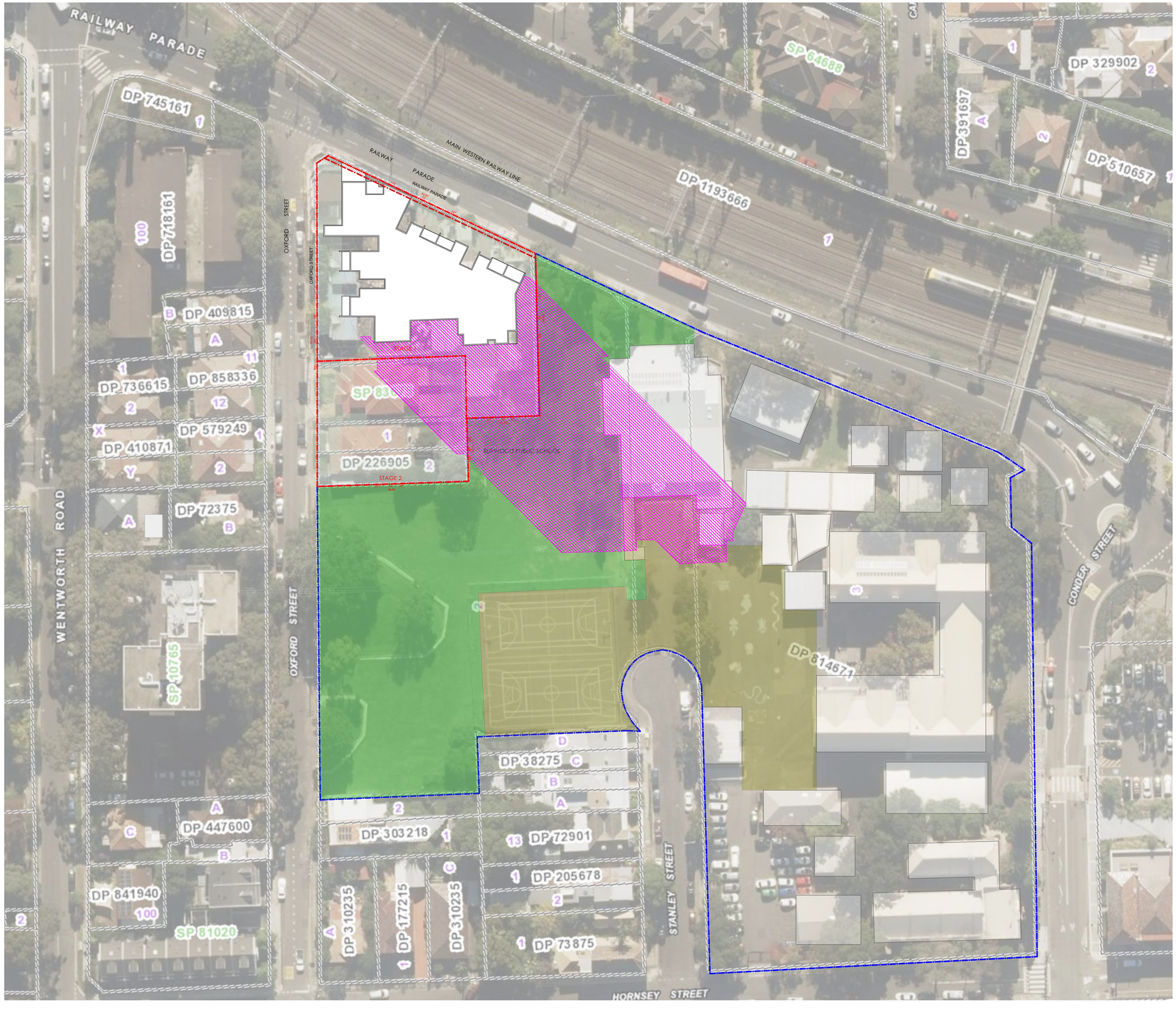
Client: X-SEALANT

Address: 68-72 RAILWAY PDE, 2 & 2A OXFORD ST & 4-10 OXFORD ST, BURWOOD

Revision		
D	AMENDED FOR DEFERRAL	6/7/18
C	FOR 3/7/18 COUNCIL MEETING	29/6/18
B	AMENDED FOR COUNCIL	24/4/18
A	FOR DA SUBMISSION	19/9/17

Title: SHADOW DIAGRAMS APPROVED DA 2PM 21ST JUNE WINTER SOLSTICE

Scale: 1:500 @ A1
Drawn By: JL
Checked By: AJ
Project No.: 17001
Drawing No.: DA16f
Revision:



APPROVED DA 74-2015 SHADOW DIAGRAM
3PM, 21ST JUNE - WINTER SOLSTICE

METHOD USED
SKETCHUP 2017
RENDERING CAD SOFTWARE

- Shadow cast by the Approved DA 74-2015
- Burwood Public School Boundary
- Burwood Public School Soft Landscape open space
- Burwood Public School Hard Paved open space

TOTAL M^2 of Soft Landscape open space
Burwood Public School: 5369 m^2

TOTAL M^2 of Hard Paved Landscape open space
Burwood Public School: 3248 m^2

TOTAL Burwood Public School open space:
8567 m^2

3PM, 21ST JUNE - WINTER SOLSTICE

M^2 of Soft Landscape open space
shaded by the approved DA 74-2015: 1349 m^2

% of Soft Landscape open space
shaded by approved DA 74-2015: 25.1 %

M^2 of Hard Paved open space
shaded by the approved DA 74-2015: 270 m^2

% of Hard Paved open space
shaded by approved DA 74-2015: 8.3 %

% of total open space
shaded by approved DA 74-2015: 18.8 %

Architect
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nominated architect: aleksandar jelicic registration no. 7167

Client: X-SEALANT

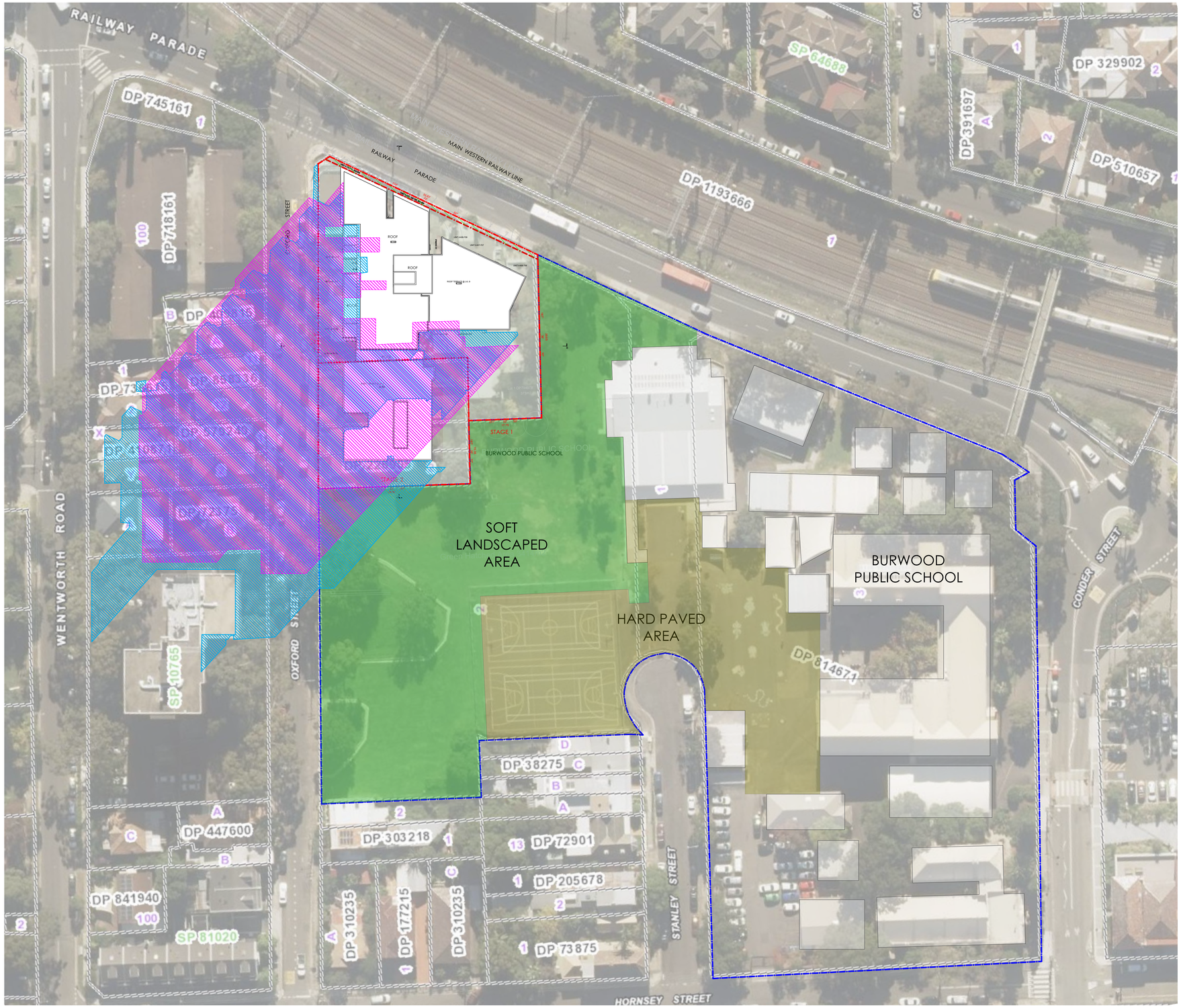
Address: 68-72 RAILWAY PDE, 2 & 2A OXFORD ST & 4-10 OXFORD ST, BURWOOD

Revision		
D	AMENDED FOR DEFERRAL	6/7/18
C	FOR 3/7/18 COUNCIL MEETING	29/6/18
B	AMENDED FOR COUNCIL	24/4/18
A	FOR DA SUBMISSION	19/9/17

Title: SHADOW DIAGRAMS APPROVED DA 3PM 21ST JUNE WINTER SOLSTICE

Scale: 1:500 @ A1
Drawn By: JL
Checked By: AJ

Project No. 17001
Drawing No. DA16g
Revision



COMPARISON SHADOW DIAGRAM
9AM, 21ST JUNE - WINTER SOLSTICE

METHOD USED
SKETCHUP 2017
RENDERING CAD SOFTWARE

- Shadow cast by amended DA 24 04 2018
- Shadow cast by Approved DA 74-2015
- Burwood Public School Boundary
- Burwood Public School Soft Landscape open space
- Burwood Public School Hard Paved open space

TOTAL M^2 of Soft Landscape open space
Burwood Public School: 5369 m^2

TOTAL M^2 of Hard Paved Landscape open space
Burwood Public School: 3248 m^2

TOTAL Burwood Public School open space:
8567 m^2

9AM, 21ST JUNE - WINTER SOLSTICE

PERCENTAGE INCREASE FOR AMENDED DA FROM APPROVED DA 74-2015

Increase in % of impact on Soft Landscape open space : 4.0 %

Increase in % of impact on Hard Paved Landscape open space : 0 %

Increase in % of impact on Total open space : 2.5 %

Architect
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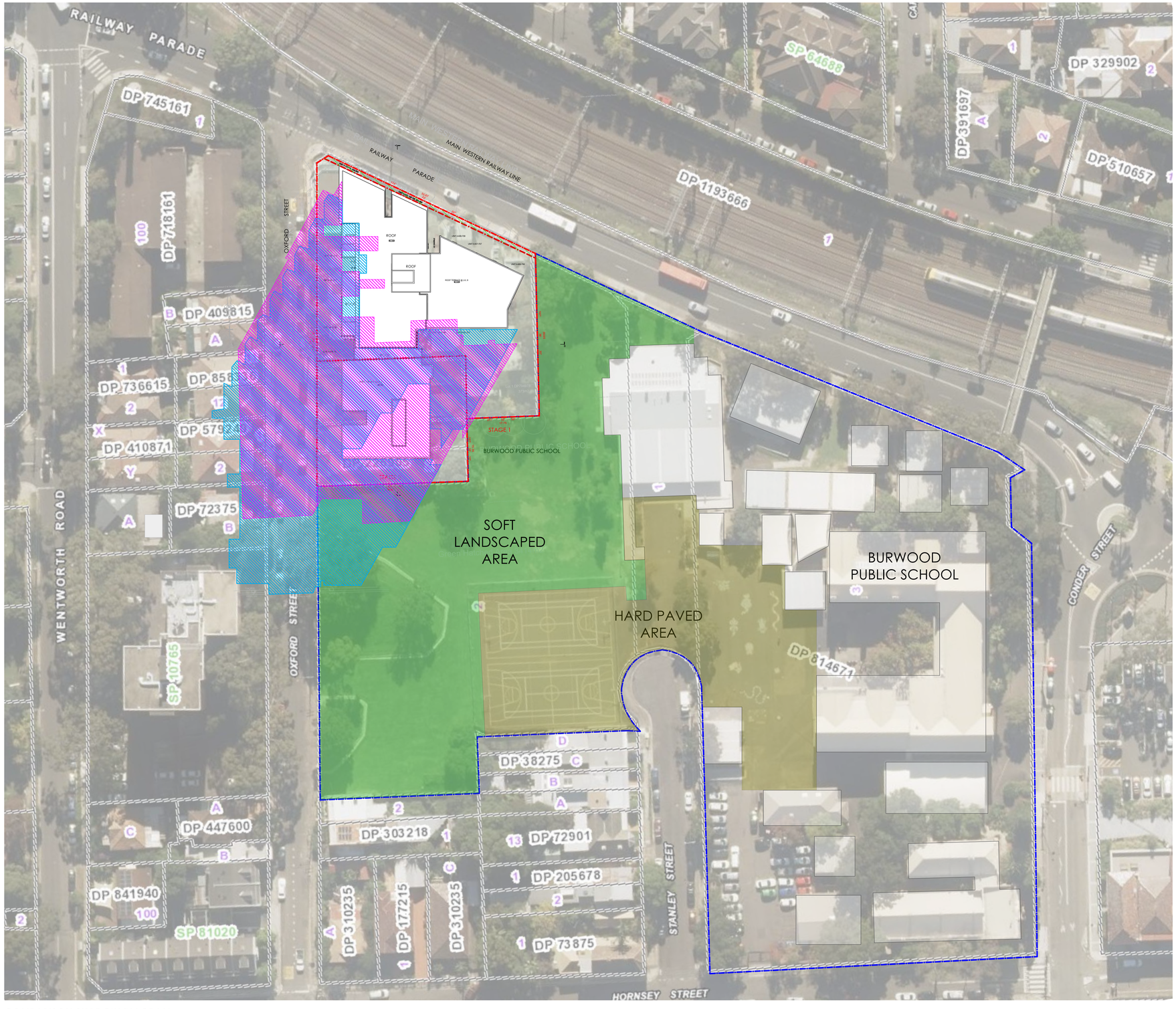
nominated architect: aleksandar jelicic registration no. 7167

Client	Address	Revision	Title	Project No.
X-SEALANT	68-72 RAILWAY PDE, 2 & 2A OXFORD ST & 4-10 OXFORD ST, BURWOOD	B AMENDED FOR DEFERRAL 6/7/18 A FOR COUNCIL MEETING 3/7/18	SHADOW DIAGRAMS COMPARISON 9AM	17001

Scale 1:500 @ A1 | Drawn By JL | Checked By AJ | Drawing No. DA17a | Revision



COMPARISON SHADOW DIAGRAM
10AM, 21ST JUNE - WINTER SOLSTICE

METHOD USED
SKETCHUP 2017
RENDERING CAD SOFTWARE

- Shadow cast by amended DA 24 04 2018
- Shadow cast by Approved DA 74-2015
- Burwood Public School Boundary
- Burwood Public School Soft Landscape open space
- Burwood Public School Hard Paved open space

TOTAL M^2 of Soft Landscape open space
Burwood Public School: 5369 m^2

TOTAL M^2 of Hard Paved Landscape open space
Burwood Public School: 3248 m^2

TOTAL Burwood Public School open space:
8567 m^2

10AM, 21ST JUNE - WINTER SOLSTICE

PERCENTAGE INCREASE FOR AMENDED DA FROM APPROVED DA 74-2015

Increase in % of impact on Soft Landscape open space : 5.8 %

Increase in % of impact on Hard Paved Landscape open space : 0 %

Increase in % of impact on Total open space : 3.6 %

Architect
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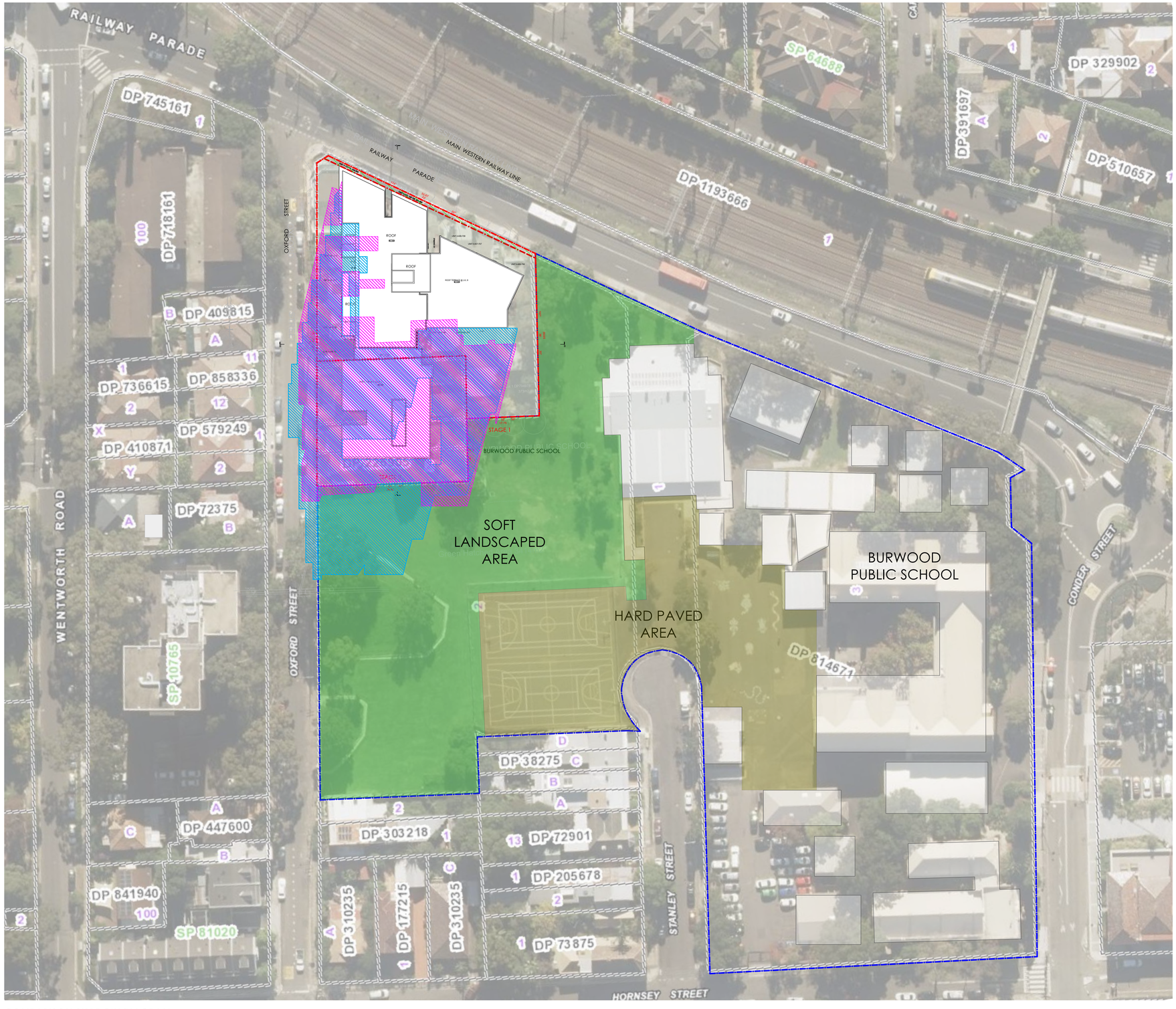
nominated architect: aleksandar jelicic registration no. 7167

Client: X-SEALANT
Address: 68-72 RAILWAY PDE, 2 & 2A OXFORD ST & 4-10 OXFORD ST, BURWOOD
Revision: B AMENDED FOR DEFERRAL 6/7/18; A FOR COUNCIL MEETING 3/7/18
Title: SHADOW DIAGRAMS COMPARISON 10AM
Scale: 1:500 @ A1
Drawn By: JL
Checked By: AJ
Project No.: 17001
Drawing No.: DA17b
Revision:



COMPARISON SHADOW DIAGRAM
11AM, 21ST JUNE - WINTER SOLSTICE

METHOD USED
SKETCHUP 2017
RENDERING CAD SOFTWARE

- Shadow cast by amended DA 24 04 2018
- Shadow cast by Approved DA 74-2015
- Burwood Public School Boundary
- Burwood Public School Soft Landscape open space
- Burwood Public School Hard Paved open space

TOTAL M^2 of Soft Landscape open space
Burwood Public School: 5369 m^2

TOTAL M^2 of Hard Paved Landscape open space
Burwood Public School: 3248 m^2

TOTAL Burwood Public School open space:
8567 m^2

11AM, 21ST JUNE - WINTER SOLSTICE

PERCENTAGE INCREASE FOR AMENDED DA FROM APPROVED DA 74-2015

Increase in % of impact on Soft Landscape open space :	8.8	%
Increase in % of impact on Hard Paved Landscape open space :	0	%
Increase in % of impact on Total open space :	5.5	%

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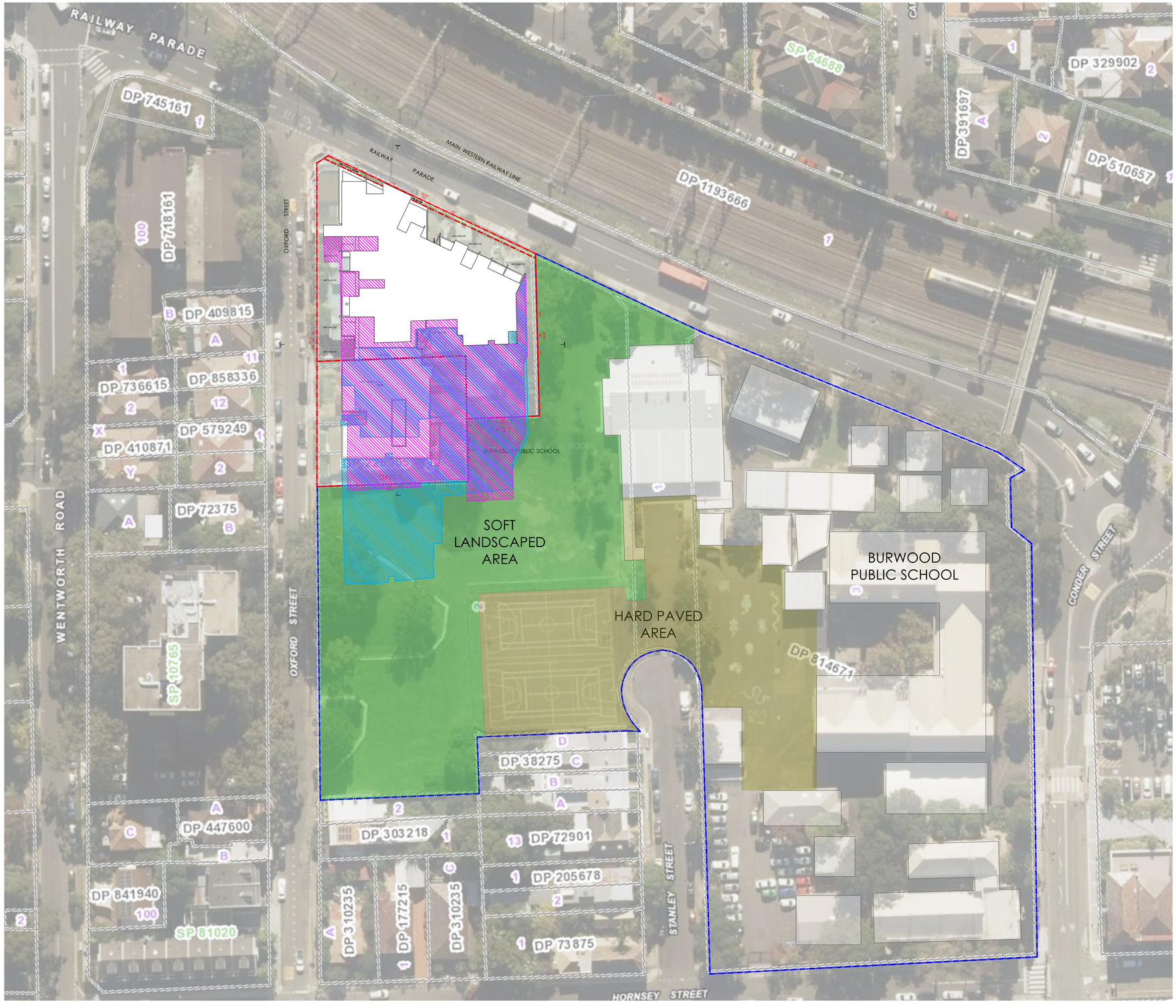
nominated architect: aleksandar jelicic registration no. 7167

Client: X-SEALANT
Address: 68-72 RAILWAY PDE, 2 & 2A OXFORD ST & 4-10 OXFORD ST, BURWOOD
Revision: B AMENDED FOR DEFERRAL 6/7/18; A FOR COUNCIL MEETING 3/7/18
Title: SHADOW DIAGRAMS COMPARISON 11AM
Scale: 1:500 @ A1
Drawn By: JL
Checked By: AJ
Project No. 17001
Drawing No. DA17c
Revision



COMPARISON SHADOW DIAGRAM
12PM, 21ST JUNE - WINTER SOLSTICE

METHOD USED
SKETCHUP 2017
RENDERING CAD SOFTWARE

- Shadow cast by amended DA 24 04 2018
- Shadow cast by Approved DA 74-2015
- Burwood Public School Boundary
- Burwood Public School Soft Landscape open space
- Burwood Public School Hard Paved open space

TOTAL M^2 of Soft Landscape open space
Burwood Public School: 5369 m^2

TOTAL M^2 of Hard Paved Landscape open space
Burwood Public School: 3248 m^2

TOTAL Burwood Public School open space:
8567 m^2

12PM, 21ST JUNE - WINTER SOLSTICE

PERCENTAGE INCREASE FOR AMENDED DA FROM APPROVED DA 74-2015

Increase in % of impact on Soft Landscape open space :	9.9	%
Increase in % of impact on Hard Paved Landscape open space :	0	%
Increase in % of impact on Total open space :	6.2	%

aleksandar design group

Architect
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nominated architect: aleksandar jelicic registration no. 7167

Client: X-SEALANT

Address: 68-72 RAILWAY PDE, 2 & 2A OXFORD ST & 4-10 OXFORD ST, BURWOOD

Revision

B	AMENDED FOR DEFERRAL	6/7/18
A	FOR COUNCIL MEETING	3/7/18

Title: SHADOW DIAGRAMS COMPARISON 12PM

Scale: 1:500 @ A1
Drawn By: JL
Checked By: AJ

Project No. 17001
Drawing No. DA17d
Revision

COMPARISON SHADOW DIAGRAM
1PM, 21ST JUNE - WINTER SOLSTICE

METHOD USED
SKETCHUP 2017
RENDERING CAD SOFTWARE

- Shadow cast by amended DA 24 04 2018
- Shadow cast by Approved DA 74-2015
- Burwood Public School Boundary
- Burwood Public School Soft Landscape open space
- Burwood Public School Hard Paved open space

TOTAL M^2 of Soft Landscape open space
Burwood Public School: 5369 m^2

TOTAL M^2 of Hard Paved Landscape open space
Burwood Public School: 3248 m^2

TOTAL Burwood Public School open space:
8567 m^2

1PM, 21ST JUNE - WINTER SOLSTICE

PERCENTAGE INCREASE FOR AMENDED DA FROM APPROVED DA 74-2015

Increase in % of impact on Soft Landscape open space :	11.8	%
Increase in % of impact on Hard Paved Landscape open space :	0	%
Increase in % of impact on Total open space :	7.4	%

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Client: X-SEALANT

Address: 68-72 RAILWAY PDE, 2 & 2A OXFORD ST & 4-10 OXFORD ST, BURWOOD

Revision		
B	AMENDED FOR DEFERRAL	6/7/18
A	FOR COUNCIL MEETING	3/7/18

Title: SHADOW DIAGRAMS COMPARISON 1PM

Scale: 1:500 @ A1
Drawn By: JL
Checked By: AJ

Project No. 17001
Drawing No. DA17e
Revision

COMPARISON SHADOW DIAGRAM
2PM, 21ST JUNE - WINTER SOLSTICE

METHOD USED
SKETCHUP 2017
RENDERING CAD SOFTWARE

- Shadow cast by amended DA 24 04 2018
- Shadow cast by Approved DA 74-2015
- Burwood Public School Boundary
- Burwood Public School Soft Landscape open space
- Burwood Public School Hard Paved open space

TOTAL M^2 of Soft Landscape open space
Burwood Public School: 5369 m^2

TOTAL M^2 of Hard Paved Landscape open space
Burwood Public School: 3248 m^2

TOTAL Burwood Public School open space:
8567 m^2

2PM, 21ST JUNE - WINTER SOLSTICE

PERCENTAGE INCREASE FOR AMENDED DA FROM APPROVED DA 74-2015

Increase in % of impact on Soft Landscape open space :	15.6	%
Increase in % of impact on Hard Paved Landscape open space :	0	%
Increase in % of impact on Total open space :	9.7	%

Architect
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Client: X-SEALANT

Address: 68-72 RAILWAY PDE, 2 & 2A OXFORD ST & 4-10 OXFORD ST, BURWOOD

Revision		
B	AMENDED FOR DEFERRAL	6/7/18
A	FOR COUNCIL MEETING	3/7/18

Title: SHADOW DIAGRAMS COMPARISON 2PM

Scale: 1:500 @ A1
Drawn By: JL
Checked By: AJ

Project No. 17001
Drawing No. DA17f
Revision

COMPARISON SHADOW DIAGRAM
3PM, 21ST JUNE - WINTER SOLSTICE

METHOD USED
SKETCHUP 2017
RENDERING CAD SOFTWARE

- Shadow cast by amended DA 24 04 2018
- Shadow cast by Approved DA 74-2015
- Burwood Public School Boundary
- Burwood Public School Soft Landscape open space
- Burwood Public School Hard Paved open space

TOTAL M^2 of Soft Landscape open space
Burwood Public School: 5369 m^2

TOTAL M^2 of Hard Paved Landscape open space
Burwood Public School: 3248 m^2

TOTAL Burwood Public School open space:
8567 m^2

3PM, 21ST JUNE - WINTER SOLSTICE

PERCENTAGE INCREASE FOR AMENDED DA FROM APPROVED DA 74-2015

Increase in % of impact on Soft Landscape open space :	18.6	%
Increase in % of impact on Hard Paved Landscape open space :	14.5	%
Increase in % of impact on Total open space :	17.0	%

Architect
aleksandar design group
Aleksandar Design Group
52 Kellett Street, Potts Point NSW 2011
aleksandardesigngroup.com.au
nominated architect: aleksandar jelicic registration no. 7167

Client: X-SEALANT
Address: 68-72 RAILWAY PDE, 2 & 2A OXFORD ST & 4-10 OXFORD ST, BURWOOD
Revision: B AMENDED FOR DEFERRAL 6/7/18; A FOR COUNCIL MEETING 3/7/18
Title: SHADOW DIAGRAMS COMPARISON 3PM
Scale: 1:500 @ A1
Drawn By: JL
Checked By: AJ
Project No.: 17001
Drawing No.: DA17g
Revision:

GEOSCAPES
LANDSCAPE ARCHITECTS

No. 68-72 Railway Parade,
2 & 2A Oxford St & 4-10 Oxford St, Burwood

ANALYSIS OF PROPOSED RESIDENTIAL FLAT BUILDING OVERSHADOWING BURWOOD PUBLIC SCHOOL RECREATIONAL TURF AREA

Prepared for:

X - SEALANT

Prepared by:

Ben Gluszkowski
Director
Registered Landscape Architect #5868

GEOSCAPES Landscape Architecture
Suite 215, 284 Victoria Avenue
Chatswood NSW 2067

Geoscapes Pty Ltd
ABN 84 620 205 781
ACN 620 205 781

Document Status

REV	Description	Initial	Date
A	For Submission	BG	09.07.2018

1.0 INTRODUCTION

1.1 Project Background and Intention of this Report

The proposed development is located at No. 68-72 Railway Parade, 2 & 2A Oxford St & 4-10 Oxford St, Burwood. It will comprise of a residential flat building with 124 units. The building has been designed by architects Aleksandar Design Group.

A concern has been raised to Burwood Council by the adjacent Burwood Public School regarding the potential overshadowing by the development of their recreation playing field. The school has stated that they believe that the grass within the field will be adversely affected by the shadow created by the new development. The school believe that this would be to such an extent that the existing grass will not be able to survive in certain locations.

Geoscapes Landscape Architects were asked to provide a report to investigate the potential effects of the shadowing and try to quantify how much if any of the grassed playing field would be affected.

2.0 GRASS SPECIES AND EXISTING CONDITION OF PLAYING FIELD

2.1 Species

From site investigations, it is believed that the vast majority of grass species within the school playing field is Kikuyu. This has been a commonly used species in school playing fields in the past due to its cost effectiveness, its ability to establish quickly and be generally hard-wearing. Research studies have shown that this species of grass requires approximately 6 hours of sunlight per day to survive. This has also been confirmed by leading turf supplier Lawn Solutions Australia.

2.2 Existing Condition of Playing Field

The current condition of the playing field is mixed. There are large areas of dirt where turf has been worn away through the presence of constant foot traffic by school children (see 5.0 appendix site and aerial photography). This would also lead to the conclusion that the underlaying soil has suffered compaction. There are also several existing trees present which create shade, however these will help to screen the southern facade of the new residential development.

3.0 ANALYSIS OF SHADOW DIAGRAMS AND SUNLIGHT HOURS MAPPING

3.1 Methodology

Using the computer software Trimble SketchUp, Aleksandar Design Group produced shadow diagrams and sunlight hours mapping of the playing fields for winter and summer months (refer to appendix section 5.3. It is important to note that these are a guide and an approximation of the amount of shade that will be produced by this development). These diagrams were then analysed by Geoscapes Landscape Architects

3.2 Findings

When looking at the worst case scenario, (the winter solstice sunlight hours) is apparent that there will be some impact on the playing field within the area adjacent to the proposed developments southern boundary. During summer months the playing field remains generally unaffected.

4.0 CONCLUSIONS

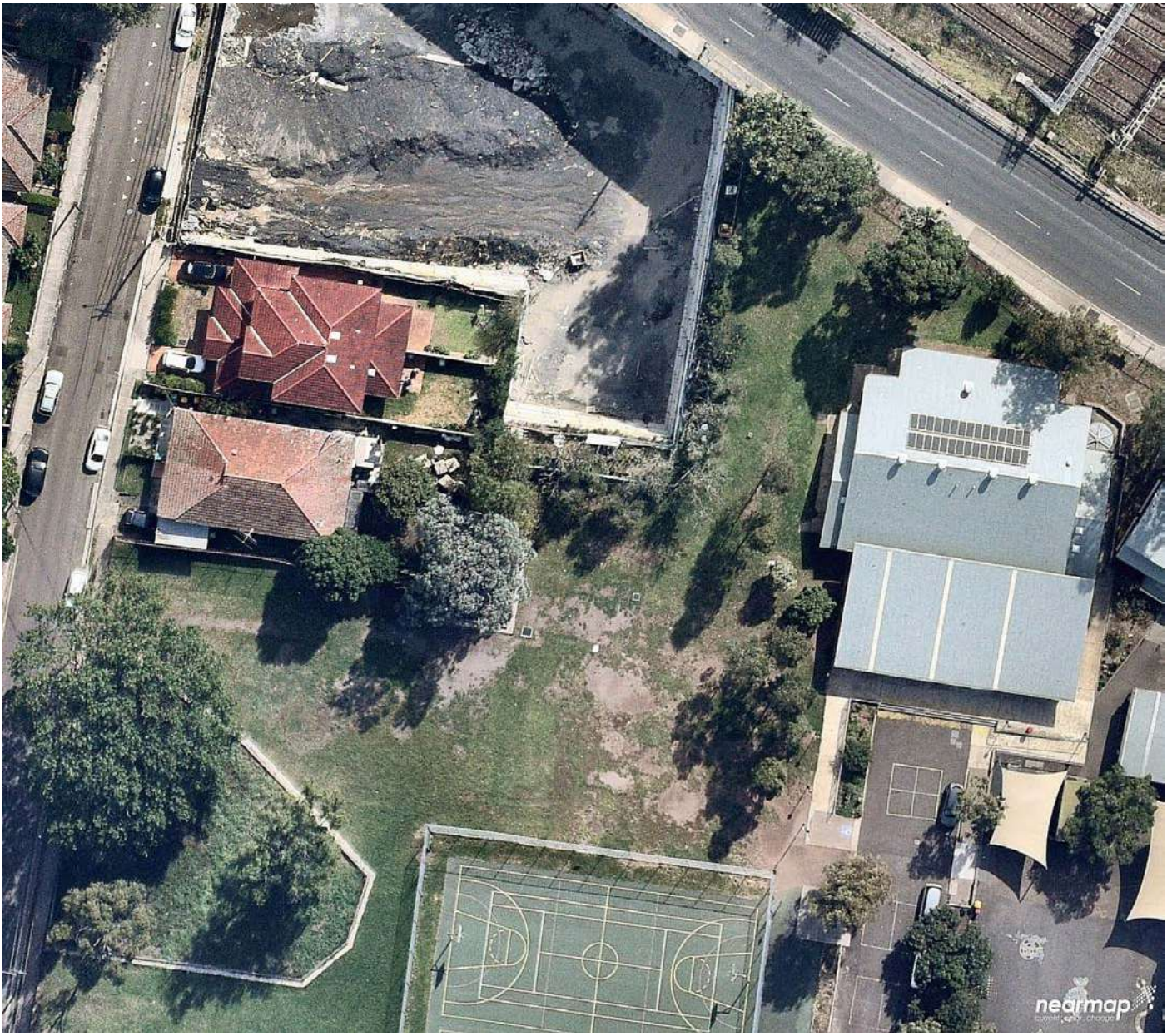
From site investigation and shadow analysis, the following conclusions can be drawn over the impact of the new development on the Burwood School playing field:

- The existing condition of the playing field grass is mixed with several areas of dirt exposed.
- During the winter months there will be some shadow impacts to a location immediately adjacent to the southern boundary of the proposed development. It is unlikely that any turf grown in this area will survive in the winter months.
- The majority of the playing field, even in winter, should continue to receive 6 or more sunlight hours per day that the current turf species requires to grow.
- The proposed building to the south which is immediately adjacent to the playing field does comply with Council DCP height controls, in being 2 storey or 25% under allowable height limit.

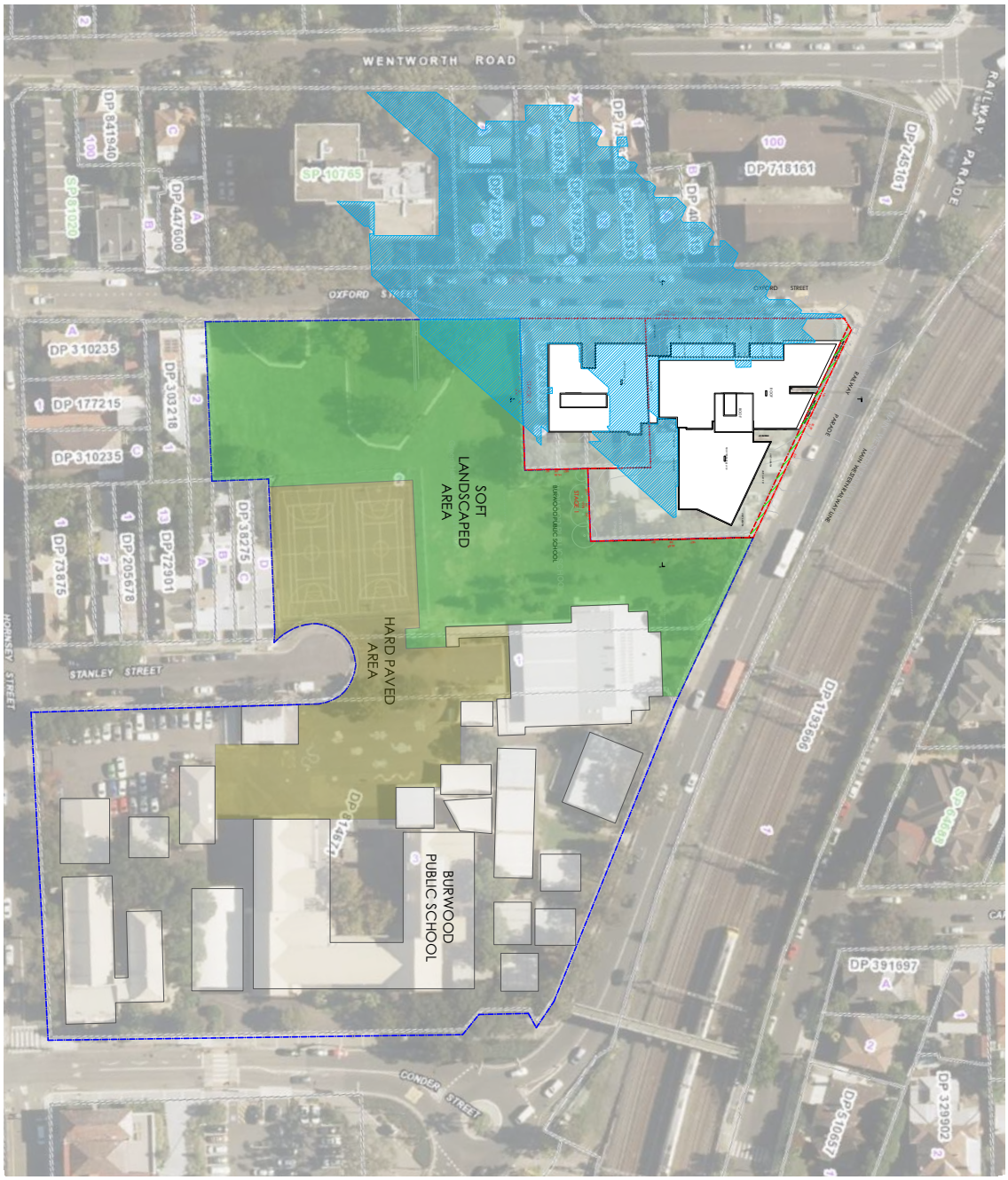
5.0 APPENDIX

5.1 Site Photos - Friday 6th July 2018

5.2 Nearmap Aerial Photography - Sunday 15th April 2018



5.3 Aleksandar Design Group - Shadow and Sunlight Hours Analysis



METHOD USED
SKETCHUP 2017
RENDERING CAD SOFTWARE

Shadow cast by amended DA
24.04.2018

Burwood Public School Boundary

Burwood Public School Soft Landscape open space

Burwood Public School Hard Paved open space

TOTAL M² of Soft landscape open space Burwood Public School: 5369 m²

TOTAL M² of Hard Paved Landscape open space Burwood Public School: 3248 m²

TOTAL Burwood Public School open space: 8567 m²

9AM, 21ST JUNE - WINTER SOLSTICE

M² of Soft Landscape open space shaded by the amended DA: 355 m²

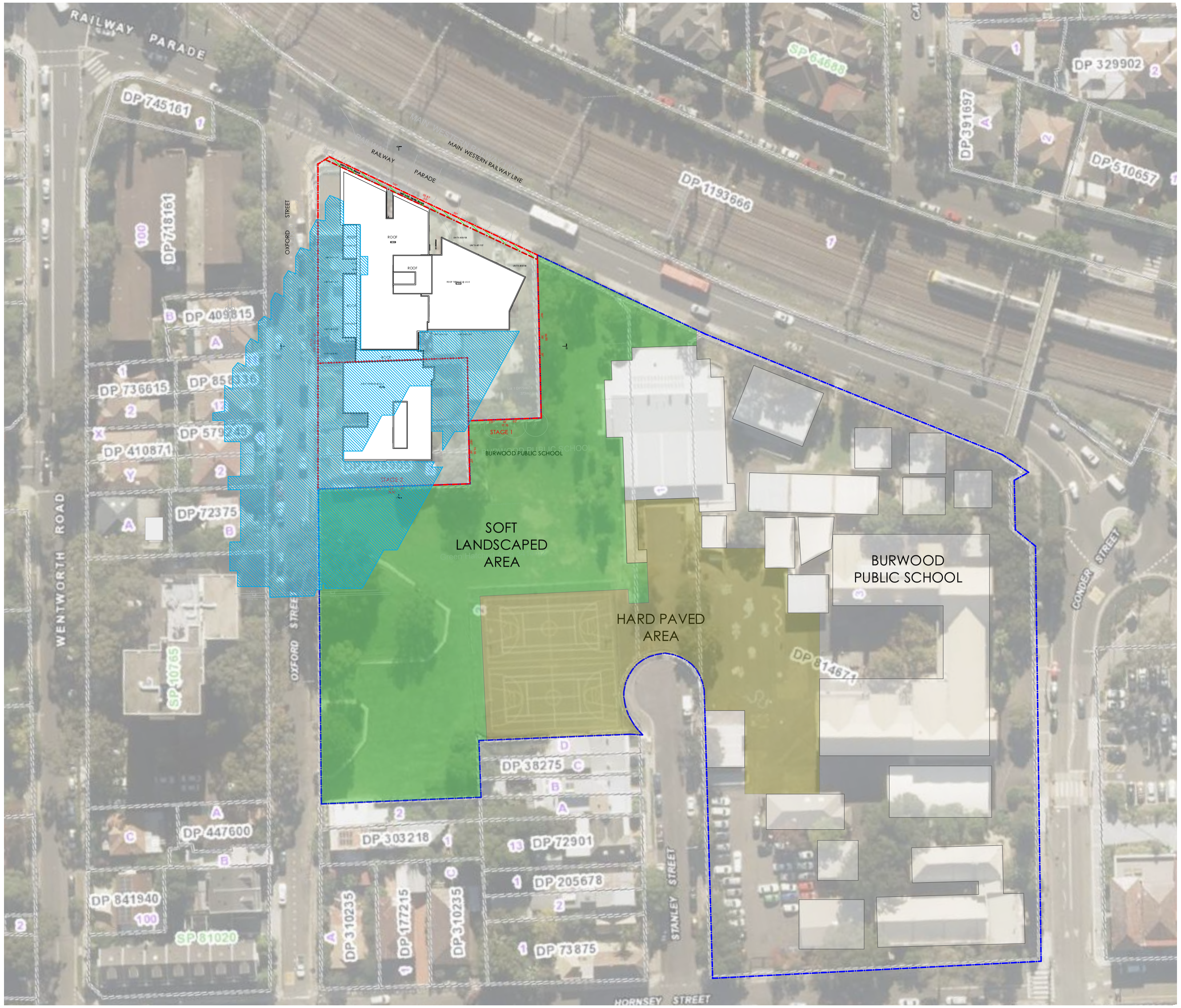
% of Soft Landscape open space shaded by amended DA: 6.6 %

M² of Hard Paved open space shaded by the amended DA: 0 m²

% of Hard Paved open space shaded by amended DA: 0 %

% of total open space shaded by amended DA: 4.1 %

Architect: Aleksandar Design Group
52 Gerlach Street Potts Point NSW 2011
Client: X-SEALANT
Address: 68-72 RAILWAY PDE. 2, 2A OXFORD ST. BURWOOD
Revision: A ORIGINAL ISSUE FOR DA 20/7/18
Title: SHADOW DIAGRAMS 9AM 21ST JUNE WINTER SOLSTICE
Scale: 1:500 @ A1
Checked by: AJ
Drawing No.: DA13a
Project No.: 17001
Revision: A



METHOD USED
SKETCHUP 2017
RENDERING CAD SOFTWARE

- Shadow cast by amended DA 24 04 2018
- Burwood Public School Boundary
- Burwood Public School Soft Landscape open space
- Burwood Public School Hard Paved open space

TOTAL M^2 of Soft Landscape open space Burwood Public School:	5369	m^2
TOTAL M^2 of Hard Paved Landscape open space Burwood Public School:	3248	m^2
TOTAL Burwood Public School open space:	8567	m^2

10AM, 21ST JUNE - WINTER SOLSTICE

M^2 of Soft Landscape open space shaded by the amended DA:	477	m^2
% of Soft Landscape open space shaded by amended DA:	8.9	%
M^2 of Hard Paved open space shaded by the amended DA:	0	m^2
% of Hard Paved open space shaded by amended DA:	0	%
% of total open space shaded by amended DA:	5.5	%

Architect
Aleksandar Design Group
52 Kellett Street, Potts Point NSW 2011
aleksandardesigngroup.com.au
nominated architect: aleksandar jelicic registration no. 7167

Client: X-SEALANT

Address: 68-72 RAILWAY PDE, 2 & 2A OXFORD ST & 4-10 OXFORD ST, BURWOOD

Revision		
D	AMENDED FOR DEFERRAL	6/7/18
C	FOR 3/7/18 COUNCIL MEETING	29/6/18
B	AMENDED FOR COUNCIL	24/4/18
A	FOR DA SUBMISSION	19/9/17

Title: SHADOW DIAGRAMS 10AM 21ST JUNE WINTER SOLSTICE

Scale: 1:500 @ A1
Drawn By: JL
Checked By: AJ

Project No. 17001
Drawing No. Revision DA13b

METHOD USED
SKETCHUP 2017
RENDERING CAD SOFTWARE

- Shadow cast by amended DA 24 04 2018
- Burwood Public School Boundary
- Burwood Public School Soft Landscape open space
- Burwood Public School Hard Paved open space

TOTAL M² of Soft Landscape open space Burwood Public School:	5369	m²
TOTAL M² of Hard Paved Landscape open space Burwood Public School:	3248	m²
TOTAL Burwood Public School open space:	8567	m²

11AM, 21ST JUNE - WINTER SOLSTICE

M² of Soft Landscape open space shaded by the amended DA:	624	m²
% of Soft Landscape open space shaded by amended DA:	11.6	%
M² of Hard Paved open space shaded by the amended DA:	0	m²
% of Hard Paved open space shaded by amended DA:	0	%
% of total open space shaded by amended DA:	7.2	%

Architect
aleksandar design group
Aleksandar Design Group
52 Kellett Street, Potts Point NSW 2011
aleksandardesigngroup.com.au
nominated architect: aleksandar jelicic registration no. 7167

Client: X-SEALANT

Address: 68-72 RAILWAY PDE, 2 & 2A OXFORD ST & 4-10 OXFORD ST, BURWOOD

Revision		
D	AMENDED FOR DEFERRAL	6/7/18
C	FOR 3/7/18 COUNCIL MEETING	29/6/18
B	AMENDED FOR COUNCIL	24/4/18
A	FOR DA SUBMISSION	19/9/17

Title: SHADOW DIAGRAMS 11AM 21ST JUNE WINTER SOLSTICE

Scale 1:500 @ A1
Drawn By JL
Checked By AJ

Project No. 17001
Drawing No. Revision DA13c

Architect
Aleksandar Design Group
52 Kellett Street, Potts Point NSW 2011

Client: X-SEALANT

Address: 68-72 RAILWAY PDE, 2 & 2A OXFORD ST & 4-10 OXFORD ST, BURWOOD

Revision		
D	AMENDED FOR DEFERRAL	6/7/18
C	FOR 3/7/18 COUNCIL MEETING	29/6/18
B	AMENDED FOR COUNCIL	24/4/18
A	FOR DA SUBMISSION	19/9/17

Title: SHADOW DIAGRAMS 12PM 21ST JUNE WINTER SOLSTICE

Scale: 1:500 @ A1
Drawn By: JL
Checked By: AJ
Project No. 17001
Drawing No. Revision: DA13d

METHOD USED
SKETCHUP 2017
RENDERING CAD SOFTWARE

- Shadow cast by amended DA 24 04 2018
- Burwood Public School Boundary
- Burwood Public School Soft Landscape open space
- Burwood Public School Hard Paved open space

TOTAL M^2 of Soft Landscape open space Burwood Public School:	5369	m^2
TOTAL M^2 of Hard Paved Landscape open space Burwood Public School:	3248	m^2
TOTAL Burwood Public School open space:	8567	m^2

12PM, 21ST JUNE - WINTER SOLSTICE

M^2 of Soft Landscape open space shaded by the amended DA:	799	m^2
% of Soft Landscape open space shaded by amended DA:	14.9	%
M^2 of Hard Paved open space shaded by the amended DA:	0	m^2
% of Hard Paved open space shaded by amended DA:	0	%
% of total open space shaded by amended DA:	9.3	%

METHOD USED
SKETCHUP 2017
RENDERING CAD SOFTWARE

- Shadow cast by amended DA 24 04 2018
- Burwood Public School Boundary
- Burwood Public School Soft Landscape open space
- Burwood Public School Hard Paved open space

TOTAL M^2 of Soft Landscape open space Burwood Public School:	5369	m^2
TOTAL M^2 of Hard Paved Landscape open space Burwood Public School:	3248	m^2
TOTAL Burwood Public School open space:	8567	m^2

1PM, 21ST JUNE - WINTER SOLSTICE

M^2 of Soft Landscape open space shaded by the amended DA:	1208	m^2
% of Soft Landscape open space shaded by amended DA:	22.5	%
M^2 of Hard Paved open space shaded by the amended DA:	0	m^2
% of Hard Paved open space shaded by amended DA:	0	%
% of total open space shaded by amended DA:	14	%

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Suite 215, 284 Victoria Avenue • Chatswood • NSW • 2067
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Architect
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52 Kellett Street, Potts Point NSW 2011
aleksandardesigngroup.com.au
nominated architect : aleksandar jokic registration no. 7167

Client: X-SEALANT

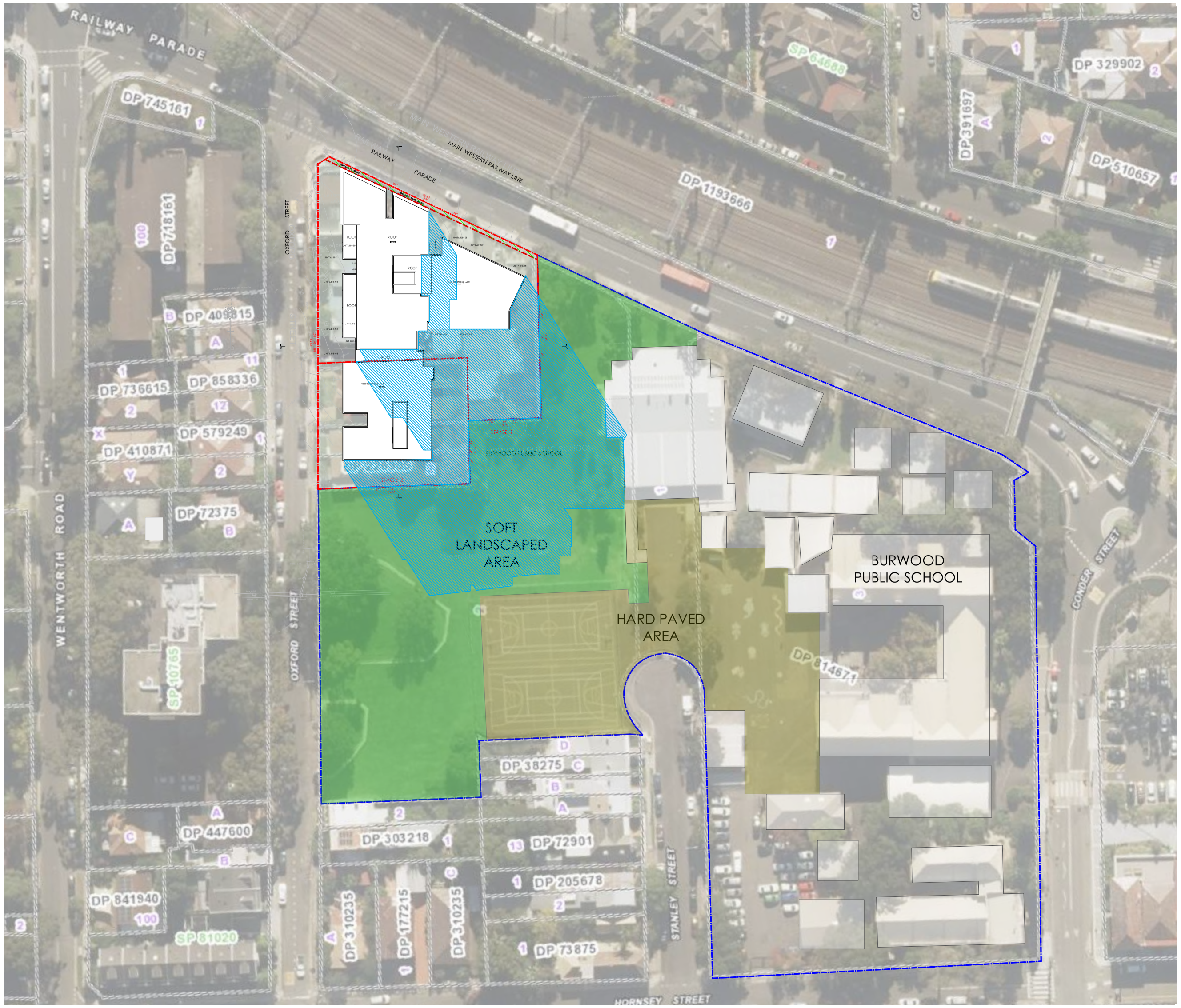
Address: 68-72 RAILWAY PDE, 2 & 2A OXFORD ST & 4-10 OXFORD ST, BURWOOD

Revision		
D	AMENDED FOR DEFERRAL	6/7/18
C	FOR S79 RECONCIL MEETING	29/6/18
B	AMENDED FOR COUNCIL	26/6/18
A	FOR DA SUBMISSION	19/9/17

Title: SHADOW DIAGRAMS 1PM 21ST JUNE WINTER SOLSTICE

Scale: 1:500 @ A1
Drawn By: JL
Checked By: AJ

Project No: 17001
Drawing No.: DA13e
Revision:



METHOD USED
SKETCHUP 2017
RENDERING CAD SOFTWARE

- Shadow cast by amended DA 24 04 2018
- Burwood Public School Boundary
- Burwood Public School Soft Landscape open space
- Burwood Public School Hard Paved open space

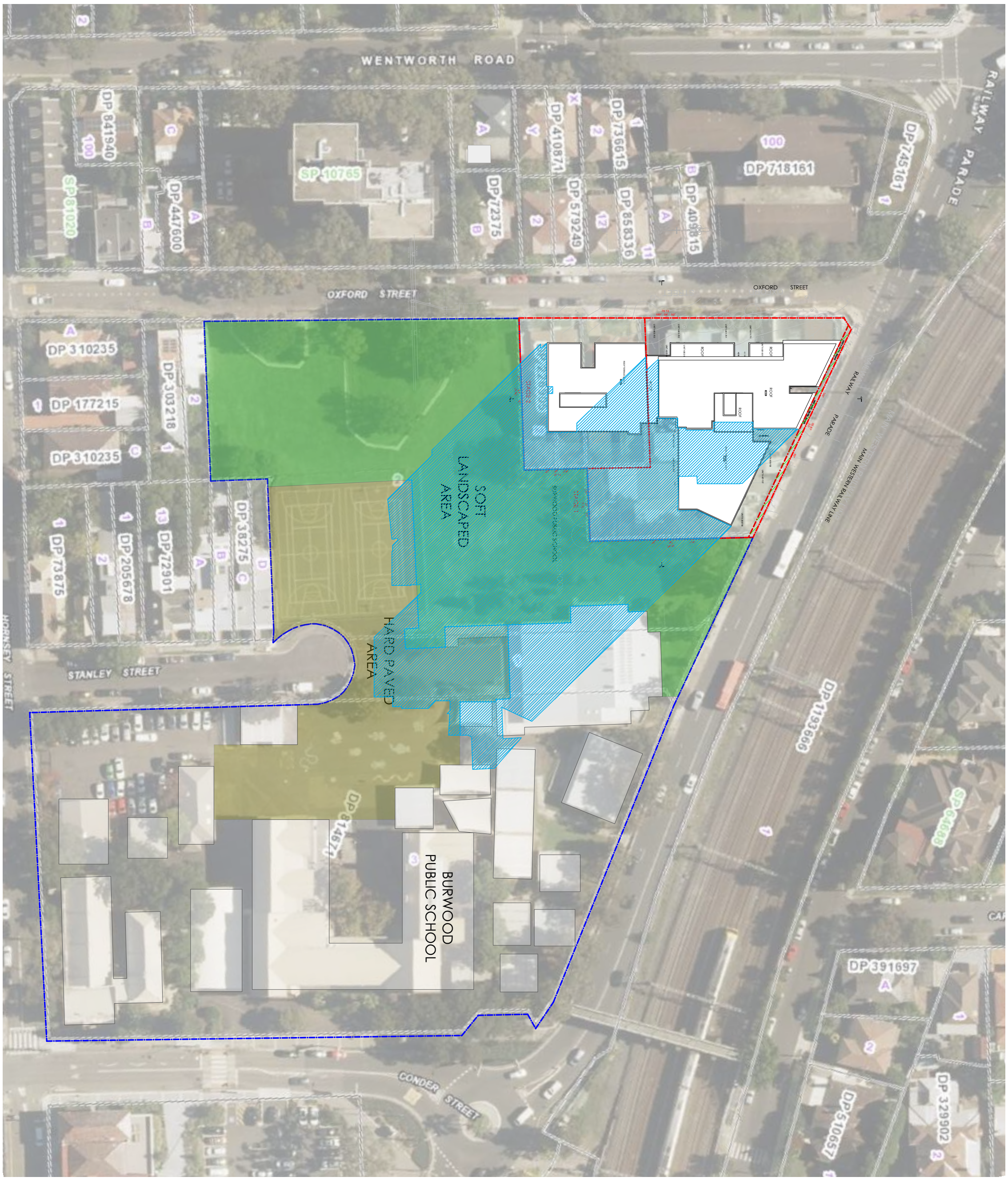
TOTAL M² of Soft Landscape open space Burwood Public School:	5369	m²
TOTAL M² of Hard Paved Landscape open space Burwood Public School:	3248	m²
TOTAL Burwood Public School open space:	8567	m²

2PM, 21ST JUNE - WINTER SOLSTICE

M² of Soft Landscape open space shaded by the amended DA:	1977	m²
% of Soft Landscape open space shaded by amended DA:	36.8	%
M² of Hard Paved open space shaded by the amended DA:	0	m²
% of Hard Paved open space shaded by amended DA:	0	%
% of total open space shaded by amended DA:	22.9	%

Architect	Client	Address	Revision	Title		Project No.
aleksandar design group Aleksandar Design Group 52 Kellett Street, Potts Point NSW 2011 aleksandardesigngroup.com.au nominated architect: aleksandar jelicic registration no. 7167 © copyright aleksandar design group pty ltd	X-SEALANT	68-72 RAILWAY PDE, 2 & 2A OXFORD ST & 4-10 OXFORD ST, BURWOOD	D AMENDED FOR DEFERRAL 6/7/18 C FOR 3/7/18 COUNCIL MEETING 29/6/18 B AMENDED FOR COUNCIL 24/4/18 A FOR DA SUBMISSION 19/9/17	SHADOW DIAGRAMS 2PM 21ST JUNE WINTER SOLSTICE	Scale 1:500 @ A1 Drawn By JL Checked By AJ	17001 Drawing No. Revision DA13f

This diagram is prepared for the information of the 'client' by Aleksandar Design Group Pty Ltd. No one other than the 'client' may rely on it and Aleksandar Design Group Pty Ltd does no accept responsibility to any other user. Potential areas of yield are approximate only and subject to site survey, detailed design, Apartment Design Guide compliance, overshadowing, consultant input and council approval.



METHOD USED
SKETCHUP 2017
RENDERING CAD SOFTWARE

- Shadow cast by amended DA 24 04 2018
- Burwood Public School Boundary
- Burwood Public School Soft Landscape open space
- Burwood Public School Hard Paved open space

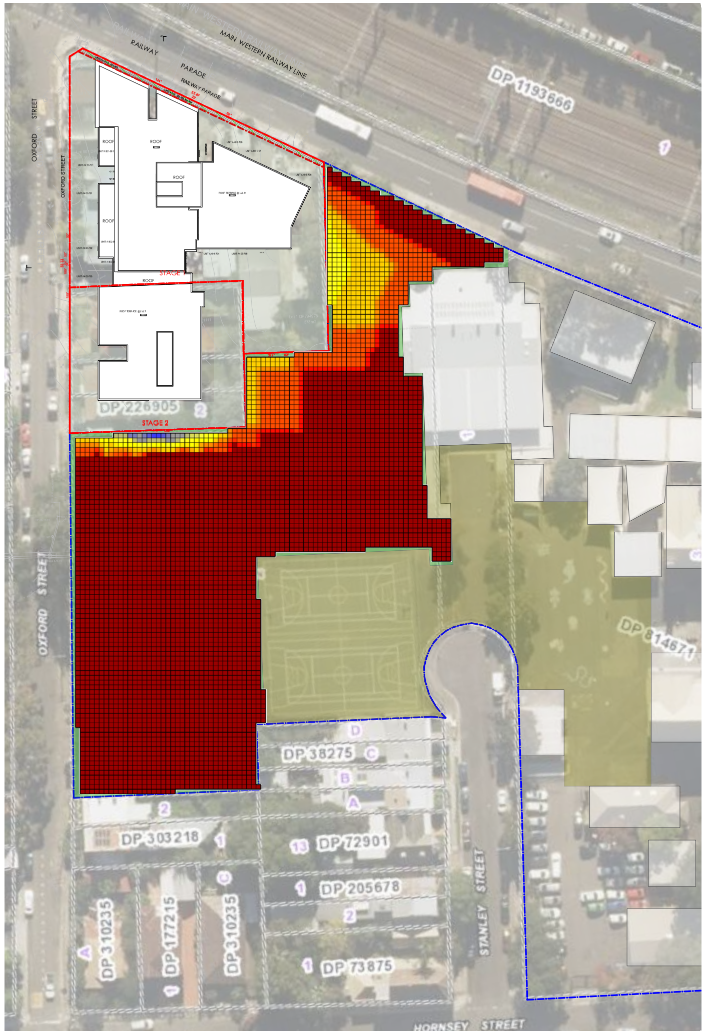
TOTAL M² of Soft Landscape open space Burwood Public School: 5369 m²
TOTAL M² of Hard Paved Landscape open space Burwood Public School: 3248 m²
TOTAL Burwood Public School open space: 8567 m²

3PM, 21ST JUNE - WINTER SOLSTICE

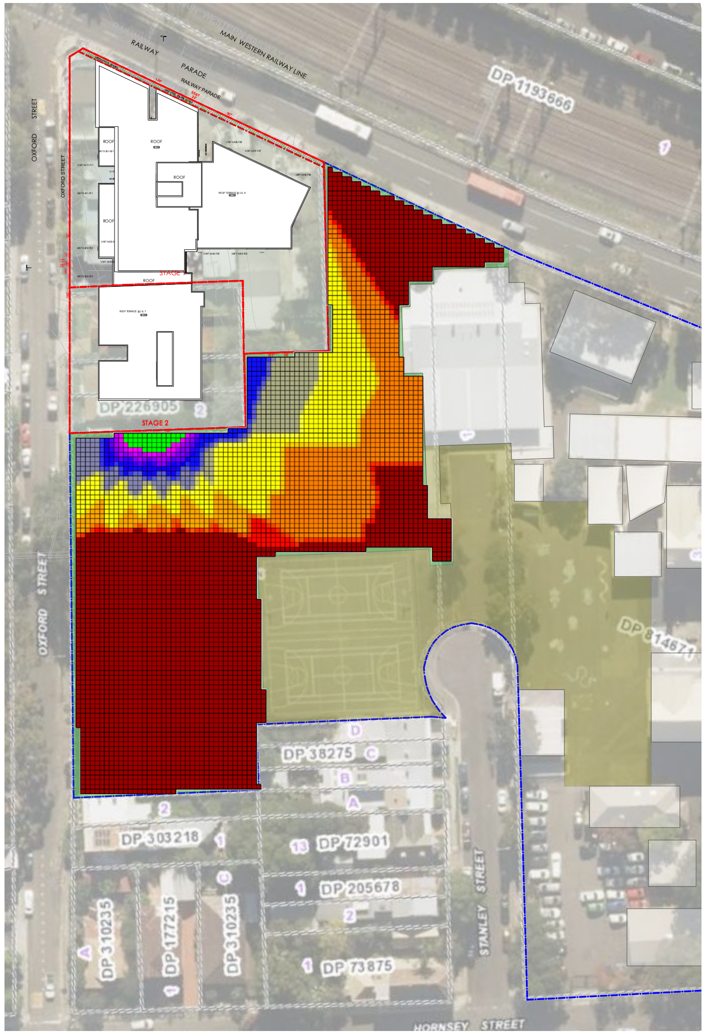
M² of Soft Landscape open space shaded by the amended DA: 2346 m²
% of Soft Landscape open space shaded by amended DA: 43.7 %
M² of Hard Paved open space shaded by the amended DA: 742 m²
% of Hard Paved open space shaded by amended DA: 22.8 %
% of total open space shaded by amended DA: 35.8 %

Architect
Aleksandar Design Group
52 Kellett Street, Potts Point NSW 2011

Client: X-SEALANT
Address: 68-72 RAILWAY PDE, 2 & 2A OXFORD ST & 4-10 OXFORD ST, BURWOOD
Title: SHADOW DIAGRAMS 3PM 21ST JUNE WINTER SOLSTICE
Project No. 17001
Drawing No. DA13g



DATE ASSESSED: 21ST MARCH, MID AUTUMN
TIME ASSESSED: 07:00 TO 17:00 (10 HOURS)



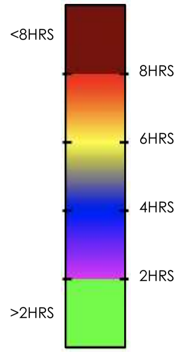
DATE ASSESSED: 21ST JUNE, MID WINTER
TIME ASSESSED: 07:00 TO 17:00 (10 HOURS)

METHOD USED:
SKETCHUP 2017 + EXTENSION SUNHOURS

AREA ANALYSED LIMITED TO SOFT LANDSCAPE OPEN SPACE OF ADJACENT SITE BURWOOD PUBLIC SCHOOL

GRID APPROXIMATELY 1m x 1m

AMOUNT OF SOLAR ACCESS BY COLOUR RANGE



Site Boundary

Burwood Public School

Architect	Client	Address	Revision	Title
Aleksandar Design Group 52 Kellett Street, Potts Point NSW 2011 aleksandardesigngroup.com.au nominated architect: aleksandar jelcic registration no. 7167 © copyright aleksandar design group pty ltd	X-SEALANT	68-72 RAILWAY PDE, 2 & 2A OXFORD ST & 4-10 OXFORD ST, BURWOOD	D AMENDED FOR DEFERRAL 6/7/18 C FOR 3/7/18 COUNCIL MEETING 29/6/18 B AMENDED FOR COUNCIL 24/4/18 A FOR DA SUBMISSION 19/9/17	OVERSHADOWING ANALYSIS OF SOFT LANDSCAPE OPEN SPACE

Scale 1:500 @ A1 Drawn By JL Checked By AJ Drawing No. DA 17

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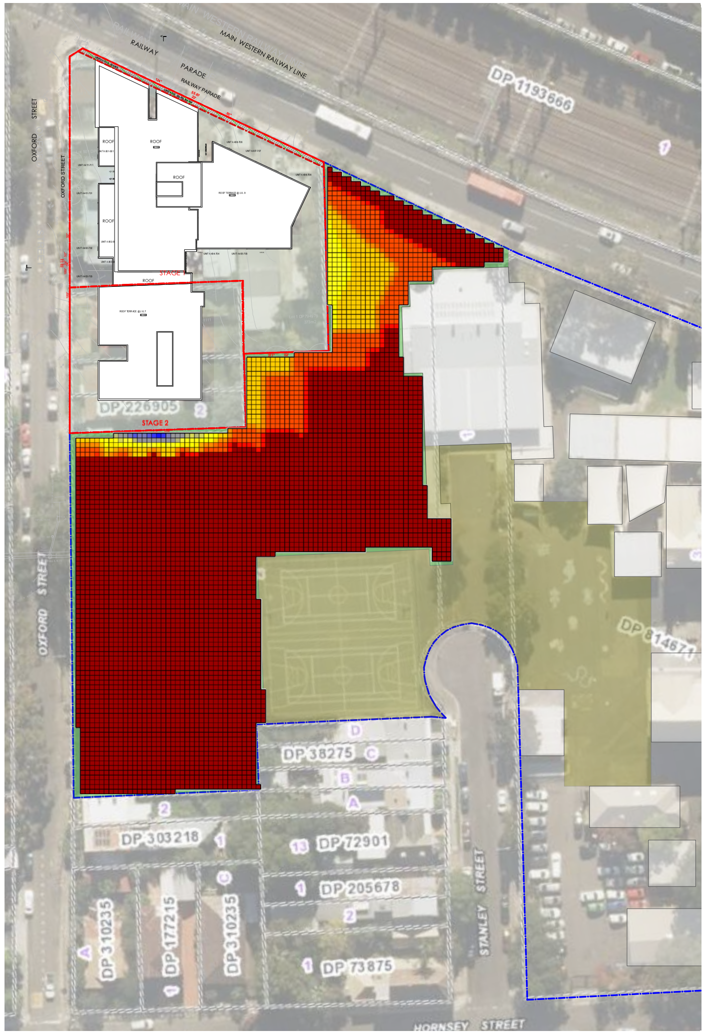
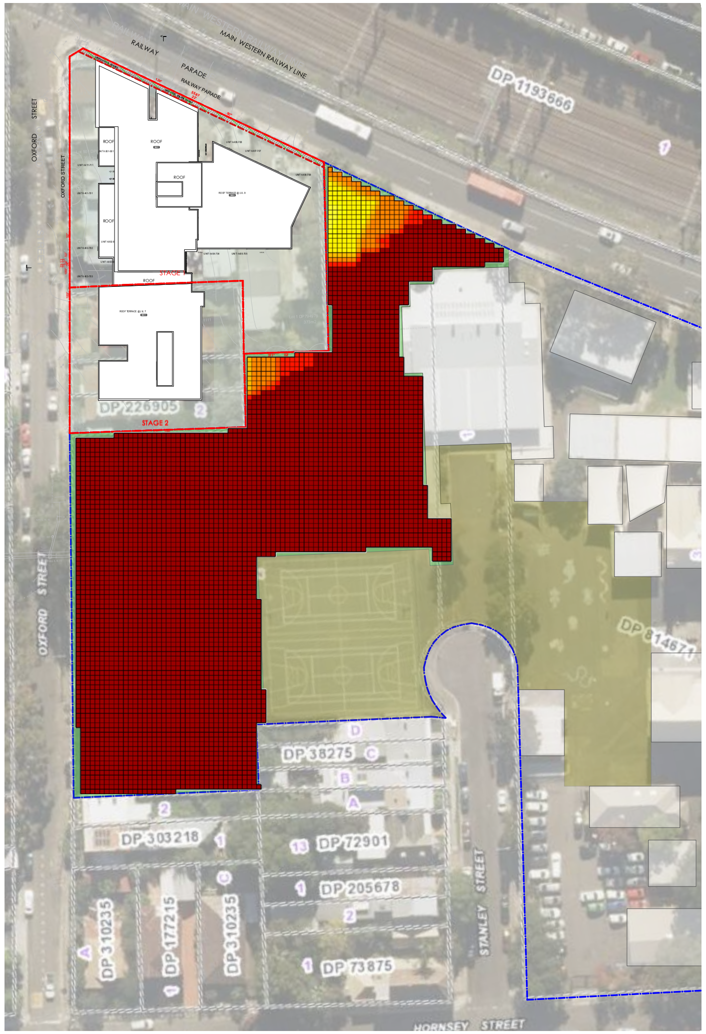
Suite 215, 284 Victoria Avenue • Chatswood • NSW • 2067
P. 02 9411 1485 M. 0450690638



DATE ASSESSED: 23RD SEPTEMBER, MID SPRING
TIME ASSESSED: 07:00 TO 17:00 (10 HOURS)



DATE ASSESSED: 22ND DECEMBER, MID SUMMER
TIME ASSESSED: 07:00 TO 17:00 (10 HOURS)

METHOD USED:
SKETCHUP 2017 + EXTENSION SUNHOURS

AREA ANALYSED LIMITED TO SOFT LANDSCAPE OPEN SPACE OF ADJACENT SITE BURWOOD PUBLIC SCHOOL

GRID APPROXIMATELY 1m x 1m

AMOUNT OF SOLAR ACCESS BY COLOUR RANGE

<8HRS
8HRS
6HRS
4HRS
2HRS
>2HRS

Site Boundary
Burwood Public School

Architect
Aleksandar Design Group
52 Kellett Street, Potts Point NSW 2011
aleksandardesigngroup.com.au
nominated architect: aleksandar jelicic registration no. 7167

Client: X-SEALANT

Address: 68-72 RAILWAY PDE, 2 & 2A OXFORD ST & 4-10 OXFORD ST, BURWOOD

Revision		
D	AMENDED FOR DEFERRAL	6/7/18
C	FOR 3/7/18 COUNCIL MEETING	29/6/18
B	AMENDED FOR COUNCIL	24/4/18
A	FOR DA SUBMISSION	19/9/17

Title: OVERSHADOWING ANALYSIS OF SOFT LANDSCAPE OPEN SPACE

Scale 1:500 @ A1
Drawn By JL
Checked By AJ
Drawing No. DA
17