



**NPDC**

1 to 3 Dawson Street

BOON Shade Study Peer Review

DATE: 27/07/2021

Revision 1 Report Issued to NPDC

## PROJECT AIMS

This project involved reviewing the accuracy of supplied BOON shade studies of 1-3 Dawson Street following proposed extensions.

## SCOPE OF WORK

The specific scope of work as determined by NPDC is:

- Audit drawing software (Revit) settings for time (including daylight savings), location and cast shadow plane
- Audit building model base floor level set out to survey
- Audit random pdf drawings against model

## INFORMATION SUPPLIED

BOON supplied:

IFC model of site and architectural model received 9/07/2021

Drawings 'Issued for Resource Consent' received 19 July 2021

SK0.01 rev 2

SK2.01 rev 2

SK2.02 rev 2

SK2.03 rev 1

SK2.04 rev 1

SK3.01.1 rev 2

SK3.02.1 rev 2

SK3.03.1 rev 2

SK3.04.1 rev 2

SK3.05 rev 1

SK3.10

SK3.11

SK3.12

SK3.13

SK4.00 rev 1

SK4.01 rev 2

SK4.02 rev 2

SK4.03 rev 2

SK4.04 rev 2

SK4.05 rev 2

SK4.06 rev 2

SK4.07 rev 2

SK4.08 rev 2

SK4.09 rev 2

SK4.10 rev 2

SK4.11 rev 2

SK4.12 rev 2

SK4.13 rev 2

SK4.14 rev 2

SK4.15 rev 2

SK4.16 rev 2

SK4.17 rev 2

SK4.18 rev 2

SK4.19 rev 2

SK4.20 rev 2

SK4.21 rev 2

SK4.22 rev 2

SK4.23 rev 2  
SK4.24 rev 2  
SK5.01 rev 2  
SK5.02 rev 2  
SK5.03 rev 2  
SK5.04 rev 2  
SK5.05 rev 2  
SK5.06 rev 2  
SK5.10 rev 1

#### AUDIT

The audit process identified the following issues:

- Discrepancy in BOON daylight savings time settings resulting in summer images being represented off by 1 hour
- IFC site model supplied is coarse and obstructed by earlier site modelling meaning shadowing did not match the BOON images supplied
- BOON shadowing has been set to ground floor level not topo, resulting in changes in cast shadow. Surfaces below ground floor level (typically seaward side) are worse affected than represented. Surfaces above ground floor level (typically west, east and south) are less affected than represented
- Discrepancy in modelling caused by vegetation

Following discussion with parties the BTW survey revit file was made available.

Samples of shadowing based on the BTW survey revit file and BOON IFC architectural file matched the BOON pdf drawings 'issued for resource consent'.

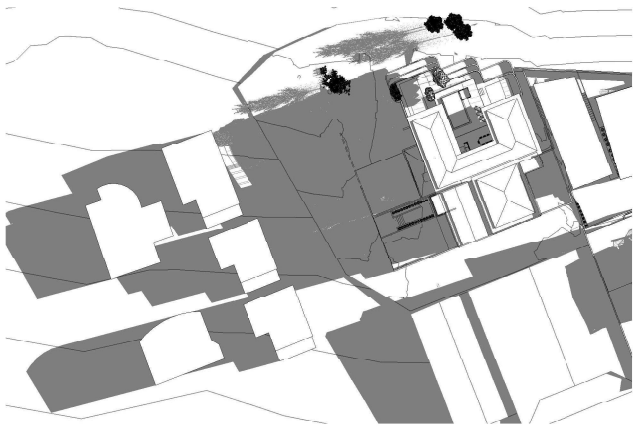
#### CONCLUSION

Overall, with daylight savings time adjusted the BOON modelling and documentation provides an accurate representation of the proposed additions and shading effects at ground floor level.

APPENDIX

Sample comparisons

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APA - 21 March 9am (GMT +13)



APA - 21 March 10am (GMT +13)



BOON - 21 March 8am (GMT +12)



BOON - 21 March 9am (GMT +12)

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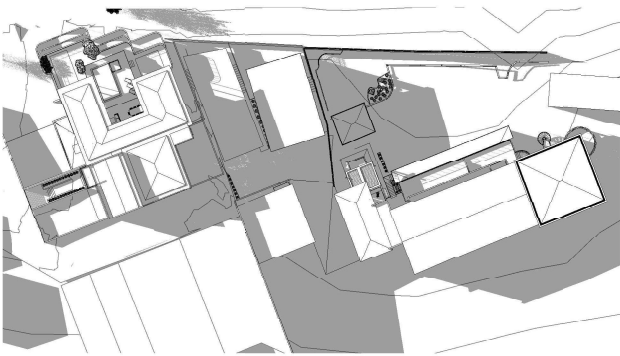
1 - 3 DAWSON STREET  
Enter address here

REV DATE DESCRIPTION

DRAWING  
SHADOW STUDY - 21 MARCH AM

PROJECT PHASE  
FOR INFORMATION  
DRAWING ISSUE PROJECT NO.  
3330.01 DRAWING NO.  
A1-01 REVISION

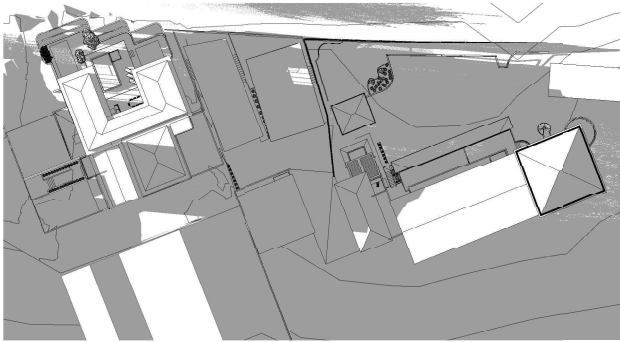
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**BOON - 21 March 5pm (GMT +12)**



**APA - 21 March 7pm (GMT +13)**



**BOON - 21 March 6pm (GMT +12)**

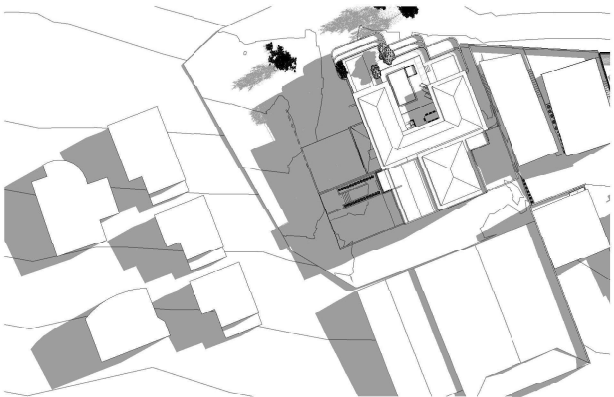
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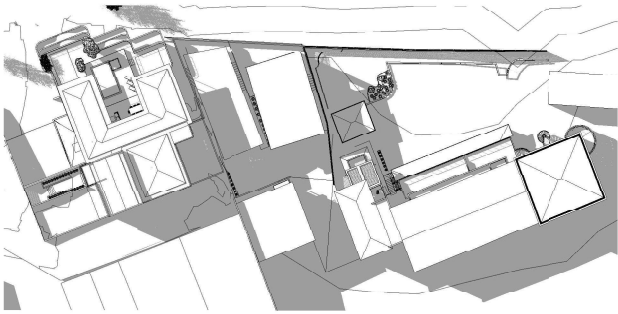
REV	DATE	DESCRIPTION

DRAWING  
SHADOW STUDY - 21 SEPTEMBER AM

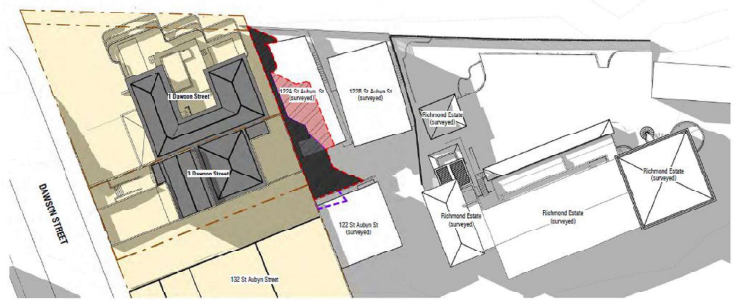
PROJECT PHASE	DRAWING NO.	DRAWING I.D.	REVISION
FOR INFORMATION	3330.01	A1-03	



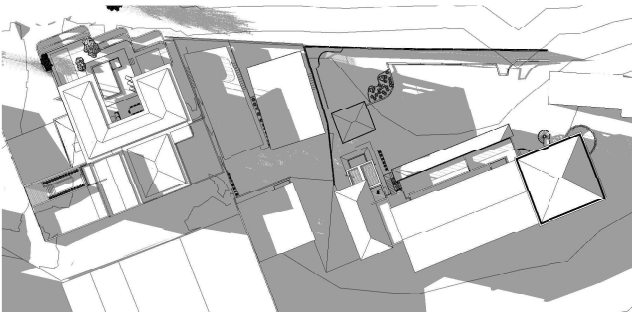
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