

SHADOW ANALYSIS

424 Churchill Avenue North
Residential Apartment Building
OPA No.: 2119

Open Plan Architects Inc.

Prepared for:

Churchill Properties Inc.
5-145 Select Avenue,
Toronto, ON, M1V 5M8
416-292-9920

Prepared by:

Kristopher Benes,
Open Plan Architects Inc.
2305 Hillary Ave.,
Ottawa, ON K1H 7J2

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1. Introduction

The following, updated analysis, studies the shading impacts of the proposed 8-storey apartment building development to be located at 424 Churchill Avenue North, Ottawa, ON. This document has been prepared by Open Plan Architects Inc. as a submission requirement in support of the site plan control, zoning by-law amendment and official plan amendment applications.

A reduction in the side yard setbacks is being sought together with a modest increase in building height from 24 m to 27.5 m. Refer to Appendix B, for diagrams illustrating both the as-of-right and the proposed building heights, and massing, that were used for this study. The site coordinate inputs are: 45.4215 N latitude and 75.6972 W longitude.

2. Shadow Impacts

Public Spaces:

The only public place receiving any impact during the September test time is Byron Linear Tramway Park. On this date, between the period of approximately 14:30 and 16:00 there is a minimal impact to the westernmost tip of this park, after which, the existing as-of-right shadows begin to takeover and eclipse the new shadows.

It can be seen in *Figure 13* that there are no new net shadows falling on the area at 18:00. The park is approximately 1.9 km in length, therefore, the approximately 15 m impact zone is a negligible value in proportion to the overall (< 50% average impact).

Furthermore, there is no impact to the roof area of the proposed development southeast of the subject site during this test date.

Communal Amenity Areas:

The Churchill Alternative School is impacted on only the June test date, after 18:00, and therefore, automatically complies with the required criteria of maintaining light between 11:00 and 15:00.

The Churchill Seniors' Recreational Centre only receives shadows before 10:00 during the December test date, and therefore, automatically complies with the required criteria of maintaining light between 11:00 and 15:00.

Traditional and Arterial Mainstreets:

Richmond Road falls within the study area, however, no shadow impacts are observed with the proposed building during the September test date.


Mitigation Measures and Conclusion

In accordance with the criteria set out in the City's *Terms of Reference – Shadow Analysis*, no mitigation measures are required based on the modest height increase being proposed. The proposed development is, therefore, considered appropriate in terms of its sun shadow impact on the surrounding urban context.

Approvals and Signature

Open Plan Architects Inc.

Kris Benes, OAA



Appendix A - Shadow Diagrams

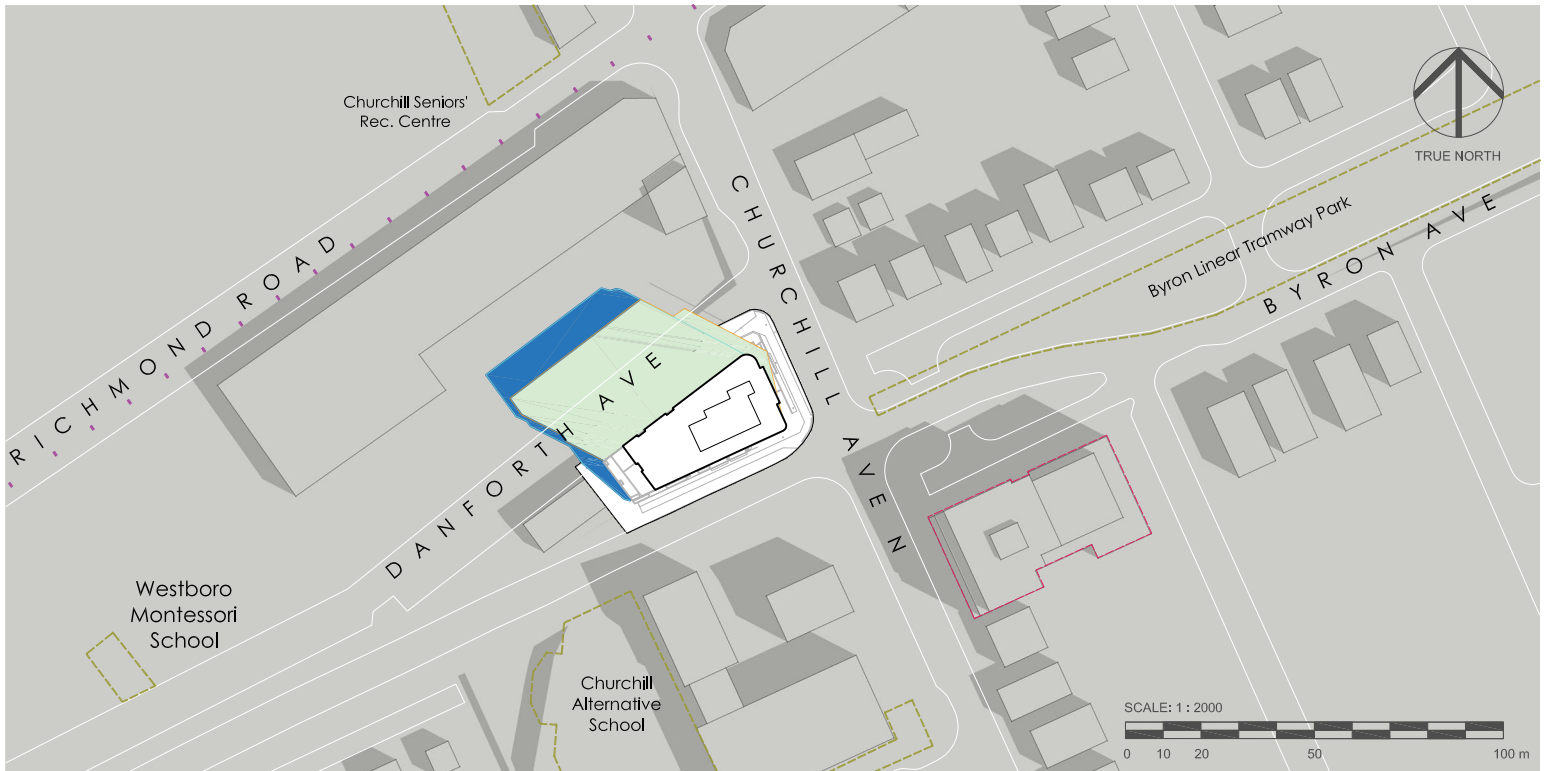


FIGURE 1: JUNE 21 08 00

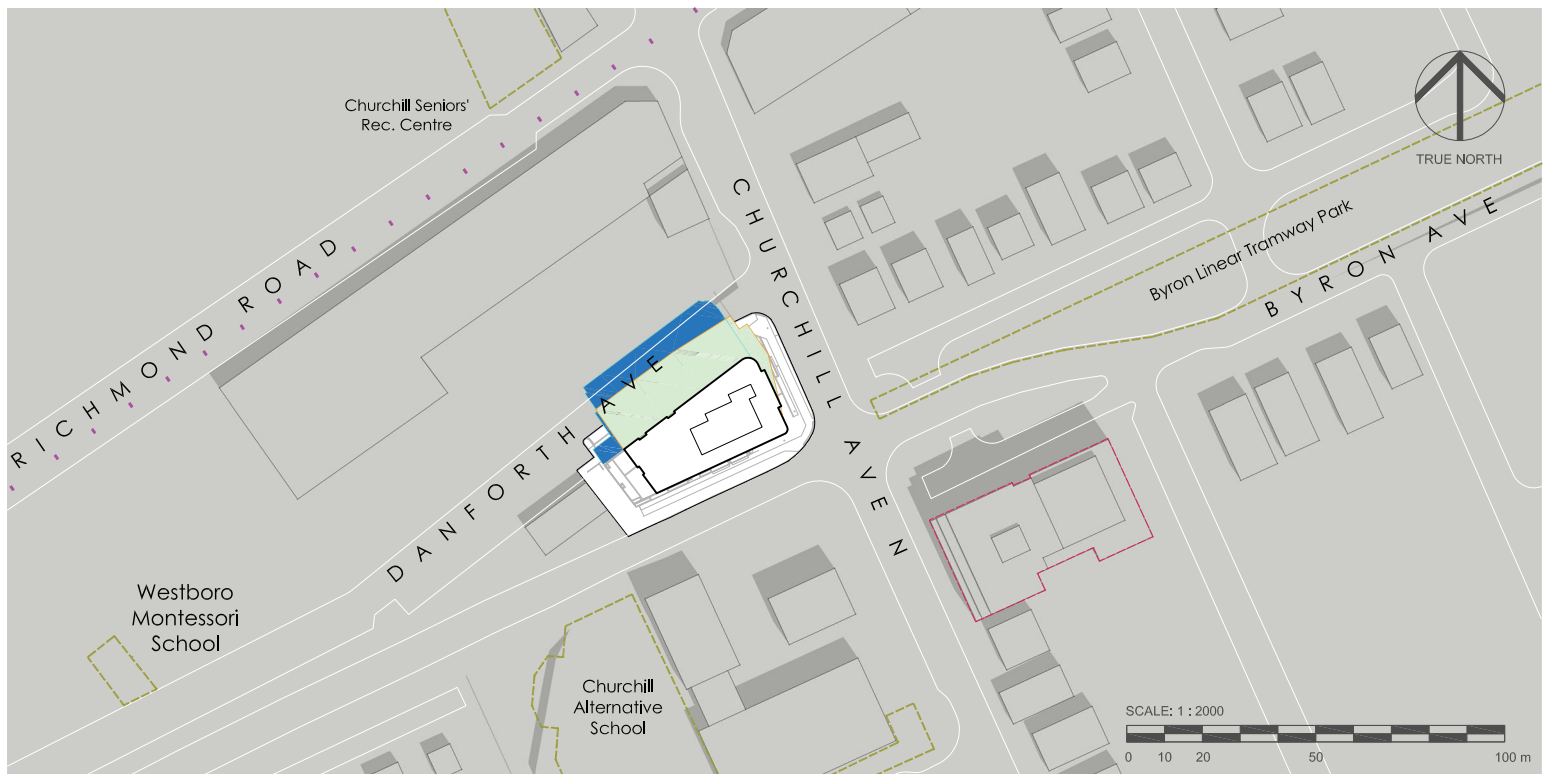











FIGURE 2: JUNE 21 10 00

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|--|-------------------------|---|----------------------------|---|---|
|  | proposed development |  | as-of-right shadow outline |  | traditional mainstreet |
|  | proposed shadow outline |  | as-of-right shadow |  | approved development |
|  | new net shadow |  | general shadow map |  | public spaces and communal amenity area |

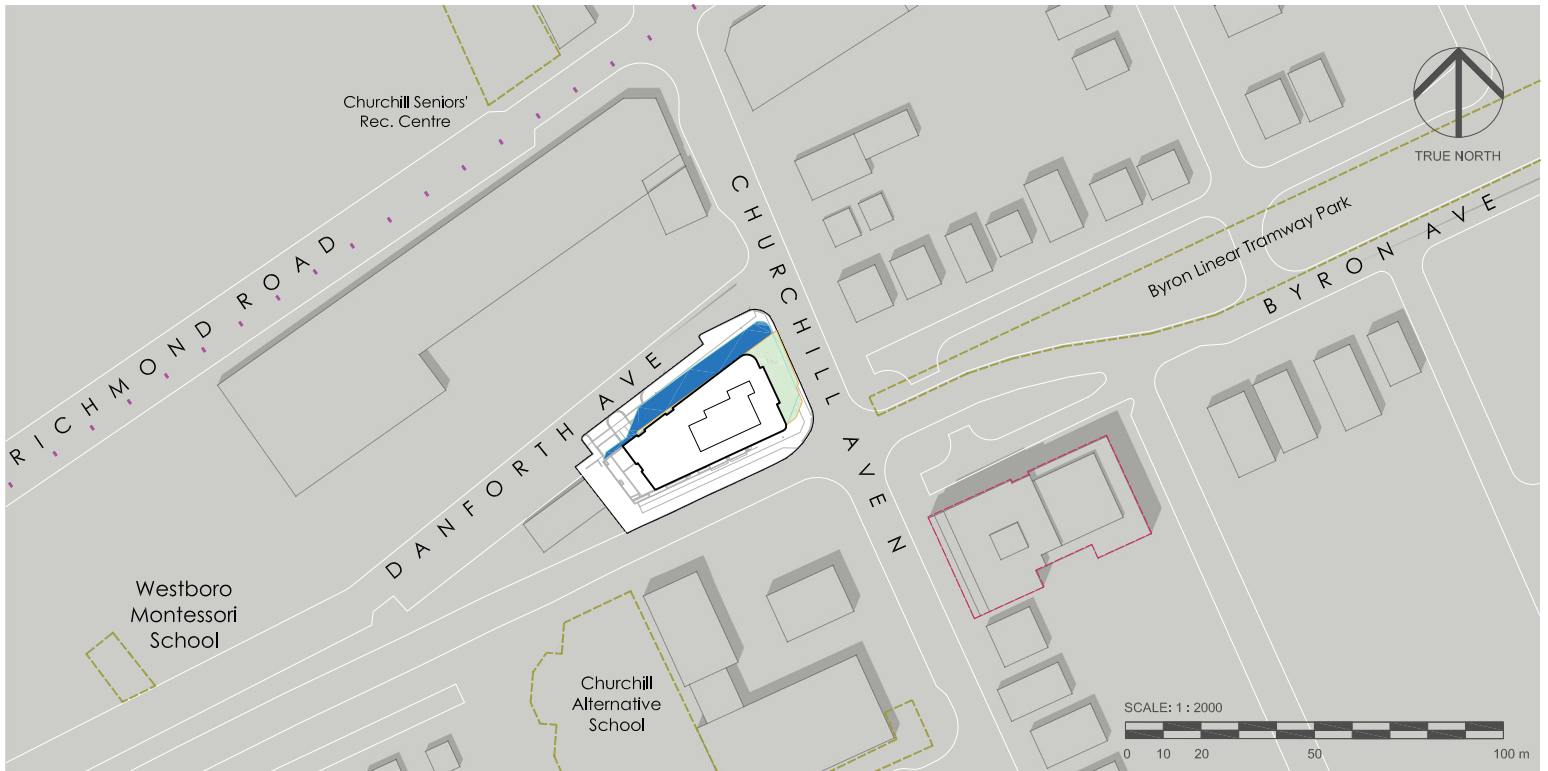


FIGURE 3: JUNE 21 12 00

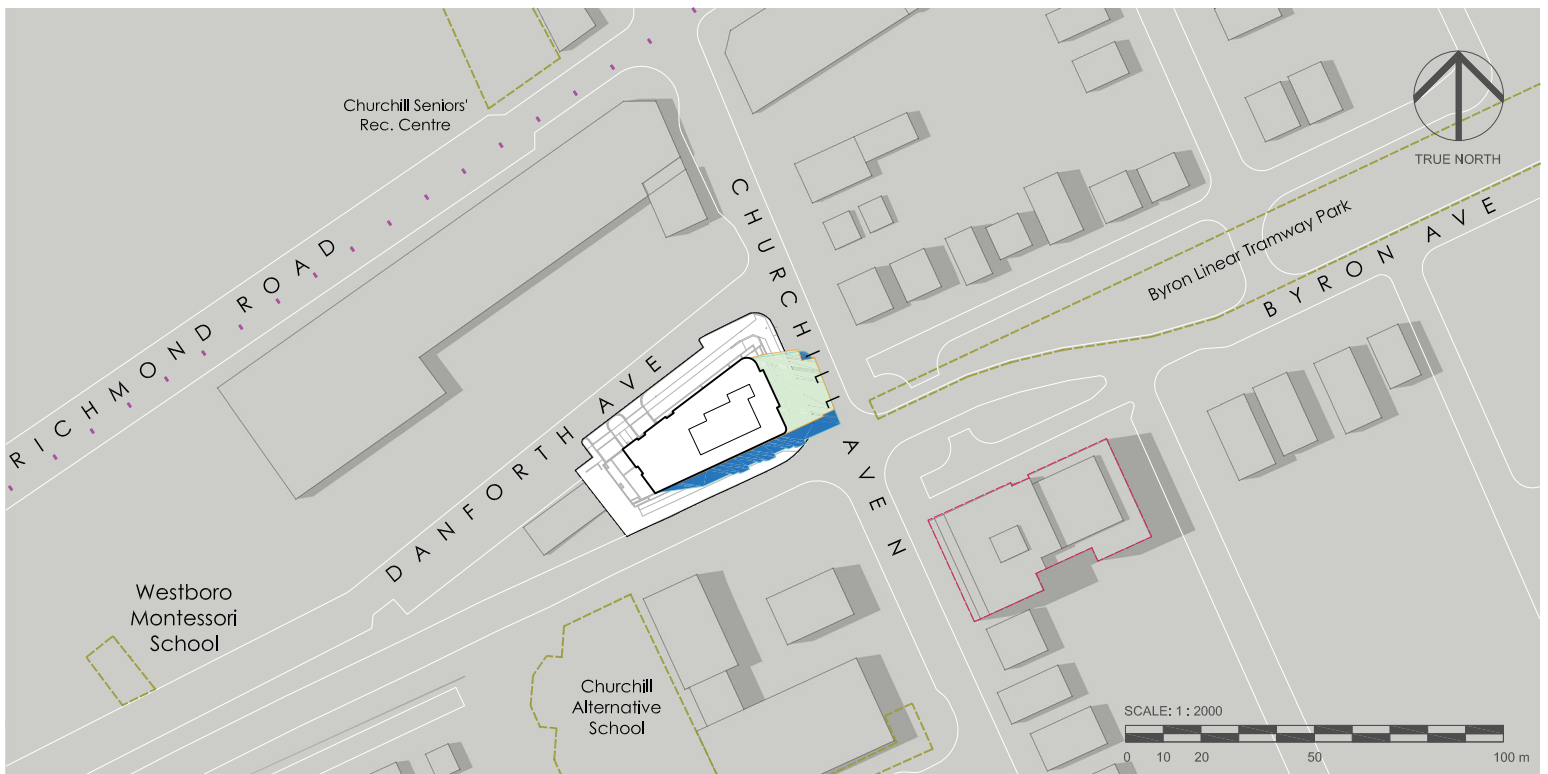











FIGURE 4: JUNE 21 14 00

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|--|-------------------------|---|----------------------------|---|---|
|  | proposed development |  | as-of-right shadow outline |  | traditional mainstreet |
|  | proposed shadow outline |  | as-of-right shadow |  | approved development |
|  | new net shadow |  | general shadow map |  | public spaces and communal amenity area |

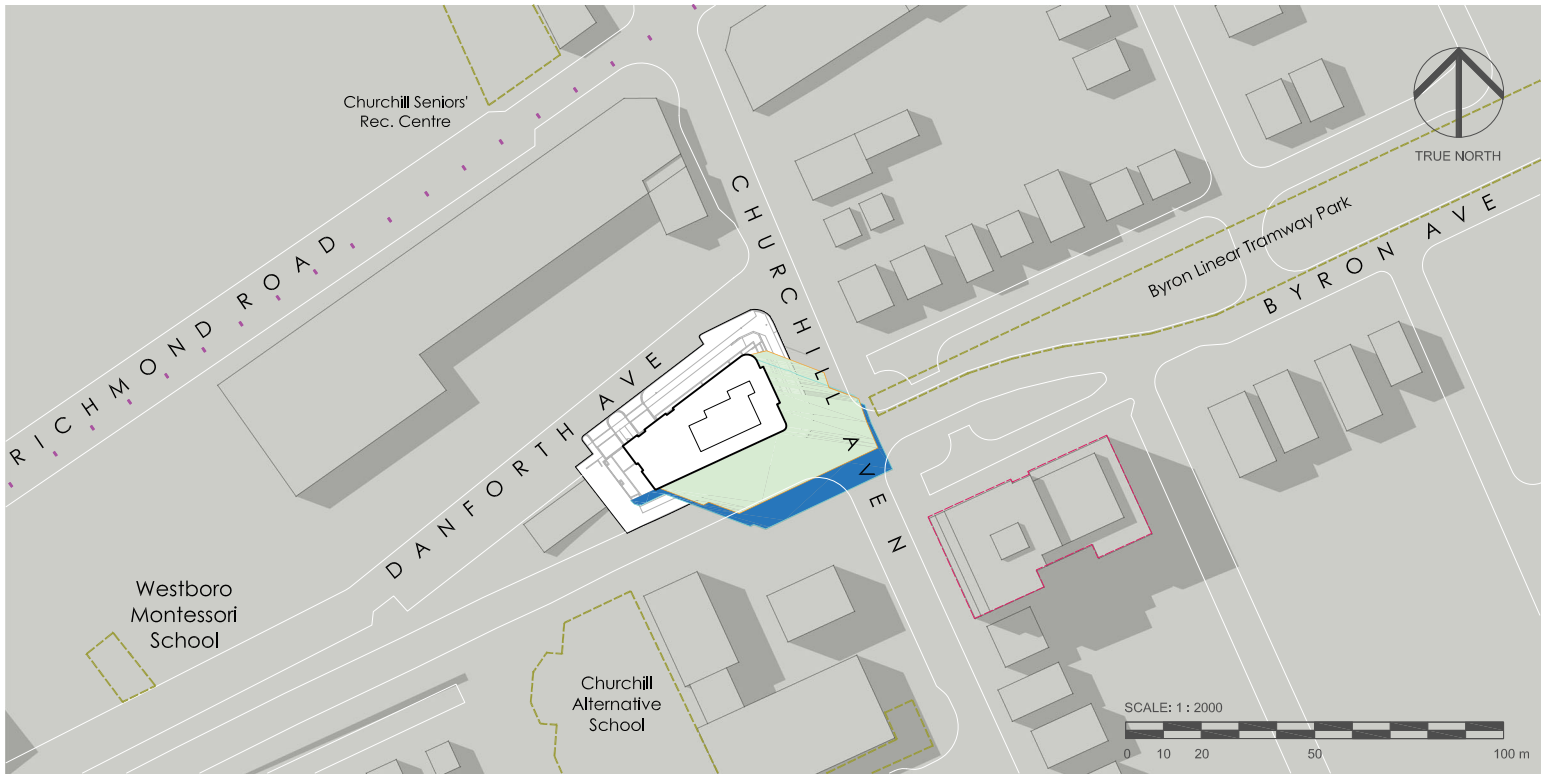











FIGURE 5: JUNE 21 16 00



FIGURE 6: JUNE 21 18 00

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|--|-------------------------|---|----------------------------|---|---|
|  | proposed development |  | as-of-right shadow outline |  | traditional mainstreet |
|  | proposed shadow outline |  | as-of-right shadow |  | approved development |
|  | new net shadow |  | general shadow map |  | public spaces and communal amenity area |

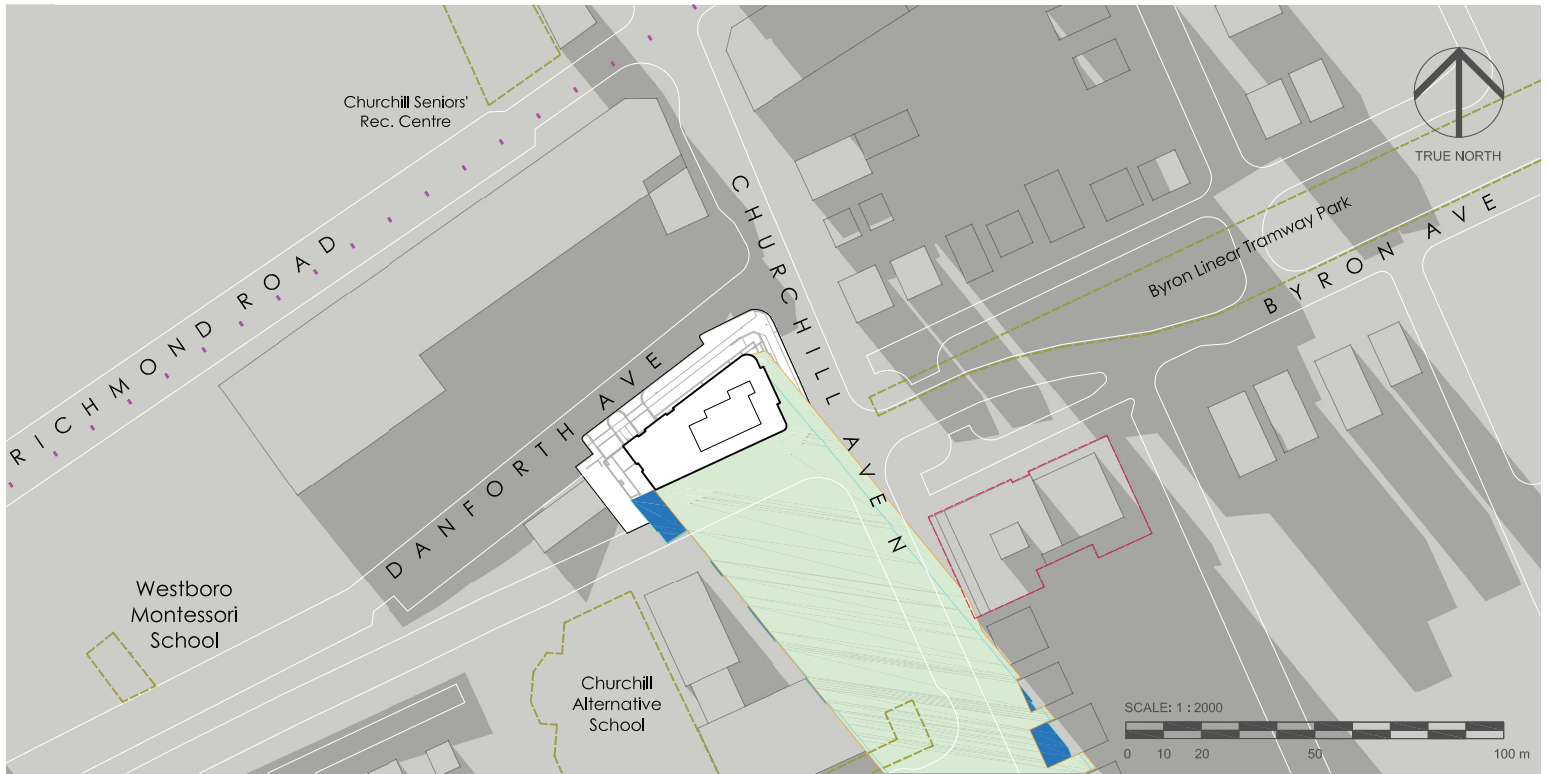


FIGURE 7: JUNE 21 20 00










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|--|-------------------------|---|----------------------------|---|---|
|  | proposed development |  | as-of-right shadow outline |  | traditional mainstreet |
|  | proposed shadow outline |  | as-of-right shadow |  | approved development |
|  | new net shadow |  | general shadow map |  | public spaces and communal amenity area |



FIGURE 8: SEPTEMBER 08 00

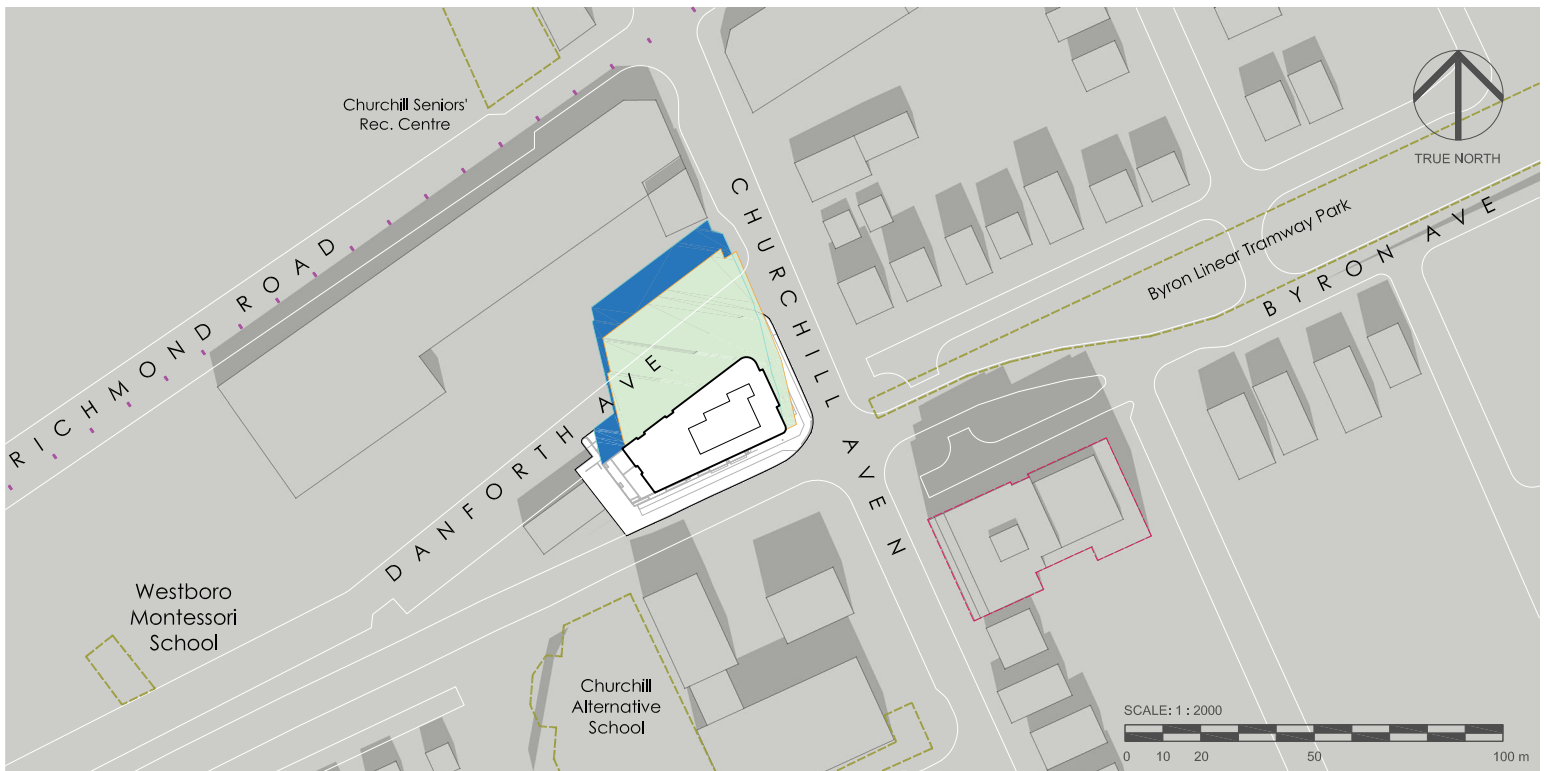











FIGURE 9: SEPTEMBER 10 00

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|--|-------------------------|---|----------------------------|---|---|
|  | proposed development |  | as-of-right shadow outline |  | traditional mainstreet |
|  | proposed shadow outline |  | as-of-right shadow |  | approved development |
|  | new net shadow |  | general shadow map |  | public spaces and communal amenity area |

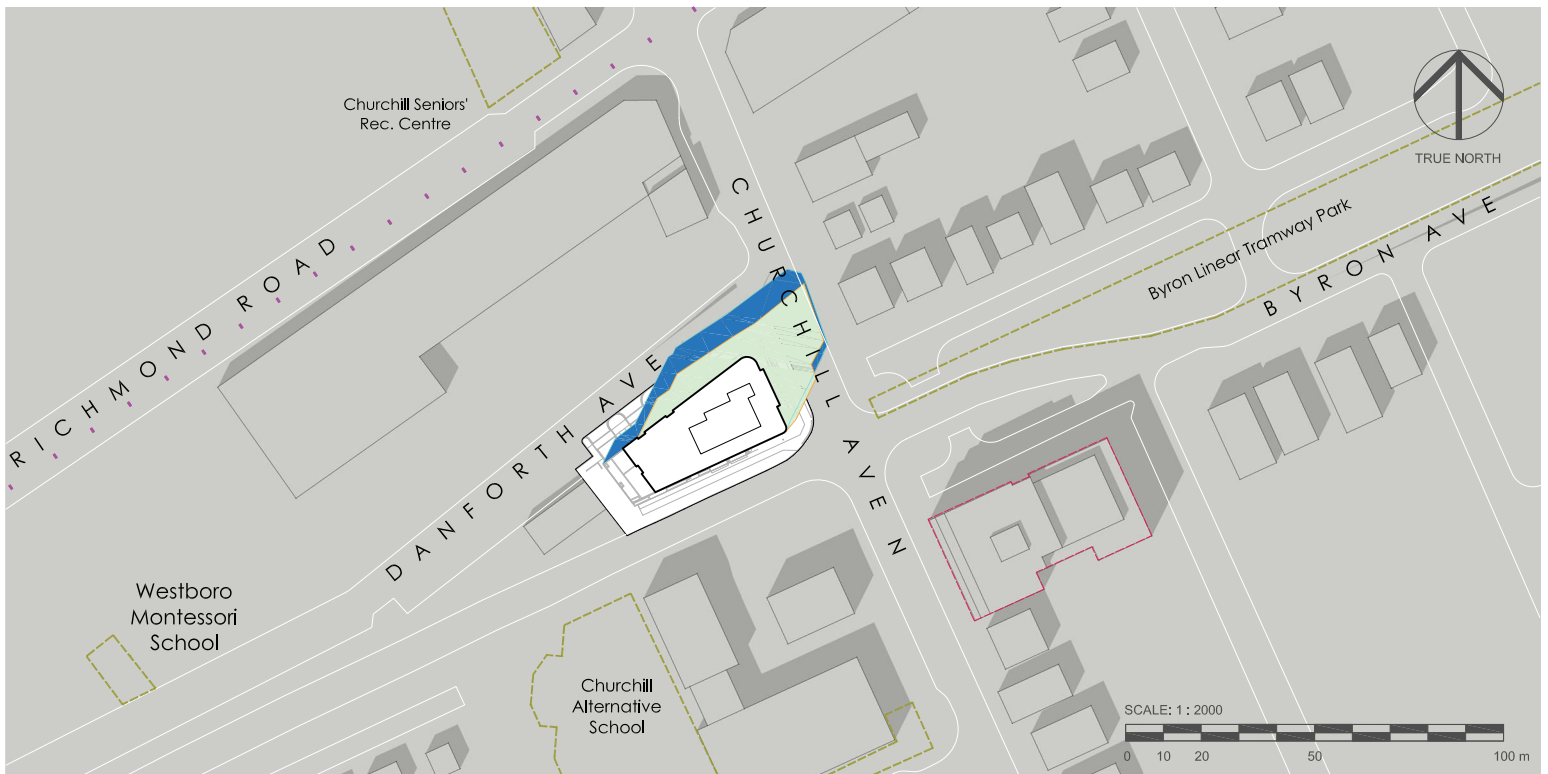


FIGURE 10: SEPTEMBER 12 00

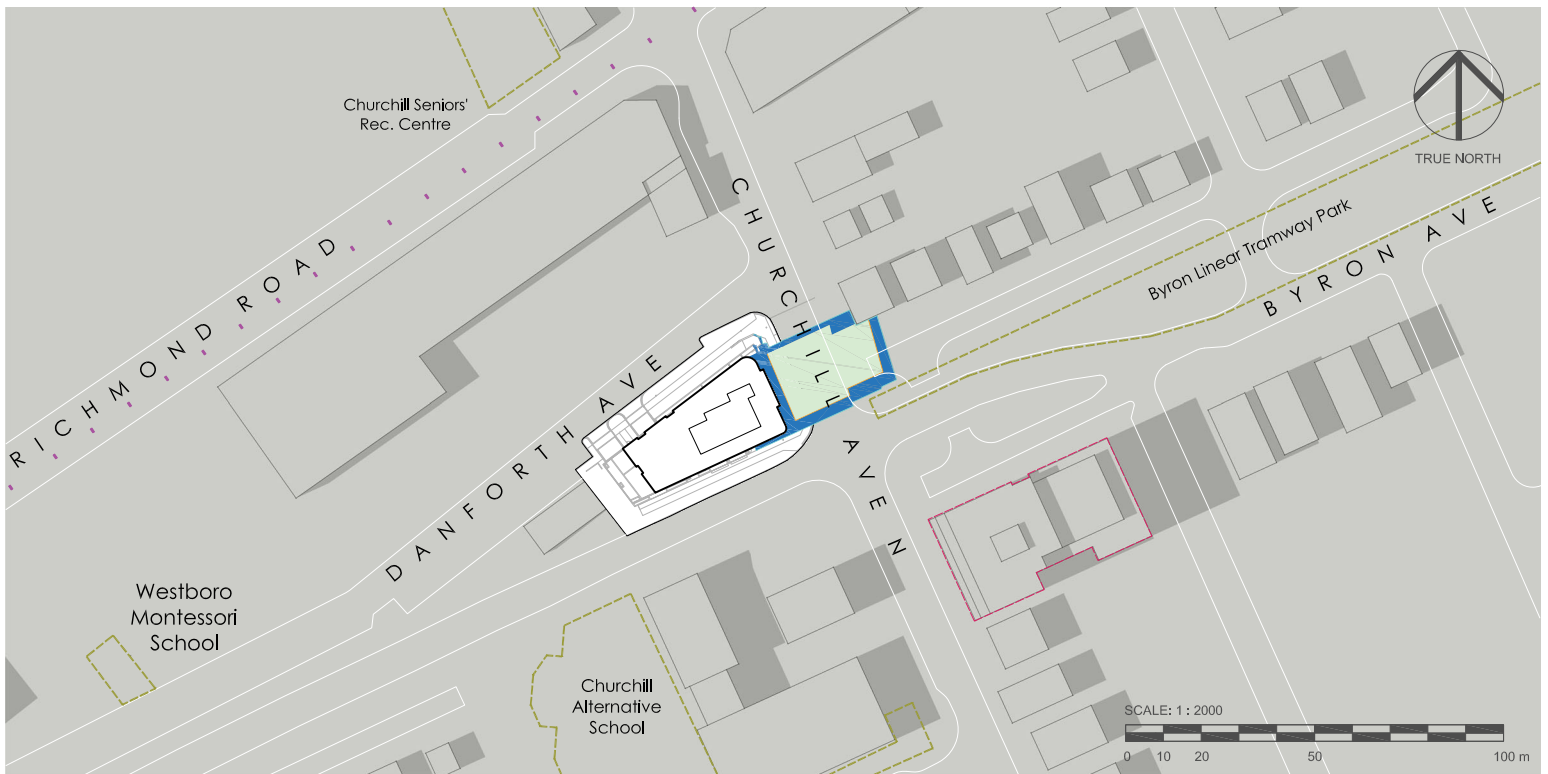


FIGURE 11: SEPTEMBER 14 00










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|--|-------------------------|---|----------------------------|---|---|
|  | proposed development |  | as-of-right shadow outline |  | traditional mainstreet |
|  | proposed shadow outline |  | as-of-right shadow |  | approved development |
|  | new net shadow |  | general shadow map |  | public spaces and communal amenity area |



FIGURE 12: SEPTEMBER 16 00

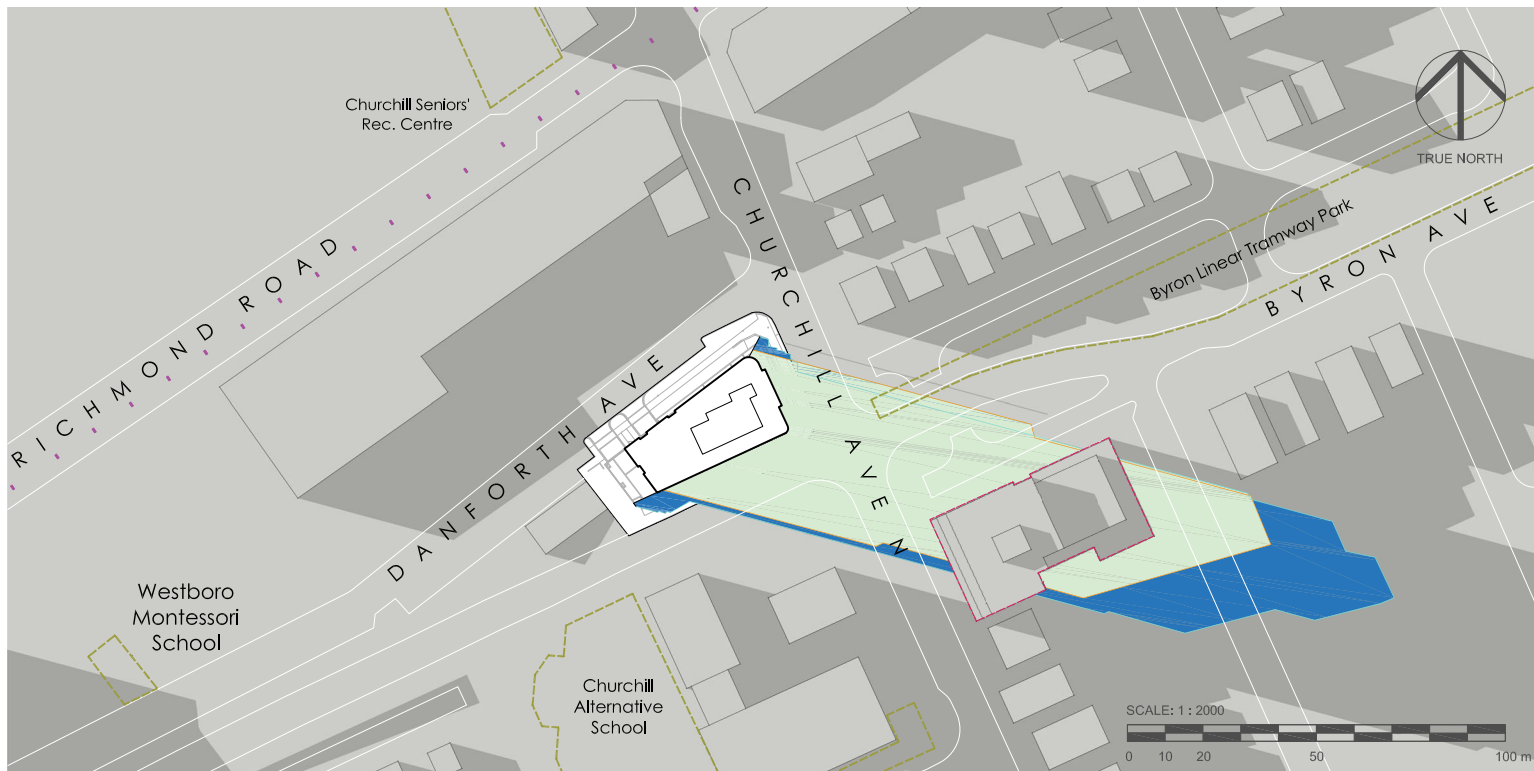











FIGURE 13: SEPTEMBER 18 00

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|--|-------------------------|---|----------------------------|---|---|
|  | proposed development |  | as-of-right shadow outline |  | traditional mainstreet |
|  | proposed shadow outline |  | as-of-right shadow |  | approved development |
|  | new net shadow |  | general shadow map |  | public spaces and communal amenity area |

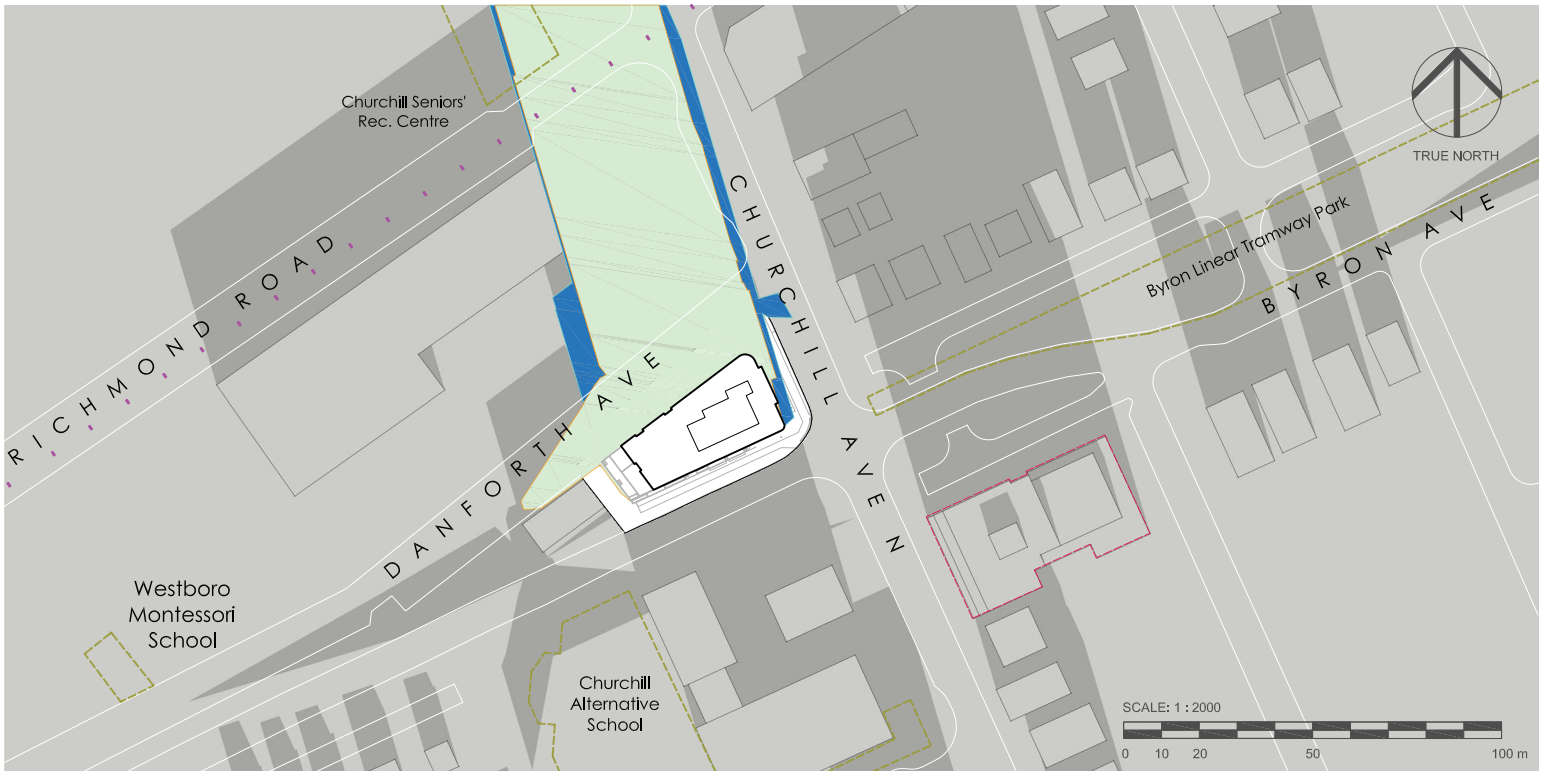


FIGURE 14: DECEMBER 21 09 00



FIGURE 15: DECEMBER 21 10 00










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|--|-------------------------|---|----------------------------|---|---|
|  | proposed development |  | as-of-right shadow outline |  | traditional mainstreet |
|  | proposed shadow outline |  | as-of-right shadow |  | approved development |
|  | new net shadow |  | general shadow map |  | public spaces and communal amenity area |



FIGURE 16: DECEMBER 21 12 00

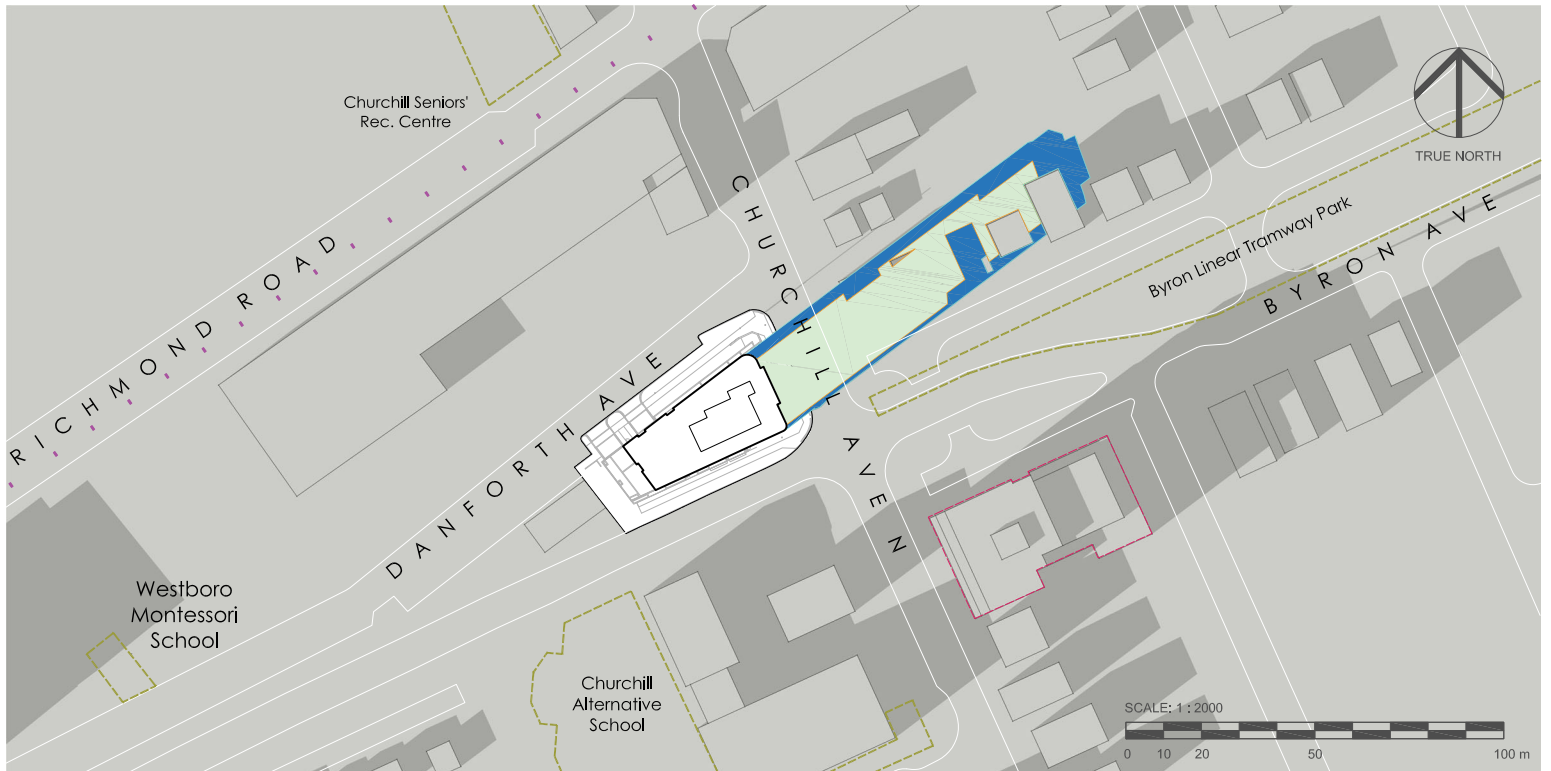


FIGURE 17: DECEMBER 21 14 00



















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|--|-------------------------|---|----------------------------|---|---|
|  | proposed development |  | as-of-right shadow outline |  | traditional mainstreet |
|  | proposed shadow outline |  | as-of-right shadow |  | approved development |
|  | new net shadow |  | general shadow map |  | public spaces and communal amenity area |

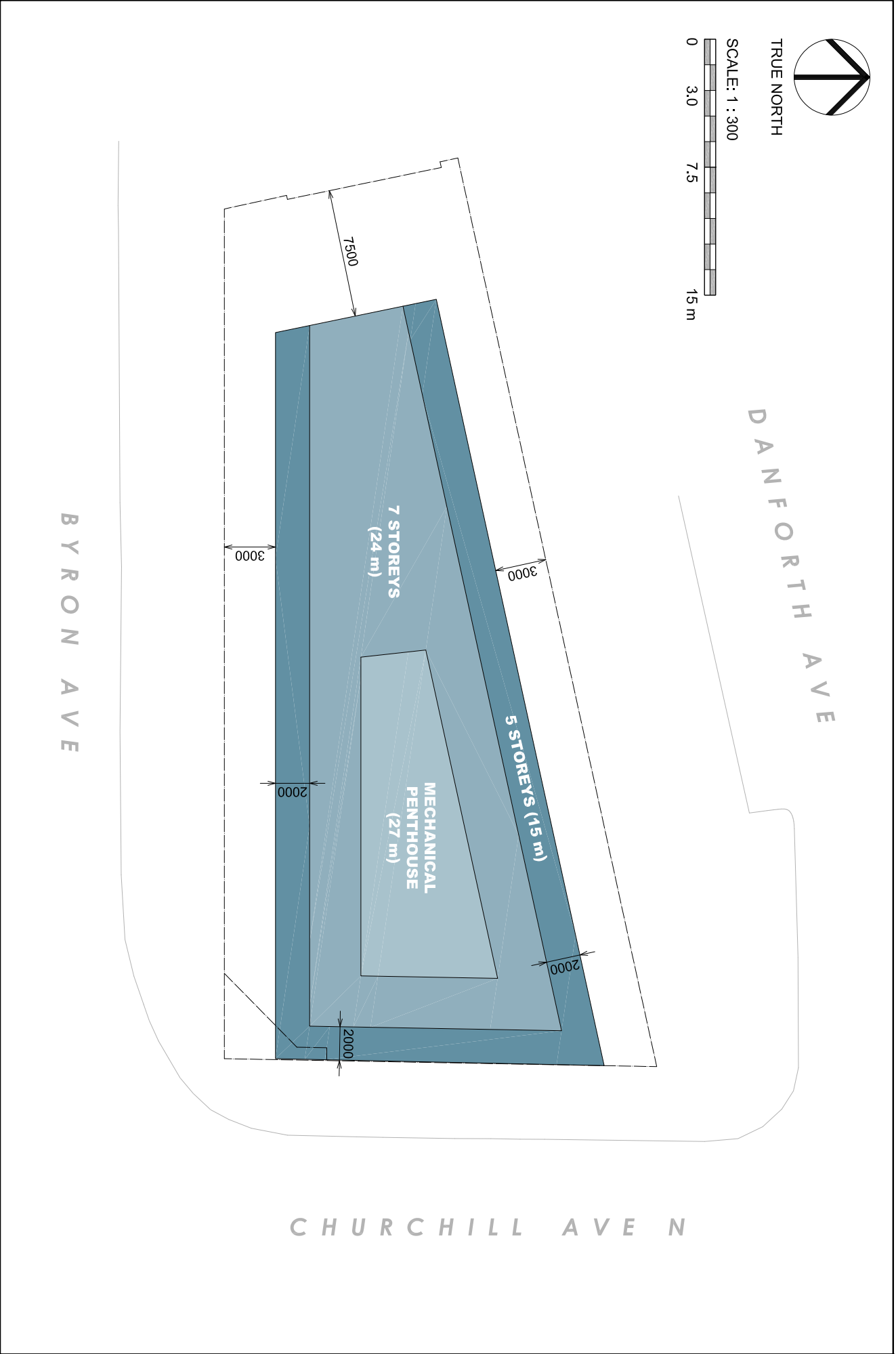


FIGURE 18: DECEMBER 21 15 00

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|--|-------------------------|---|----------------------------|---|---|
|  | proposed development |  | as-of-right shadow outline |  | traditional mainstreet |
|  | proposed shadow outline |  | as-of-right shadow |  | approved development |
|  | new net shadow |  | general shadow map |  | public spaces and communal amenity area |

Appendix B - Massing and Building Heights

APPENDIX B.1
As-of-right massing



APPENDIX B.2
Proposed building

