

4:00pm



5:00pm



New Town Hall Square

March 21st

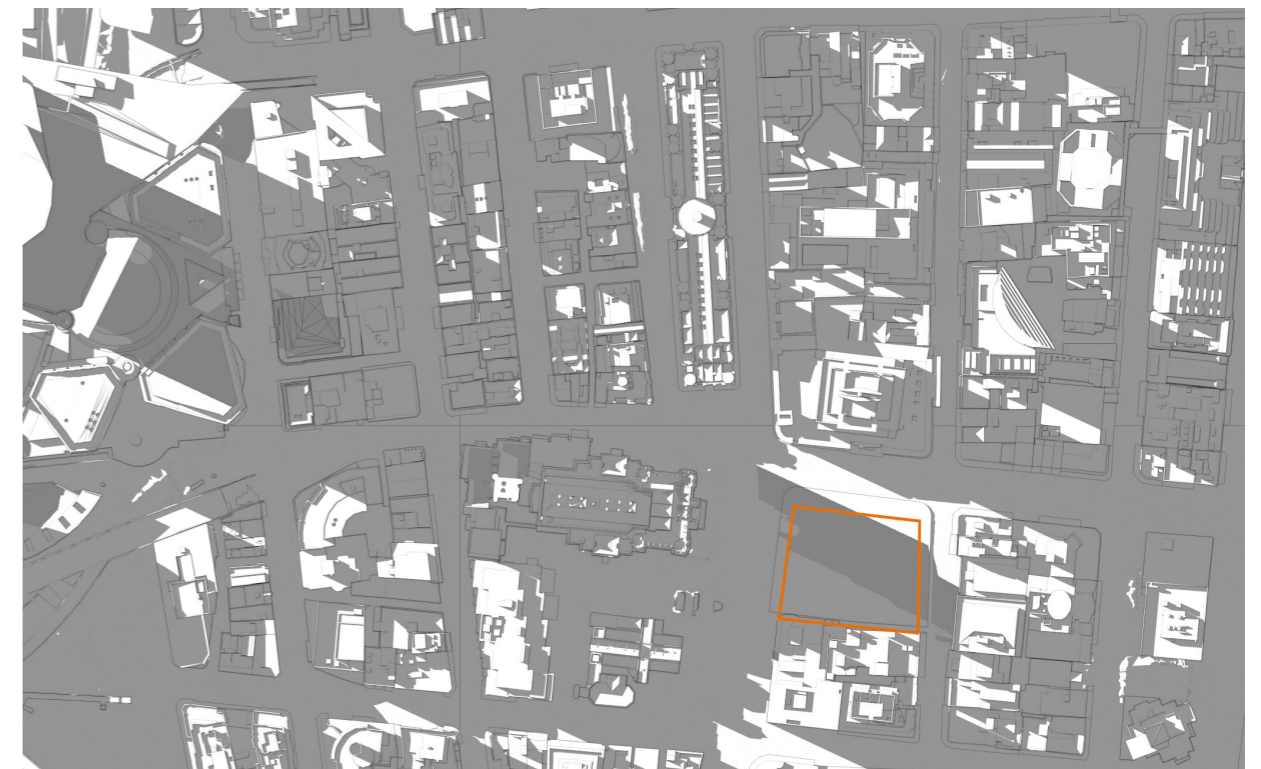
3:00pm



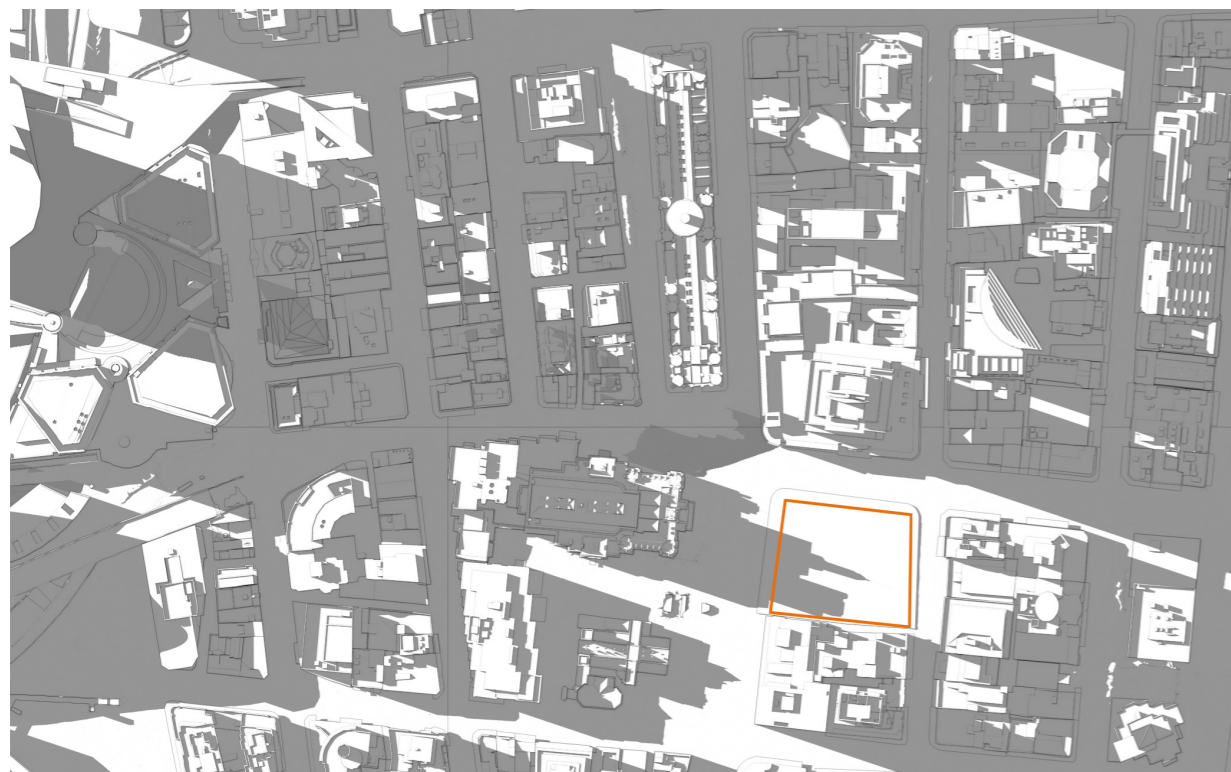
4:00pm



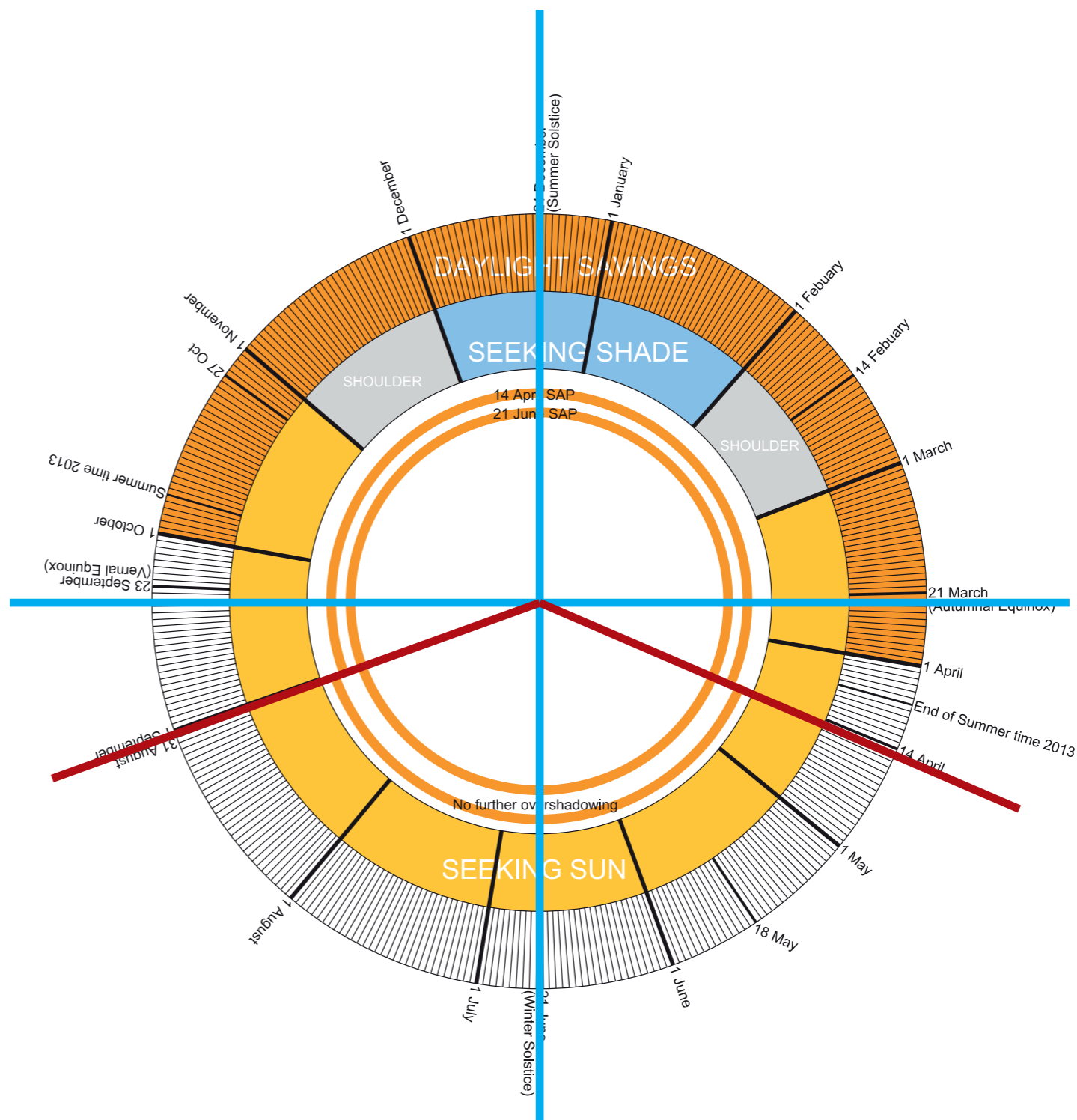
April 14th



5:00pm



Note: Solar analysis based on proposed envelope. Final design massing within the envelope is anticipated to have improved solar access than analysed in this report.



Shadow studies indicate that the proposed envelope creates no overshadowing on Winter and Summer solstice, as well as the vernal and autumnal equinox. However some overshadowing exists on 14 April and 31 August.

New Town Hall Square

To further interrogate the extent of overshadowing and its relative impact on the square are detailed analysis across the entire year has been prepared.

The reduction in hours of sun for each location in the square attributable to the proposal is indicated below.

The following diagram expresses the solar reduction in percentages and excludes shadows by existing adjacent structures. Across most of the New Town Hall square the solar impact ranges from 0-1%. There is a limited area to the North East of Town Hall square that has up to 2% solar reduction. (On average this has been measured less than 1%)

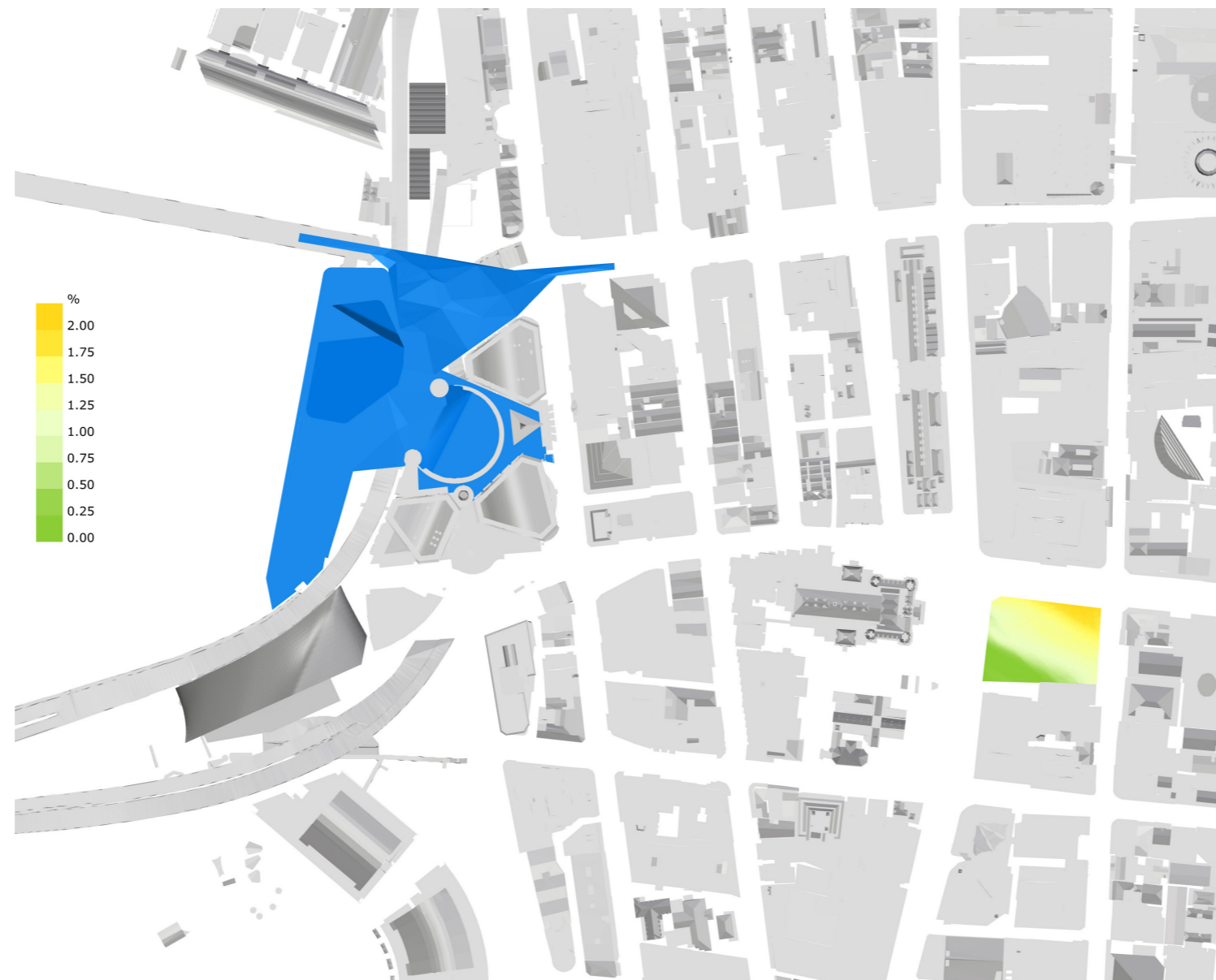
Heat maps have been prepared to also show the effect on number of hours received in the New Town Hall Square, which is also negligible.

The study proposes that the solar loss contributed but the Cockle Bay envelope is relatively insignificant and does not unreasonably affect the amenity of Town Hall Square.

However, the proponent will continue to work on ways to improve and in particular, will be further limited in detailed design / Stage 2 phases.

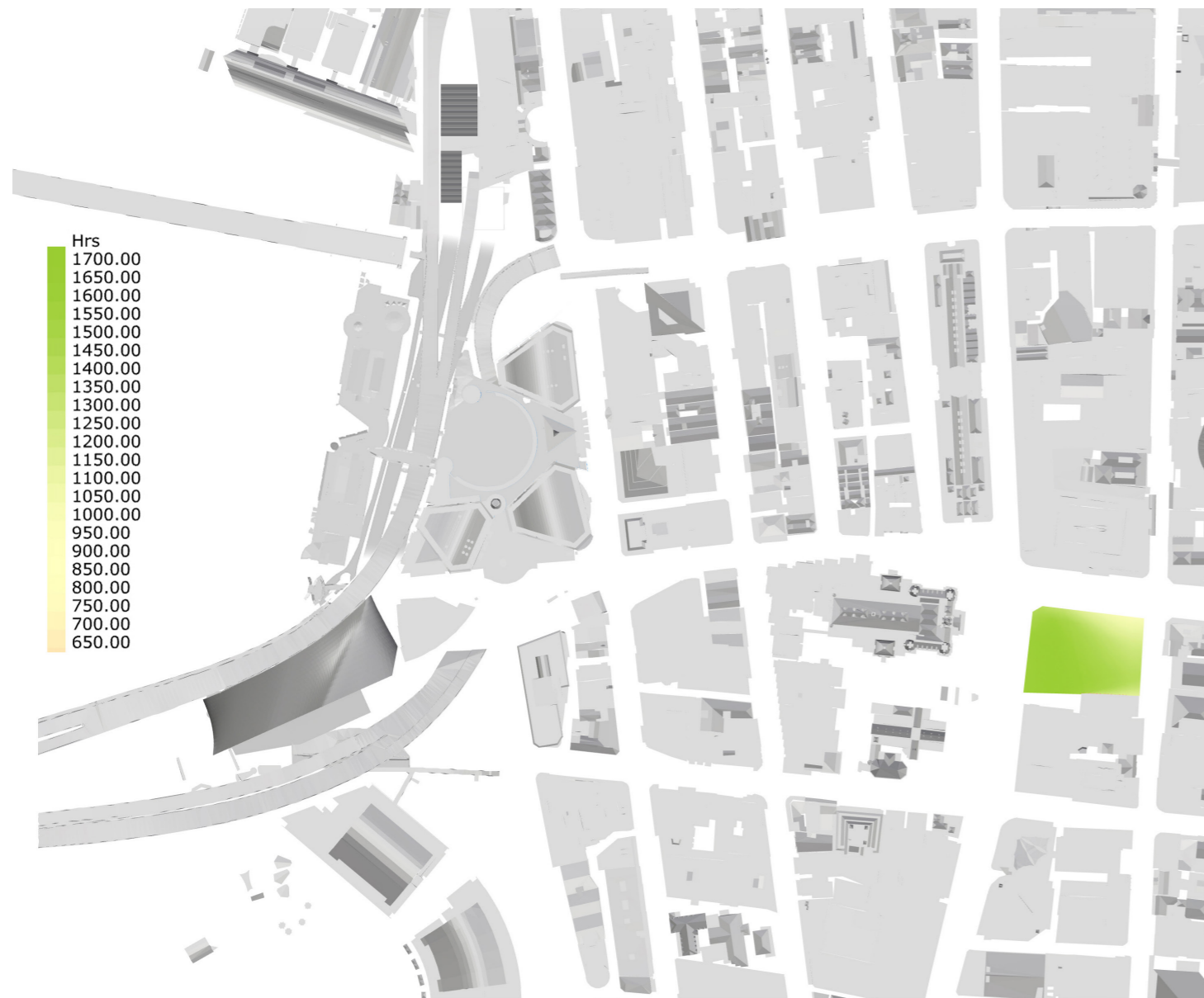
It is not considered possible to remove all impacts, in the context of other constraints.

Note: Solar analysis based on proposed envelope. Final design massing within the envelope is anticipated to have improved solar access than analysed in this report.

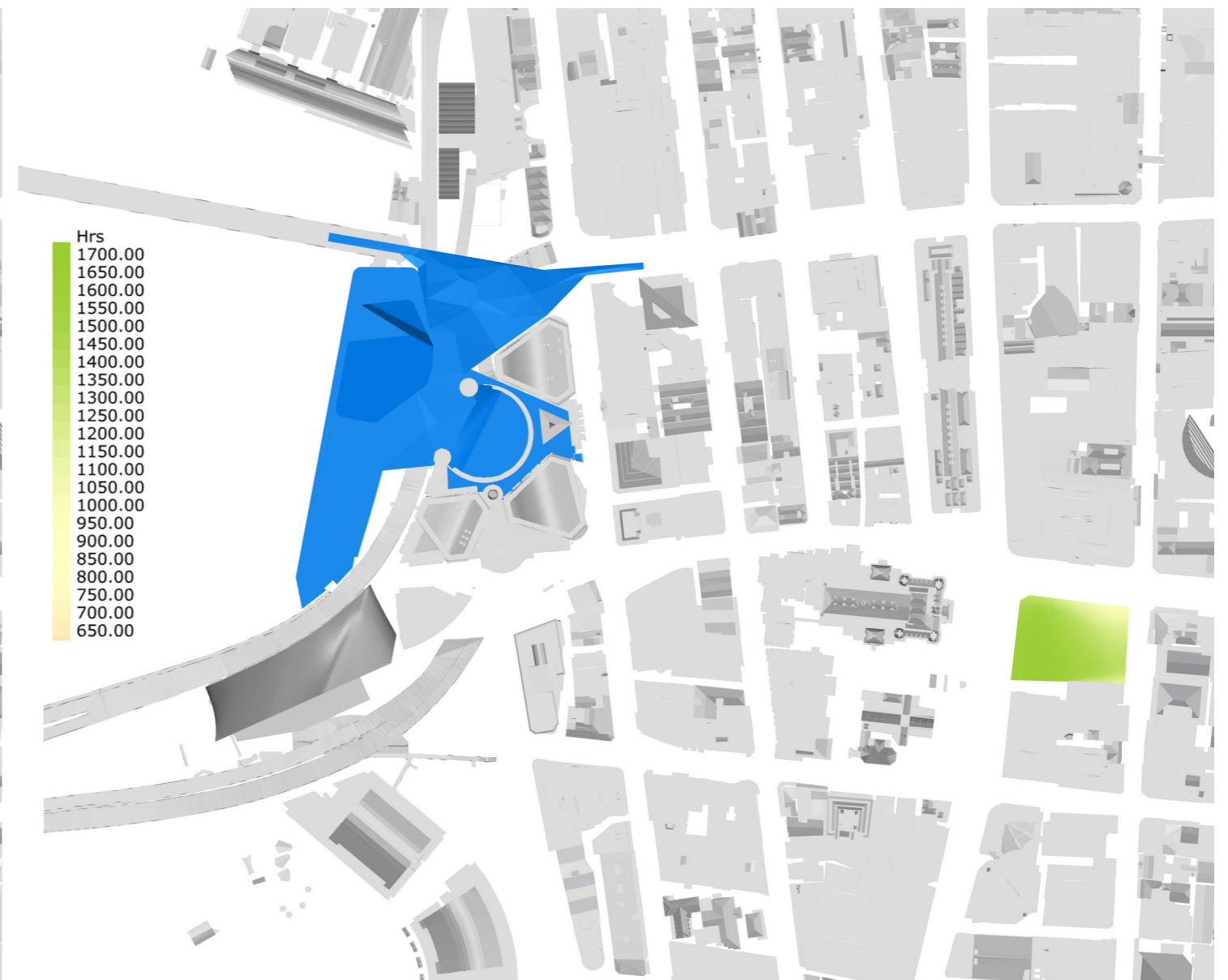


Annual 12pm - Sunset

Showing the envelopes overshadowing extent expressed as a percentage (total received hours / total available) for each point of the square for the whole year. ie. green is no overshadowing, yellow is showing a maximum of 2 percentage, and averaging 0.99%.



Annual 12pm - Sunset Total available hours to proposed Town Hall square - existing development



Annual 12pm - Sunset Total available hours to proposed Town Hall square - proposed envelope

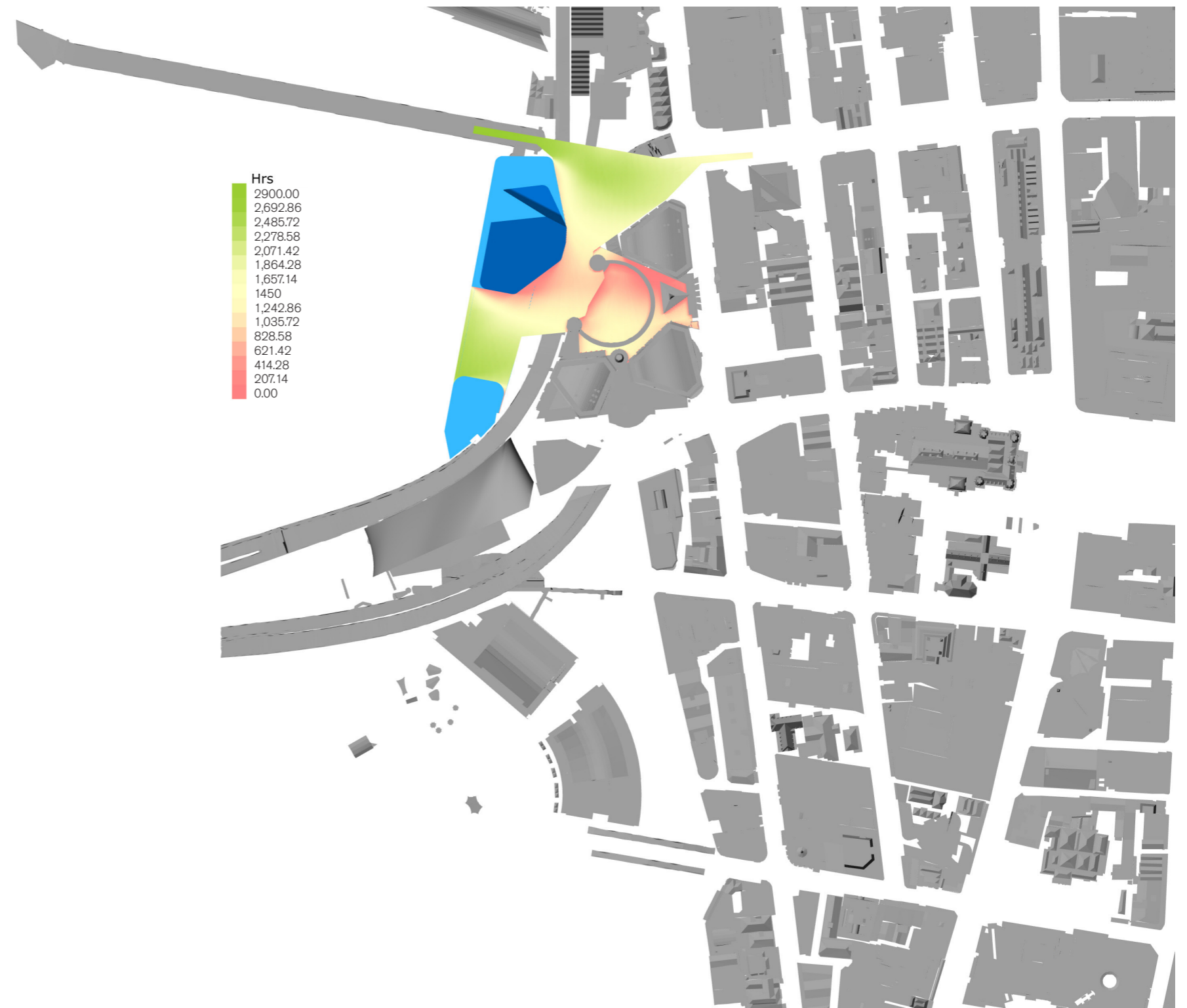
Note: The gradients between the existing and proposed appear identical as the differences due to the scaling charted at 50 hour increments.

New Publicly Accessible Open Space

The proposal includes the creation of a new public park over the road network, and connecting the city to the water promenade via landscaped terracing. The new public park has good solar access as illustrated in the following 3d solar analysis heat map. Based on the envelope, on average the park receives annually is 1380 hours.

Note: Shadow studies are based on envelope. Any proposed massing within the envelope will achieve improved results.

Note: Solar analysis based on proposed envelope. Final design massing within the envelope is anticipated to have improved solar access than analysed in this report.



Annual 9am - 5pm hours received