APPENDIX E1 **OVERSHADOWING INFORMATION**

TFT have been appointed to consider the roof extension proposals to 34 Deverell Place and their potential effect on sunlight availability to solar panels to 32 Deverell Place. We have their undertaken a 3D computer analysis with the methodology outlined in The Building Research Establishment Report *"Site layout planning for daylight and sunlight - A guide to good practice", 2022, 3rd edition* (BRE 209 2022).

In Section *4.3 Photovoltaics*, the BRE state:

*"**Calculating loss of radiation to solar panels***
Where a proposed development may result in loss of radiation to existing solar panels (either photovoltaic or solar thermal), an assessment should be carried out.

For solar thermal collectors, the loss of radiation falling on the collector is approximately proportional to the loss of renewable heat generation. For example, a collector that has a 25% loss of radiation on its surface would see roughly a 25% reduction in instantaneous performance.

***Where the Annual Probable Sunlight Hours (APSH) received by a solar panel with the new development in place is less than 0.90 times the value before, a more detailed calculation of the loss of solar radiation should be undertaken.**"*

We have therefore undertaken this initial APSH assessment to gauge whether 0.9 of former sunlight hours will be retained i.e. a reduction of 10% or less.

In addition to the holistic assessment of the overall panel area, we have subdivided the panels in to 12 separate sections to determine whether there are particular areas where sunlight reduction may be more apparent.

The results can be seen by reference to drawings and results table at Appendix A. These indicate that in the proposed condition, the panels retain annual sunlight availability of at least 0.94 to any single panel assessed and an average of 0.98 to the panels as whole. In winter, the effect is reduced further still, with induvial panels retaining at least 0.97 and an average of 0.99. Therefore, no reductions of 10% or greater will be seen and no further assessments are required.

In accordance with the BRE guidelines, as 0.9 of the former APSH value has been retained, no detailed solar radiation testing is required.

Therefore, is possible to conclude that no material reduction in sunlight will occur as a result of the proposals and the BRE guidelines are satisfied.

Yours sincerely