

Doc Ref: WF705-01F02(rev2)- SR Memo

Date: November 12, 2020

To: Construction Assignments (NSW)

Address: Level 2, 17 Federation Road, Newtown, NSW 2042

**RE: 195-197 SYDNEY ROAD, FAIRLIGHT
SOLAR LIGHT REFLECTIVITY OF THE SOLAR PANELS**

1 Introduction

It is proposed to install solar panels to some rooftop areas of the development located at 195-197 Sydney Road, Fairlight. This report presents an assessment of potential solar glare observed from the proposed solar panels. If necessary, recommendations are provided to mitigate any adverse solar glare conditions identified.

2 Analysis and Discussion

The solar panels, which are to be inclined at an angle of 30deg (from the horizontal) and oriented to the north-west (with an orientation of 318deg), are proposed to be installed to rooftop sections of Levels 04 and 05 of the development.

A solar chart for the solar panels is presented in Figure 2, and this is used to derive the check zone which is shown in Figure 1. The solar chart is determined from the standard sun chart of the region (from Phillips, 1992), using the method detailed in Hassall (1991). The check zone presented in Figure 1 highlights the area where solar glare from the solar panels could be observed. However, since the solar panels are located on rooftop surfaces, glare from the solar panels will only be visible from an observer at an elevated location. Hence glare from the solar panels will not be observed by motorists or pedestrians on the surrounding streets.

Analysis of the check zone presented in Figure 1 confirms that there will be no elevated locations within the check zone where an observer could potentially see solar glare from the solar panels. Hence there will be no adverse solar glare observed from the rooftop solar panels of the development.

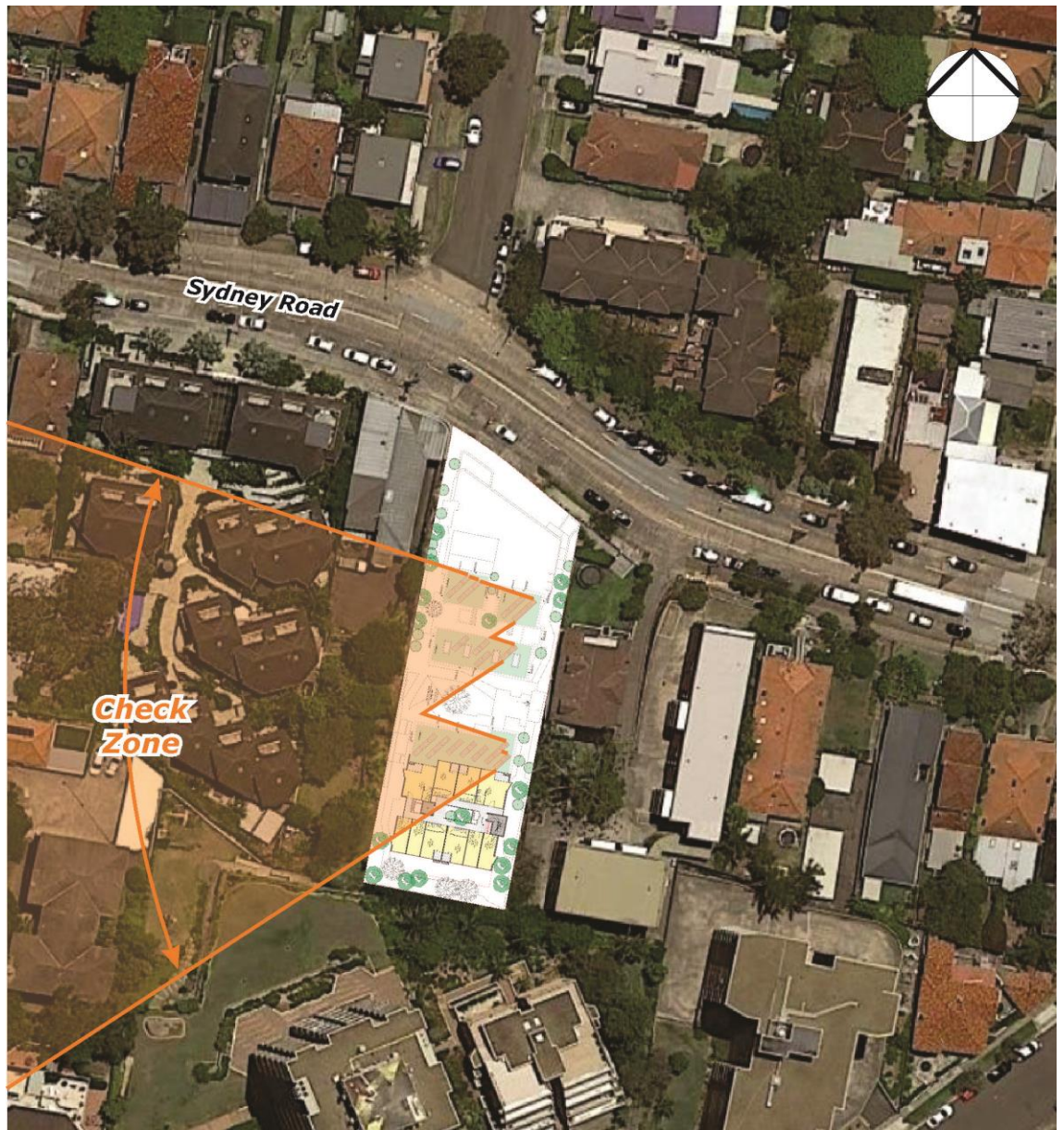


Figure 1: Check Zone Diagram for the Solar Panels
 (the check zone is the area where glare could be observed from the solar panels, although this does not take into account that an observer would need to be at a sufficient elevation to see the solar panels)

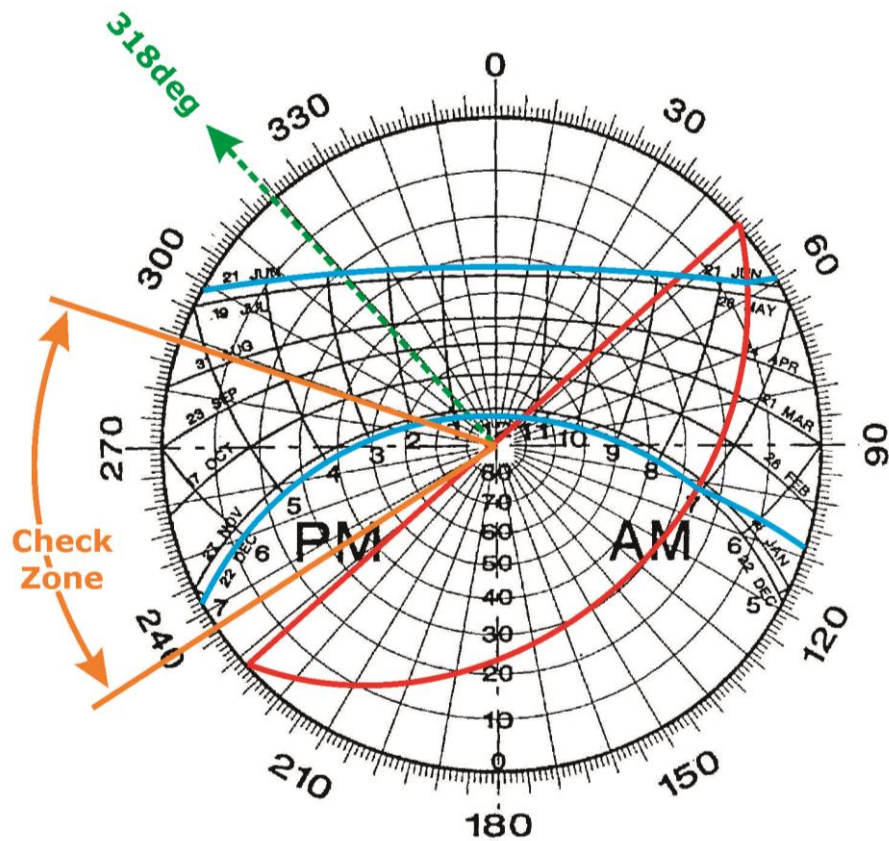


Figure 2: Sun Chart for the Solar Panels
(oriented to 318deg, inclined 30deg from the horizontal)

3 References

- Hassall, D.N., 1991, "Reflectivity, Dealing with Rogue Solar Reflections", (published by author).
- Phillips, R.O., 1992, "Sunshine and Shade in Australasia", Sixth Edition, CSIRO Publishing.

DOCUMENT CONTROL

Date	Revision History	Issued Revision	Prepared By (initials)	Instructed By (initials)	Reviewed & Authorised by (initials)
September 23, 2020	Initial.	0	AB	SWR	AB
October 20, 2020	Updated analysis.	1	AB	SWR	AB
November 12, 2020	Reoriented panels.	2	AB	SWR	AB

The work presented in this document was carried out in accordance with the Windtech Consultants Quality Assurance System, which is based on International Standard ISO 9001.

This document is issued subject to review and authorisation by the Team Leader noted by the initials printed in the last column above. If no initials appear, this document shall be considered as preliminary or draft only and no reliance shall be placed upon it other than for information to be verified later.

This document is prepared for our Client's particular requirements which are based on a specific brief with limitations as agreed to with the Client. It is not intended for and should not be relied upon by a third party and no responsibility is undertaken to any third party without prior consent provided by Windtech Consultants. The information herein should not be reproduced, presented or reviewed except in full. Prior to passing on to a third party, the Client is to fully inform the third party of the specific brief and limitations associated with the commission.