SOLAR LIGHT REFLECTIVITY MEMO

WESTFIELD PARRAMATTA REDEVELOPMENT

WB400-01F04(REV3)- SR MEMO

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Prepared for:

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Date	Revision History	Non-Issued Revision	Issued Revision	Prepared By (initials)	Instructed By (initials)	Reviewed & Authorised by (initials)
26/07/2012	Initial	-	0	AB	TR	AB
30/07/2012	Updated report format.	-	1	AB	TR	AB
31/07/2012	Reference to latest drawings.	-	2	AB	TR	AB
16/08/2012	Updated the maximum height reference of the Stage 1 component.	-	3	AB	TR	AB

This technical memo is in relation to possible adverse reflected solar glare from the proposed redevelopment of Westfield Parramatta. The conclusions of this report are drawn from our extensive experience in this field and are based on an examination of the architectural drawings which have been prepared by Westfield, dated July 27, 2012.

The proposed redevelopment comprises of two stages. Stage 1 is for the construction of an additional retail level to parts of the existing shopping mall, and additional car parking. The maximum building height of the Stage 1 component is 34.14m above ground. Stage 2 is for a high-rise commercial office tower at the north-eastern corner the existing shopping centre (overlooking the intersection of Argyle Street and Church Street), and an upgrade of the existing Argyle Street ground level façade. The tower will sit atop the existing shopping mall on Level 5, and will have a height of approximately 20 stories above Level 5 of the existing shopping mall.

It should be noted that the architectural design of the Stage 2 office tower has not yet been finalised, and hence a detailed analysis of potential reflected solar glare from the tower façade cannot yet be undertaken.

The Parramatta City Centre DCP 2001 requires that the design of buildings and façades should not result in glare that causes discomfort or threatens safety of pedestrians or motorists. With regards to reflected glare to pedestrians or occupants of neighbouring buildings, our past experience tends to indicate that the glazing used on buildings that tend to cause discomfort have a normal specular reflectance of visible light greater than 20%. This seems to justify the suggested limit of 20% reflectivity by many local government authorities and state planning bodies. However, this does not address the impact onto the sightline of motorists in the surrounding area, which is a safety concern. Some building facades can cause adverse glare for motorists even if the glazing has a reflectivity value less than 20%. Hence it is recommended that a detailed investigation be undertaken at a more detailed design phase to determine the potential for adverse glare from the façade of the Stage 2 office tower. However, it should be noted that the Stage 2 tower is located atop the existing shopping mall podium and setback from the podium edge, and this will assist in keeping the view of the tower outside the direct line of sight of motorists in the surrounding area.

Regarding the Stage 1 component of the subject redevelopment, it should be noted that only a minimal amount of glazing will be used, and it will be well outside the direct sightline of motorists in the surrounding area. Hence, if the selected glazing for the Stage 1 component of the redevelopment has a maximum normal specular reflectance of visible light of 20%, no adverse solar glare effects are expected for Stage 1.