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Façade Engineer Glass Lift Advice

By Prism Facades



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Adam O'Meara
Australian War Memorial
20 Treloar Crescent, Campbell ACT 2612

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Dear Adam,

AWM Southern Entrance Lift: Façade Reflectivity

Prism Facades have been engaged to provide façade consultancy services for the Australian War Memorial on the proposed redevelopment of the new Southern Entrance facades.

The EPBC approval process has asked the project to respond the following concern that materials used on the Southern Entrance Lift will result in high levels of solar reflectivity from new façade elements:

Please address any visual impact/glare from the glass lift along the Parliament House Vista, noting that Appendix L states that glare/reflection from the glass lift is unavoidable (note: the Vista extends from Parliament House to the Australian War Memorial and incorporates views at all points along this axis). Appendix L provides view from Parade Ground only.

In relation to EPBC commentary, we advise the following:

It is common practice to limit external specular reflectivity of facade materials to 20%. This limit has been derived from planning controls from cities around the world including Sydney, Melbourne and Singapore, to reduce glare and manage stray solar reflections which may cause discomfort.

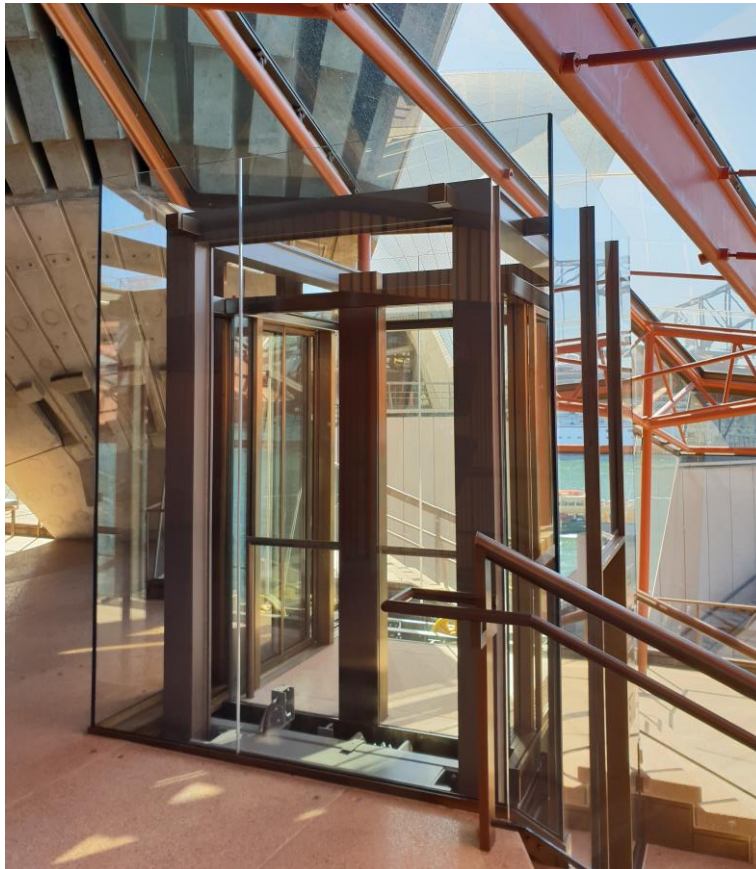
In an effort to meet the EPBC requirement we are reviewing a range of low reflectivity glass products with an external reflectivity of 9% to 13%, which is significantly lower than the common 20% limit, and considered to be in the low range.

The lift is currently undergoing design development and the final glass product has not yet been selected. The glass will need to meet thermal and architectural requirements, and will also be selected to have low external reflectivity. Clear uncoated glass is anticipated for the glass lift shaft which provides the lowest level of reflectivity.

The below is a project example using a similar glass product proposed for the Southern Entrance Glass Lift:

Uncoated single glazing with low-iron substrate– maximum reflectivity of 10%

Internal glass lift at the Sydney Opera House – Scott Carver



Should the glass require increased thermal performance, the following product examples represent the upper end of the external reflectivity.

Single hard coat low-e coating – maximum reflectivity of 13%

Reference product example: CSG's Super SE1 on low-iron glass. External reflectivity of 13%.



Triple silver soft coat low-e coating – maximum reflectivity of 13%

Reference product example: CSG's SJ52s on low-iron glass. External reflectivity of 13%.

Reference project with reference glass: International House, Barangaroo



We will not allow or consider reflective coating types to control the thermal performance of the glass. Reflective coating types typically have external reflectivity of 15% to 30%.

Further, we will also not allow or consider tinting of the glass to control the thermal performance of the glass. This will minimise the visual impact of the lift, and allow the glass to be as transparent as possible.

Prism Facades have been retained by the Australian War Memorial as the certifying engineer for the glass lift and we will oversee all glass and material selection on the building to ensure that this target is complied with.

We trust that the above meets with your expectations, please don't hesitate to contact us if you should have any questions.

Yours sincerely,

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