

Stephen Simpson
Senior Project Design Manager
Mirvac
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Australian Technology Park Building 2 Section 96 – Travelator Access to Locomotive Workshops

Dear Stephen

We, Arcadis Pty Ltd, being Structural Engineers within the meaning of the Building Code of Australia, are responsible for the structural design of the above-mentioned project.

The Locomotive Workshops are located adjacent to Building 2 at the Australian Technology Park (ATP). Arcadis understands that Mirvac proposes to provide connection between the two buildings by way of a tunnel between the basement of Building 2 and a travelator into the Locomotive Workshops. This letter is to support the submission by Mirvac of a Section 96 for the above works. The proposed travelator work are shown in drawings SA-AR-DWG-BB-B4-0410 and SA-AR-DWG-BB-B4-0411 by Sissons Architects.

The proposed structure consists of shoring walls extending from the existing shoring line of Building 2 under the perimeter wall and into the Locomotive Workshops. The tunnel is proposed to pass under the existing foundations of the Locomotive Workshops with the new travelator providing access in to the building from the carpark. The proposed shoring walls consist of 600mm diameter piles at 2 metre centres embedded into rock below the tunnel floor level. A 180mm thick shotcrete wall is to span between the piles to provide support to the soil beyond.

Arcadis has proposed an excavation and temporary works procedure to ensure that all existing in-ground services will be supported during and after the installation of the tunnel. Arcadis has also proposed a works procedure to reduce the excavation required and minimise the impact on the adjacent roadway. Arcadis has determined the foundation levels from geotechnical information provided by Douglas Partners in report 84955.04 R.001.Rev 0 *Report on Geotechnical Investigation Locomotive Shed Redevelopment*.

The base level of the tunnel aligns with the basement level of Building 2 and is supported by shoring piles embedded into sound rock. The proposed system does not apply additional loads to the structure of Building 2 and therefore will not have an adverse impact on the stability of the basement.

Arcadis also proposes steel underpinning beams and concrete strengthening to provide stability to the existing Locomotive Workshop façade at the excavation location. A demolition procedure to facilitate the installation of the tunnel.

Yours sincerely

A handwritten signature in black ink, appearing to read 'N. Sheldrake', with a horizontal line extending to the right.

Nicholas Sheldrake
Assistant Discipline Manager – NSW Building Structures
02 8907 2649

Enc. *ARC-ST-SKT-BB-B4-0004 Travelator Shoring Concept
Design*