Your ref Our ref File ref **ARUP**

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5 September 2021

Dear Matthew

Newcastle Art Gallery Expansion - Mine Subsidence Parameters

Arup has been engaged by the City of Newcastle to provide structural engineering services for the Newcastle Art Gallery expansion project.

We have reviewed the "Report on Pillar Stability and Subsidence Modelling, Newcastle Art Gallery Proposed Alterations and Additions, 1 Laman Street Newcastle", Project 49737.05, Document Number R.002.Rev0, dated 27 August 2021, by Douglas Partners (DP). The report provides subsidence parameters associated with mine workings in the Borehole Seam.

As described in the letter from Shane McDonald dated 25 June 2021, Subsidence Advisory NSW (SANSW) requires that the proposed structure can be designed to be "safe, serviceable and any damage from mine subsidence shall be limited to 'very slight' in accordance with AS2870 (Damage Classification), and readily repairable" given the subsidence parameters detailed in the DP report.

We confirm that the proposed structure can be designed to accommodate the above requirement. We also note that this applies to the new structure only, not to the existing gallery building.

Yours sincerely

Andrew Phillips

Associate

MIEAust CPEng NER

Peter Smith, Smith & Tzannes
Penny Hoyle, Smith & Tzannes
Janine Sidhom
Phillip Lathourakis
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