SUBSIDENCE EVENT NOTIFICATION

Tahmoor Coal - Longwall West 1-West 2 Subsidence Event Notification

Reported Date:	**Reported Time:**	**Reported By:**
16/09/2021 (MSEC) 17/09/2021 (EMM)	N/A	Daryl Kay, Mine Subsidence Engineering Consultants (MSEC) Pamela Chauvel, EMM Consultants
Incident Date:	**Incident Time:**	**Reported To:**
21/06/2021 (Newcastle GeoTech inspection date) 25/08/2021 (EMM historical heritage inspection date for LW W2 End of Panel reporting)	N/A	April Hudson, Tahmoor Coal

Location:

Culverts located at 88.400 km and 88.980 km (distance measured from Sydney Central Station) located on the Picton-Mittagong Loop Line (PMLL), Picton (refer to Figure 1).

Event:

Longwall West 1 – West 2 subsidence event.
Level 3 TARP trigger for historical heritage at two culverts (88.400 km and 88.980 km) located on the PMLL as the following has occurred:

- Historical heritage site monitoring indicates environmental consequences to heritage site(s).

Environmental consequences were confirmed to have occurred following the EMM historical heritage End of Panel monitoring for LW W2, and were noted to consist of:

- Culvert 88.400:
  - An 8 mm wide crack in the vertical mortar joint, and cracked sandstone capping on the downside abutment.
  - A 7 mm wide crack in a mortar joint around the arch stones at the upside abutment, as well as minor spalling of sandstone on the arch stones.
- Culvert 88.980:
  - Cracks through the mortar and sandstone capping as well as some minor spalling of the arch stones of the western portal (in addition to existing pre-mining cracking).

It is noted that the two culverts are not listed heritage items, however have local heritage significance as individual items and as a group (of culverts located on the PMLL).
It is also noted that DA 67/98 performance measure for 'other Aboriginal and heritage sites' has been exceeded as visible perceptible impacts such as subsidence induced cracking, exfoliation, block movement or block fall, have been observed. However, heritage value of these culverts will be restored using established techniques.

Management Plan/s Activated:

Tahmoor Coal Longwalls West 1 and West 2 Extraction Plan
Tahmoor Coal Longwalls West 1 and West 2 Heritage Management Plan

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Immediate Response:

- Site inspection by a structural engineer (Mark Delaney from Newcastle GeoTech) was completed on 21 June 2021, and his report was reviewed by structural engineer John Matheson (JMA Solutions).
- Archaeologist (Pamela Chauvel from EMM) inspected the culverts on 25 August 2021.
- Discussion of the historical heritage monitoring findings and proposed response to the culvert impacts at the Tahmoor Coal Environmental Response Group Meeting was completed on 14 September 2021.
- Report on summary of subsidence predictions and observations relating to the two culverts in question was completed by MSEC on 16 September 2021. This report also reviewed mine design/predictions against mine criteria and concluded that heritage value can be restored using established techniques.
- Report on Historical Heritage End of Panel by EMM on 17 September 2021.
- Subsidence event notification (this document) to DPIE and Heritage NSW in accordance with Section 6.1.2 of LW W1-W2 Extraction Plan.

Likely or Known Cause:

Consequence of subsidence impacts from the mining of Longwalls West 1 and West 2.

Management Actions:

As per the relevant Historical Heritage TARP, the following actions will be completed:

1. Continue monitoring and management of sites in accordance with the LW W3-W4 Heritage Management Plan. The Picton Mittagong Loop Line Management Plan for LW W3-W4 was prepared in consultation with Transport Heritage NSW and the Tahmoor Coal Rail Management Group. Monitoring of the two culverts in accordance with this management plan have been adopted in the LW W3-W4 Heritage Management Plan;
2. Tahmoor Coal is seeking further expert advice from a heritage stonemason regarding remediation of the sandstone; and
3. Remediation will be undertaken after the full effects of LW W3-W4 have been completed.

Responsible & Reporting Person:

Responsible Person: Zina Ainsworth - Environment and Community Manager, Tahmoor Coal
Reporting Person: April Hudson - Approvals Specialist, Tahmoor Coal

Notification Required:

- Tahmoor Coal Longwalls West 1 and West 2 Extraction Plan
- Tahmoor Coal Longwalls West 1 and West 2 Heritage Management Plan

NSW Department of Planning, Industry and Environment
Heritage NSW

Is there a public safety risk?	**No**

Stakeholder/s to be Notified:

As per above.

Attachment/s (if applicable):

Figures attached below:
Figure 1 – Heritage sites within the study area, and impacted culverts

Reports attached :
EMM (2021), Historical Heritage monitoring report : Tahmoor Mine Longwall West 2 (LW W2) End of panel monitoring inspection, 17 September 2021

MSEC (2021), Tahmoor Coal – Picton to Mittagong Loop Line Culverts at 88.400km and 88.890km, 16 September 2021

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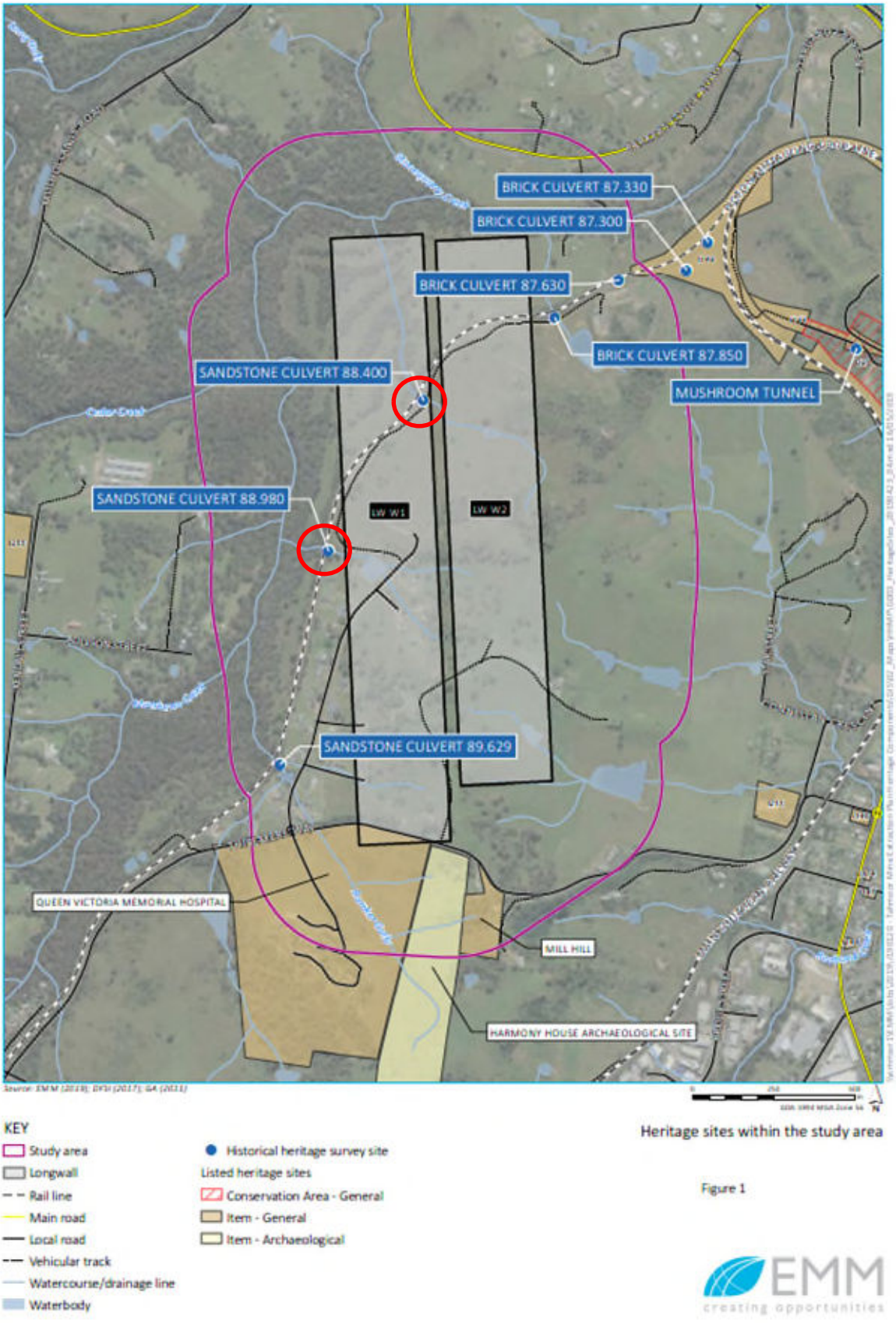

Figure 1 – Heritage sites within the study area, and impacted culverts