## Aboriginal Heritage

A number of Aboriginal heritage sites have been identified within 600 metres of Longwalls 20-22 secondary extraction and are shown on Figure 1.

The first round of monitoring (Round 1) was conducted in January and March 2012 and recorded subsidence impacts to two sites, namely site FRC 281 and site FRC 284. The results were described in the Metropolitan Coal 2012 Environmental Monitoring Summary.

The second round of monitoring (Round 2) was conducted in July/August 2013 and included all Aboriginal heritage sites located within the 35º Angle of Draw for Longwalls 20 and 21 (Figure 1 and Table 1).

The Round 2 monitoring team included an archaeologist (with experience in rock art recording and management) and Aboriginal stakeholder representatives. A summary of the information collected during monitoring is recorded in the Heritage Management Plan – Subsidence Impact Register.

Specific details that are recorded during the monitoring program include:

- the date of monitoring;
- the location of longwall extraction (i.e. the longwall chainage) at the time of monitoring;
- comparison of the physical characteristics of the site at the time of monitoring against the previous monitoring and the baseline record (detail/quantify any changes observed);
- inspections of rock surfaces for cracking and/or exfoliation and/or blockfall since the previous monitoring and against the baseline record;
- inspection of art motifs for damage or deterioration since the previous monitoring and against the baseline record;
- identification of any natural deterioration processes (e.g. fire, vegetation growth and water seepage);
- detailed description and quantification of any changes noted during the completion of the above tasks;
- a photographic record of any changes noted during monitoring (taken at the same position and distance as baseline record to allow comparison over time);
- whether any follow-up actions are required to be considered (e.g. implementation of management or initiation of the Contingency Plan, etc.); and
- any other relevant information.

**Table 1**
**Aboriginal Heritage Site Monitoring – Round 2**

| Aboriginal Heritage Sites | | |
|---|---|---|
| FRC 13 | FRC 160 | MET 1 |
| FRC 14 | FRC 168 | PAD 2 |
| FRC 15 | FRC 266 | FRC 22 |
| FRC 16.1 | FRC 273 | FRC 25 |
| FRC 16.2 | FRC 272 | FRC 45 |
| FRC 17 | FRC 278 | FRC 46 |
| FRC 20 | FRC 279 | FRC 119 |
| FRC 21 | FRC 280 | FRC 176 |
| FRC 105 | FRC 281 | FRC 274 |
| FRC 23 | FRC 284 | FRC 275 |
| FRC 124 | FRC 285 | FRC 283 |
| FRC 125 | FRC 304 | FRC 302 |

Site FRC 168 (a grinding groove) and site FRC 302 (an overhang with artefacts and deposits) could not be located during Round 2 monitoring. Attempts to locate sites FRC 168 and FRC 302 will be made during Round 3 monitoring.

A previously unrecorded site was identified during Round 2 monitoring. Appropriate baseline records have been obtained for this site and it will be registered on the *Aboriginal Heritage Information Management System (AHIMS)* database and included in the Round 3 monitoring program.

# METROPOLITAN COAL - ENVIRONMENTAL MONITORING SUMMARY

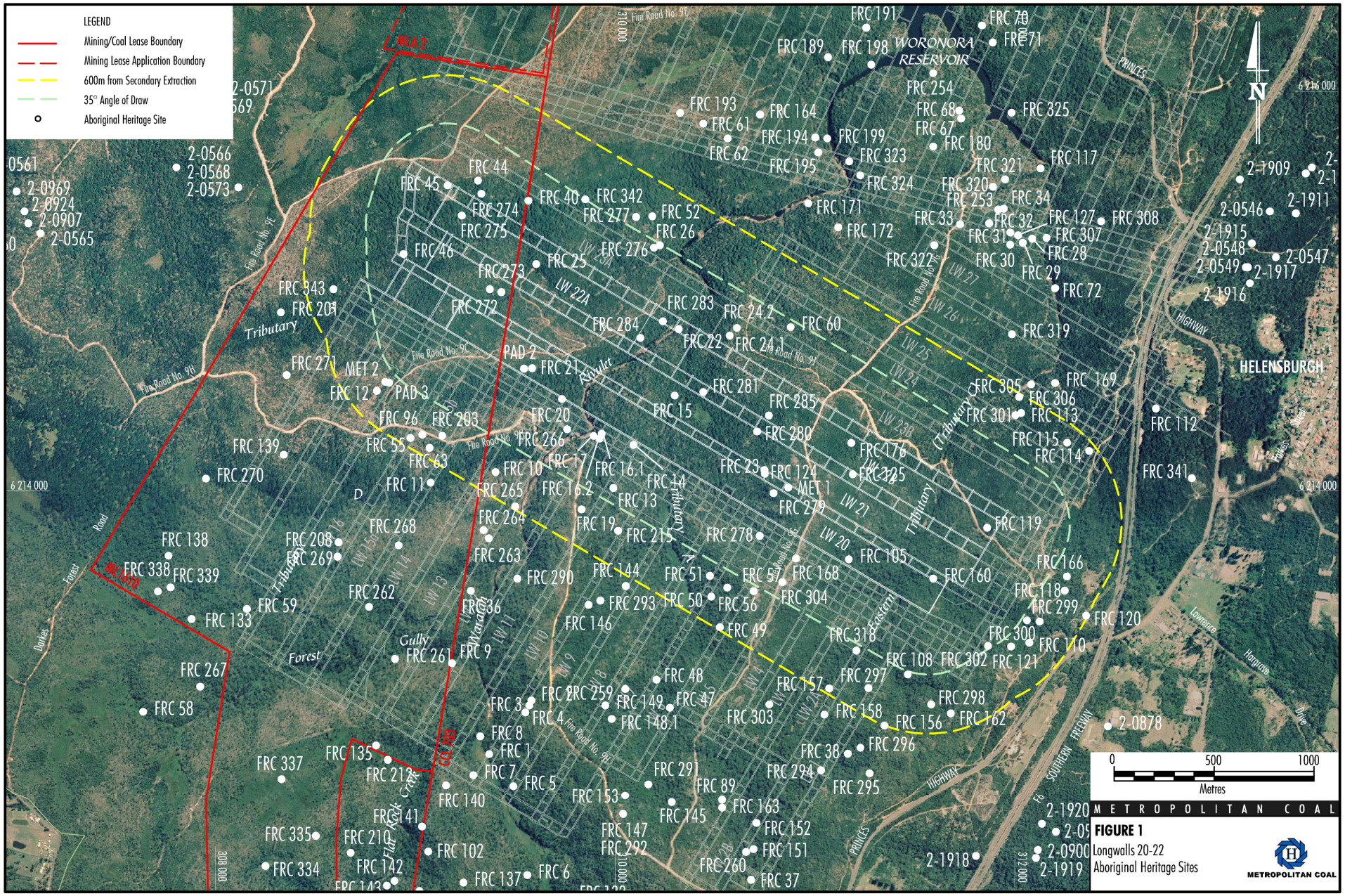


**FIGURE 1**
Longwalls 20-22
Aboriginal Heritage Sites

METROPOLITAN COAL

Peabody ENERGY

METROPOLITAN COAL

To date, three sites have been observed to have changes attributable to mine subsidence, namely sites FRC 15, FRC 284 and FRC 281:

- At site FRC 15 (an overhang with artefacts and deposit), the vertical crack previously noted on the back wall during Round 1 monitoring was observed to have increased in width and shifted laterally during Round 2 monitoring. Vertical cracking had also increased along the margins of this crack.
- At site FRC 284 (an overhang with artefacts and deposit), displacement of a small section of exfoliated shelter surface associated with a fractured corner of the shelter was observed during the Round 2 monitoring. This impact was consistent with the types and scale of impact (cracking, displacement and slumping/falling of exfoliated pieces) noted during Round 1 monitoring.
- At site FRC 281 (an overhang with art, artefacts and deposit), the impacts recorded during Round 1 monitoring (multiple cracks ranging from large, medium and small recorded in the shelter wall either running through or next to the motifs) were observed at the site during Round 2. There had, however, been no change in the shelter condition since Round 1 monitoring, suggesting the site had stabilised.

The monitoring results were used to assess the Project against the Aboriginal heritage subsidence impact performance measure:

> *Less than 10% of Aboriginal heritage sites within the mining area are affected by subsidence impacts.*

The Aboriginal heritage subsidence impact performance measure was not exceeded during the reporting period.