

**Appendix E Subsidence
Management Plan
Peer Review Letter**

7th March 2022

Garry Gough
Ensham Resources

Garry,

SUBJECT: Peer Review Outcomes – Subsidence Management Plan, Zones 2 and 3, Ensham Life of Mine Extension

This short report contains the summary outcomes of an independent peer review of the Ensham Resources Subsidence Management Plan (SMP), document reference EIMP.06.00.06, which was prepared in association with Gordon Geotechniques Pty Ltd as the appointed Geotechnical Engineer at Ensham Mine and includes the two proposed mining areas known as Zones 2 and 3. It is confirmed that the author has been provided with a final copy of the SMP document in question as part of carrying out this peer review.

It is noted at the outset that the mine design and associated surface subsidence predictions that will need to be managed during mining operations by the SMP have their origin in **GGPL 2022**, which has already been formally peer-reviewed by Mine Advice, as confirmed in **Mine Advice 2022**.

It is confirmed that in the professional opinion of the author, the supplied SMP is fit for purpose on the basis of the following summary points:

- (i) the described method of mining, layout design approach and subsidence prediction methodology are fully consistent with that contained in **GGPL 2022**.
- (ii) the proposed measurement and assessment of both the as-formed mine workings and consequent surface settlements due to mining are entirely consistent with ensuring that actual settlements are within the upper bound predictions contained in **GGPL 2022**, thereby ensuring that actual Factors of Safety against both excessive settlements and/or pillar collapse are consistent with those determined from pre-mining layout design and subsidence analyses.
- (iii) in particular, the planned use of the fixed RTK-GPS surface level monitoring system with a demonstrated accuracy of ± 5 mm, is regarded as best-practice for reliably tracking very low level surface settlements due to bord and pillar mining that leaves stable remnant pillars in place, and provides for the highest possible level of confidence that post-mining stability of the remnant workings is equal to if not better than those determined from the pre-mining layout design process.
- (iv) it is considered that the combination of measurements and surface and underground observations as well as their respective frequencies, are fully consistent with the rate that new mine workings will be formed-up and their actual stability will need to be evaluated and confirmed via the SMP.

In summary, I concur with the intent and contents of the SMP for Zones 2 and 3 including its comprehensive link to the layout design and surface subsidence settlement predictions as contained in **GGPL 2022**.

Please contact the under-signed if you require anything further in this matter.

Yours sincerely,

Handwritten signature of Russell Frith, consisting of the letters 'R' and 'A' in a stylized, cursive font.

Russell Frith
Senior Principal Geotechnical Engineer
FAusIMM CP(Geotech) RPEQ # 12952

REFERENCES

GGPL (2022). **Subsidence Report for the Ensham Life Of Mine Extension – Zones 2 and 3.** Commercial consulting report to Ensham Resources, February 2022.

Mine Advice (2022). **Peer Review Outcomes – GGPL Mine Layout and Surface Subsidence Assessment Report, Ensham Life of Mine Extension, Zones 2 and 3.** Commercial consulting report to Ensham Resources, 15th February 2022.