



Ref: T2019/001021

20 October 2021

Mr Martin Janes
Chief Executive Officer
Terramin Australia Limited and Terramin Exploration Pty Ltd
Unit 7, 202-208 Glen Osmond Road
FULLARTON SA 5063

Dear Mr Janes,

MINING LEASE APPLICATION OVER MINERAL CLAIM (MC) 4473 AND MISCELLANEOUS PURPOSES LICENCE APPLICATION FOR THE BIRD IN HAND GOLD PROJECT – REQUEST FOR INFORMATION

The Department for Energy and Mining (DEM) acknowledges the work that has been undertaken by Terramin and its consultants in support of the Response Document which was accepted by DEM on 23 August 2021.

DEM are now in the final assessment stage and have identified specific parts of the response that require additional clarification to allow for a comprehensive assessment. Specific matters which DEM seeks additional clarification on are detailed in **Attachment 1**.

In accordance with Section 36(2) and 49(2) of the *Mining Act 1971*, I require that Terramin address the matters included in the attachment within **6 weeks** of the date of this letter.

Consistent with earlier advice to Terramin, the Minister for Energy and Mining or delegate reserves the right to request further information as required during the assessment process.

Should Terramin wish to clarify any matters in this letter, including through engagement with relevant government technical specialists, or if Terramin requires additional time to provide a response, please contact Paul Thompson, Senior Assessment Officer.

Yours sincerely,

A handwritten signature in blue ink, appearing to read 'Andrew Querzoli'.

Andrew Querzoli
MANAGER MINING ASSESSMENTS
DELEGATE OF THE MINISTER FOR ENERGY AND MINING

Attachment 1: Government Matters Raised and Request for Information

Attachment 1 – Government Matters Raised and Request for Information

The following information is required in accordance with Section 36(2) and 49(2) of the *Mining Act 1971*.

Table 1: Matters Raised and Request for Information on the Bird in Hand Gold Mining Project

#	Topic	DEM Comment	Request for Information/Clarification
1	Controlled inundation	<p>Matter 54 (Table 5) of Terramin’s response document describes a ‘controlled inundation’ strategy as a response to the unlikely scenario of mine inflow exceeding Managed Aquifer Recharge (MAR) reinjection capacity.</p> <p>The response states that the groundwater outcome would continue to be achieved as groundwater would reach equilibrium with the surrounding groundwater elevation.</p> <p>Further information is required to understand the consequence on receptors during ‘controlled inundation’ in the event of mine inflows consistent with interception of the Hanging Wall Fracture (HWF), and how the strategy would practically be enacted in conjunction with other relevant strategies including:</p> <ul style="list-style-type: none"> • underground pumping and staging capacity; • water storage; • water treatment; and • MAR. <p>Further information is also required to understand the consequence of the cessation of MAR at mine closure and the potential for drawdown at receptor wells during the period of time it takes for groundwater equilibrium to be reached.</p>	<p>Controlled Inundation Strategy – Practical Application</p> <p>Provide a detailed description of:</p> <ol style="list-style-type: none"> 1. the actions involved in a ‘controlled inundation’ strategy and the transition from ‘business as usual’ groundwater management, including the relationship to any contingency/buffer capacity within the water balance and the operation of MAR; 2. how the necessary water volumes would be practically extracted to ensure continuity of MAR (considering head, changing water levels, any buffer requirements, access etc); 3. the recoverability of operations from controlled inundation. <p>Controlled Inundation - Potential Impacts</p> <ol style="list-style-type: none"> 4. Using the revised numerical model, simulate mine inflows consistent with interception of the HWF at the point in the life of mine (and depth) where the likelihood and consequence (separately) of that interception is greatest, with the highest probable rate of inflow. <p>Provide:</p> <ol style="list-style-type: none"> a. The rationale for the selected simulation(s). (DEM note that the uncertainty analysis shows the highest inflows for each grouting scenario to occur at year 5 of mining; and earlier sensitivity analysis included a scenario intercepting the hanging wall fracture at 300 m below ground level, approximately 3.5 years after the commencement of underground extraction). b. The results of the simulation(s) including drawdown curves against time for relevant receptors. c. Analysis of the potential for (and spatial extent of any) impact on receptors associated with the period between a requirement to enact the strategy, and groundwater levels reaching equilibrium. Describe any other relevant strategies. <ol style="list-style-type: none"> 5. Provide a description of any potential impacts to groundwater quality as a result of in-situ equipment/infrastructure that would be inundated.

#	Topic	DEM Comment	Request for Information/Clarification
			<p>Closure</p> <p>6. Provide a description of the potential for impact to receptors during the period between the cessation of MAR at mine closure and re-equilibrium of groundwater conditions.</p>
2	Land Access	Given the elapsed time since the applications were received, updated information on exempt land relevant to the applications is required for both the Mining Lease (ML) and Miscellaneous Purposes Licence (MPL) applications.	<p>Provide as required:</p> <ul style="list-style-type: none"> - Updated Exempt Land Maps for the ML application at Woodside (Appendix T1 of the ML Mining Proposal) - Updated register of Exempt Land and status of any relevant waivers for the ML application at Woodside (Table E1 - Appendix T3 of the ML Mining Proposal) - Updated Exempt Land Maps for the MPL application at Strathalbyn (Appendix W1 of the MPL Proposal) - Updated register of Exempt Land and status of any relevant waivers for the MPL application at Strathalbyn (Table 22-4 of the MPL Proposal).