

Submission on the referral

Lithium Development (Grants) Northern Territory Pty Ltd – Finniss Lithium Project BP33 Underground Mine – Proposed Variations

This submission is made under regulation 53 of the Environment Protection Regulations 2020

Government authority: Aboriginal Areas Protection Authority

Summary:

Section of Referral	Theme or issue	Comment
Main report Groundwater sections	Inland Waters – groundwater drawdown	The proposal to deepen the underground mine by approximately 500 m introduces uncertainty regarding the magnitude, extent and duration of groundwater drawdown. While modelling has been undertaken, the referral does not provide sufficient clarity on predicted drawdown depth, spatial extent or temporal scale. Drawdown is identified as extending up to approximately 500 m from the pit and underground workings. Further information is required to demonstrate that drawdown impacts are fully characterised and do not result in unassessed environmental or cultural risks.
Main report – hydrogeology	Inland waters – aquifer connectivity	Multiple aquifers are described with varying degrees of hydraulic connectivity; however, the assumptions underpinning this connectivity are not clearly articulated. Drawdown of deeper aquifers is likely to induce downward leakage from upper systems, reducing water levels in shallower aquifers. The referral should clearly describe the conceptual hydrogeological model, degree of connectivity between aquifers, and implications for near-surface and surface water systems. This is necessary to assess indirect and cumulative impacts beyond the disturbance footprint.
Main report – impacts and risk assessment	Inland waters – groundwater dependent ecosystems	Groundwater levels are relatively shallow and may decline over the life of the project, potentially falling below vegetation rooting depths within the drawdown zone. However, the referral does not clearly identify whether groundwater dependent ecosystems or cultural values occur within this area, nor assess their sensitivity to drawdown. Further assessment is required to identify groundwater-dependent receptors and evaluate potential impacts.
Assessment Criteria (AC)	Inland waters – adequacy of impact assessment	The assessment framework references dewatering but does not explicitly identify groundwater drawdown as a primary impact pathway. It is also unclear whether consultation adequately communicated the extent and implications of groundwater level decline. The framework should explicitly include groundwater drawdown and demonstrate that consultation has addressed associated indirect impacts, including ecological and cultural risks.

Environmental impact assessment under the Environment Protection Act 2019

Main report – surface water	Inland waters – surface water interaction	The referral concludes minimal impacts on creek flows; however, given the predicted drawdown and aquifer connectivity, there is potential for localised reductions in baseflow. Additional justification is required to substantiate this conclusion, including clear linkage between groundwater drawdown and surface water systems and sensitivity analysis under low-flow conditions.
Main report – study area	Inland waters – extent of impact	The referral indicates no water-related sites have been identified within the subject land and suggests limited impact extent. While this may indicate low likelihood of direct impact, the assessment does not clearly demonstrate that groundwater-related effects beyond the disturbance footprint have been adequately characterised. Survey methods, coverage and consideration of receptors outside the immediate area should be clearly documented
Main report – project description	Information gaps	The referral does not specify the depth of underground mine workings, which is critical for understanding groundwater interception and validating modelling. Additional information is required, including: confirmed depth of workings, detailed modelling inputs/assumptions/outputs, clearly defined drawdown contours, and validation against observed data (where available). These are necessary to assess potential significant impacts.