



Appendix 2

Updated Measures to Mitigate Environmental Impacts and Statement of Commitments

(Total No. of pages including blank pages = 10)



This compilation of the management and mitigation and updated table of measures for the Tomingley Gold Operations (TGO) has been prepared in accordance with the NSW Government's *State Significant Development Guidelines – Preparing a Submissions Report* (November 2021).

Table A2.1 presents a compilation of mitigation and monitoring measures presented in the *Modification Report*. Where these measures have been adjusted as a result of submissions received, these changes have been identified as red underline text.

Table A2.2 presents an updated version of Appendix 8 – Statement of Commitments from MP09_0155. Where the Statement of Commitments have been updated in light of commitments made in the *Modification Report*, these changes have been identified as red underline text. Where text has been removed, it is presented as ~~red-strikeout-text~~. **Table A2.2** is intended to replace the current Appendix 8 from MP09_0155 in the event that MOD6 is approved.



Table A2.1
Proposed Environmental Management and Monitoring Measures

Page 1 of 2

Desired Outcome	Action	Timing
NOISE		
Noise generated by operational activities does not exceed intrusiveness criteria nor significantly impacts on neighbouring landowners and/or residents.	Continue to implement the approved <i>Noise Management Plan</i> . That plan would be reviewed following modification of the development consent and, if required, it would be revised.	Within 3 months of approval and ongoing
	Utilise broadband reversing alarms on all mobile equipment.	Ongoing
	Continue to use meteorological forecasting information to identify periods of noise enhancing conditions such as inversions or noise enhancing winds to inform planning of surface activities.	
	Ensure that all personnel are inducted prior to work at the TGO Mine Site, including in regard to noise impacts.	
	Continue to undertake attended noise monitoring at selected locations surrounding the TGO Mine Site	
AIR QUALITY		
Particulate matter generated by operational activities do not exceed relevant criteria nor significantly impacts on neighbouring landowners and/or residents.	Continue to implement the approved <i>Air Quality Management Plan</i> . That Plan would be reviewed, <u>in consultation with the Environment Protection Authority</u> , following modification of the development consent and, if required, it would be revised.	Within 3 months of approval and ongoing
	Disturb only the minimum area necessary for mining operations.	Ongoing
	Use water sprays/sprinklers or water carts on internal, unsealed roads and in other areas to minimise dust emissions, as required.	
	Clearly mark all haul roads and other roads and tracks and ensure that signposted speed limits are complied with.	
	Minimise drop heights during loading and unloading of waste rock and ore and avoid tipping material down a tip face.	
	Apply water to material stockpiles prior to loading, transportation and unloading to limit dust emissions, as required.	
Particulate matter generated by the Project is monitored and procedures developed and implemented to respond to ensure compliance is maintained.	Monitor meteorological conditions (including via automated alerts) to identify periods of adverse weather (little or no rainfall and wind speeds above 30km/h) and implement appropriate additional mitigation measures, including: - increased use of water sprays and water carts; and - relocation or ceasing operations likely to generate significant dust emissions.	Ongoing
	Undertake visual monitoring and mandatory reporting of visible dust emissions to site supervisors and implement measures to minimise or reduce observed dust emissions.	
	Monitor real-time dust emissions (including via automated alerts) using the existing real-time dust monitor and implement measures to minimise or reduce observed dust emissions when predefined triggers are exceeded.	
	Progressively implement the following additional management measures as a Trigger Action Response Plan in the event that the existing TEOM indicates elevated concentrations of PM ₁₀ . - Reduce speed of haul trucks and increase the frequency of watering if safe to do so. - Cease the transportation and unloading of material.	



Table A2.1 (Cont'd)
Proposed Environmental Management and Monitoring Measures

Page 2 of 2

Desired Outcome	Action	Timing
SURFACE WATER		
Effective management of the potential contamination and/or reduction in availability of surface water resources.	Continue to implement the approved <i>Water Management Plan</i> . That plan would be reviewed <u>in consultation with the Environment Protection Authority</u> , following modification of the development consent and, if required, it would be revised.	Within 3 months of approval and ongoing
	Ensure that Mine and Process Water are not permitted to be discharged from the TGO Mine Site.	Ongoing
GROUNDWATER		
Effective management of the potential contamination and/or reduction in availability of groundwater resources.	Continue to implement the approved <i>Water Management Plan</i> . That plan would be reviewed following modification of the development consent and, if required, it would be revised.	Ongoing
	Continue to monitor groundwater levels and quality in bores and piezometers with and surrounding the TGO Mine Site and review resulting data to determine if the approved or proposed activities are adversely impacting on groundwater levels or quality.	Ongoing



Table A2.2
Revised Statement of Commitments

Page 1 of 6

Desired Outcome	Action	Timing
1. ENVIRONMENTAL MANAGEMENT		
Compliance with all conditional requirements in all approvals, licences and leases.	1.1 Comply with all commitments recorded in this table.	Continuous and as required
	1.2 Comply with all conditional requirements included in the: - PA 09_0155; - EPL 20169; - ML 1684; and - Groundwater licences.	Ongoing
	1.3 Implement the following management plans; - Mining Operations Plan (Rehabilitation Management Plan) - Cultural Heritage Management Plan - Water Management Plan - Noise Management Plan - Blast Management Plan - Air Quality and Greenhouse Gas Management Plan - Biodiversity Management Plan - Traffic Management Plan - Hazardous Materials Management Plan - Pollution Incident Response Management Plan	Ongoing
Compile relevant environmental data for publication	1.4 Prepare monthly environmental management reports and upload to the Mine website.	Monthly
	1.5 Incorporate relevant environmental data / information in Annual Environmental Management Reports	Annual
2. AREA OF ACTIVITIES		
All approved activities are undertaken generally in the location(s) nominated on the figures shown in Sections 2 and 4.	2.1 Mark, and where appropriate, survey the boundaries of the areas of proposed disturbance on the Mine Site.	Prior to the commencement of the relevant activity
	2.2 Mark, and where appropriate fence, boundaries relevant to the biodiversity offset strategy.	Within 6 months of approval of the biodiversity offset strategy
3. OPERATING HOURS		
All operations are undertaken within the approved operating hours.	3.1 Undertake all activities, where practicable, in accordance with the operating hours approved by PA 09_0155.	Continuous and as required
4. NOISE		
Noise generated by operational activities does not exceed intrusiveness criteria nor significantly impacts on neighbouring landowners and/or residents.	4.1 Construct and maintain an acoustic and amenity bund at the northern end of the Mine Site in accordance with PA 09_0155 MOD 2.	Complete
	4.2 Implement noise mitigation and management measures in accordance with an approved Noise Management Plan (NMP).	Ongoing
	4.3 <u>Utilise broadband reversing alarms on all mobile equipment.</u>	<u>Ongoing</u>
	4.4 <u>Continue to use meteorological forecasting information to identify periods of noise enhancing conditions such as inversions or noise enhancing winds to inform planning of surface activities.</u>	<u>Ongoing</u>
	4.5 <u>Ensure that all personnel are inducted prior to work at the TGO Mine Site, including in regard to noise impacts.</u>	<u>Ongoing</u>



Table A2.2 (Cont'd)
Revised Statement of Commitments

Page 2 of 6

Desired Outcome	Action	Timing
4. NOISE (Cont'd)		
Noise generated by the Project is monitored and procedures developed and implemented to respond to ensure compliance is maintained.	4.6 Undertake noise monitoring, <u>including attended noise monitoring</u> , in accordance with an approved NMP.	As defined within the NMP
	4.7 Implement procedures for response to real-time monitoring results.	As required on receipt of notification
	4.8 Complete annual noise compliance monitoring.	Annual
Noise complaints are recorded and addressed in an appropriate manner	4.9 Ensure that a 24-hour complaints telephone line is maintained and that the surrounding community is made aware of the number. If noise-related complaints are received.	Prior to the commencement of activities on the Mine Site
	4.10 Ensure that prompt action is taken to identify the nature of any complaint received and verify the relevant noise levels using the real-time noise monitoring equipment.	Within 24 hours of receipt of complaint
5. SURFACE WATER		
Effective management of the potential contamination and/or reduction in availability of surface water resources.	Construct and maintain surface water management infrastructure of the Mine in accordance with an approved Water Management Plan (WMP).	Ongoing
	Implement impact mitigation measures in accordance with an approved WMP.	As defined by the WMP
	Undertake surface water monitoring in accordance an approved WMP	As defined by the WMP
Effective management of the potential contamination and/or reduction in availability of surface water resources.	5.1 <u>Continue to implement the approved Water Management Plan. That plan would be reviewed, in consultation with the Environment Protection Authority, following modification of the development consent and, if required, it would be revised.</u>	<u>Ongoing</u>
Design and construct surface water management structures to prevent the discharge of contaminated (hydrocarbon, cyanide, trace metals etc.) water from the Mine Site	5.2 <u>Ensure that Mine and Process Water are not permitted to be discharged from the TGO Mine Site.</u>	<u>Ongoing</u>
	5.3 Ensure that all fuel and reagent storage, delivery and handling areas are appropriately sealed and bunded and that overflow pipes are installed in a manner that would minimise the potential for pollution in the event of overfilling.	Ongoing
	5.4 Securely store all hydrocarbon and chemical products.	Ongoing
	5.5 Ensure all hydrocarbon and chemical storage tanks are either self-bunded tanks or bunded with an impermeable surface and a capacity to contain a minimum 110% of the largest storage tank capacity.	Ongoing
	5.6 Refuel all equipment within designated areas of the Mine Site, where practicable.	Ongoing
	5.7 Undertake all maintenance works involving hydrocarbons, where practicable, within designated areas of the Mine Site such as the maintenance workshop.	Ongoing
	5.8 Direct all water from wash-down areas and workshops to oil/water separators and containment systems.	Ongoing
	5.9 Construct the RSF in accordance with design specifications and have QA/QC assessment completed.	During site establishment phase (prior to commencement of mining)
	5.10 Line the RSF and Raw Water Dam with compacted clay to achieve a permeability of 1 x 10 ⁻⁹ m/s or less.	
	5.11 Provide for design specific freeboard within the RSF and Raw Water Dam to prevent overtopping.	



Table A2.2 (Cont'd)
Revised Statement of Commitments

Desired Outcome	Action	Timing
6. GROUNDWATER		
Effective management of water dewatered from the open cuts	6.1 Remove water accumulating in the open cuts, transfer to Dewatering Dams and use preferentially for dust suppression activities.	Ongoing
Effective management of the potential contamination and/or reduction in availability of groundwater resources.	6.2 <u>Continue to implement the approved Water Management Plan. That plan would be reviewed following modification of the development consent and, if required, it would be revised.</u>	<u>Ongoing</u>
	6.3 <u>Continue to monitor groundwater levels and quality in bores and piezometers with and surrounding the TGO Mine Site and review resulting data to determine if the approved or proposed activities are adversely impacting on groundwater levels or quality.</u>	<u>Ongoing</u>
	6.4 Implement impact mitigation measures in accordance with an approved Water Management Plan (WMP).	As defined by the Water Management Plan
	6.5 Undertake the groundwater monitoring in accordance an approved WMP.	
Ensure the availability of groundwater to surrounding users is maintained.	6.6 Implement additional assessment, land owner notification and contingency or compensatory measures in accordance with an approved Site Water Management Plan.	As defined by the Water Management Plan
7. BIODIVERSITY		
Avoid, minimise, mitigate or offset impacts (in that hierarchical order) on native vegetation (including the two identified EECs), native fauna (including threatened species) and their habitat.	7.1 Locate the Mine Site activities and infrastructure so as to avoid the majority of remnant native vegetation. Restrict disturbance of remnant native vegetation to (approximately): • 2.7ha (of 36.9ha) of Inland Grey Box – Poplar Box – White Cypress Pine tall woodland on red loams; • 0.9ha (of 30.9ha) of Fuzzy Box – inland Grey Box on alluvial brown loam soils; and • 18.8ha (of 70.3ha) of Belah / Black Oak Western Rosewood Wilga woodland.	Ongoing
	7.2 Implement the impact avoidance, minimisation, mitigation and offset measures of an approved Biodiversity Offset Strategy and Biodiversity Management Plan (BMP) for the Mine in consultation with the OEH and DPE.	Ongoing
Offset residual impacts on native flora and fauna.	7.3 Implement the Conservation Property Vegetation Plan, as agreed and signed between TGO and Local Land Services – Central West.	In perpetuity
Rehabilitate disturbed areas to create a final landform that maintains or improves biodiversity values of the Project Site.	7.4 Complete rehabilitation in accordance with an approved Rehabilitation Management Plan (RMP) or Mining Operations Plan (MOP).	Ongoing
8. ABORIGINAL HERITAGE		
Maintain Aboriginal heritage values on site.	8.1 Implement the Cultural Heritage Management Plan for the Mine in consultation with OEH and DPE.	Ongoing
	8.2 In the event the disturbance footprint changes, ensure that appropriate consultation and field survey is undertaken to confirm no sites or objects of Aboriginal heritage significance are impacted.	If the disturbance footprint changes
	8.3 Ensure work in an area is suspended should any Aboriginal sites be uncovered. The OEH Western Regional Archaeologist (Dubbo Office) and local Aboriginal community will be contacted to discuss how to proceed.	If a previously unidentified object or Aboriginal site is uncovered



Table A2.2 (Cont'd)
Revised Statement of Commitments

Page 4 of 6

Page 4 of 6

Desired Outcome	Action	Timing
9. NON ABORIGINAL HERITAGE		
Site activities are undertaken to minimise impacts on non-Aboriginal heritage items.	9.1 Implement the Cultural Heritage Management Plan for the Mine in consultation with OEH and DPE.	Ongoing
10. VISUAL AMENITY		
Limit the visibility of operational areas from nearby residences and the Newell Highway.	10.1 Maintain vegetated amenity bunds in the following locations. • Adjacent to the eastern and western boundary of the Newell Highway. • To the north of the Caloma Open Cut. • To the south of the Wyoming One Open Cut. • to the north of Waste Rock Emplacement 2.	Ongoing
	10.2 Construct and progressively rehabilitate the Waste Rock Emplacements in accordance with an approved MOP (or Rehabilitation Management Plan).	Continuous for the life of the Project
	10.3 Place and operate lighting on the Mine Site that: • are not directed towards, and therefore do not impact on the vision of motorists using, the Newell Highway; • do not point towards surrounding residences; and • minimise the 'loom' created by the lights.	Continuous for the life of the Project
	10.4 Provide for additional visual screening in response to reasonable and feasible request from surrounding land holders.	As required
	10.5 Maintain the Mine Site in a clean and tidy condition at all times.	Continuous for the life of the Project
	10.6 Implement commitments related to air emissions management.	
11. AIR QUALITY		
Minimise impacts to air quality relating to the Project.	11.1 Undertake all surface disturbance, mining, processing, transportation and other air emissions activities in accordance with an approved Air Quality and Greenhouse Gas Management Plan (AQGHGMP) for the Mine.	Ongoing
Monitor and manage dust emissions.	11.2 Undertake air quality monitoring in accordance with an approved AQGHGMP for the Mine.	As defined within the AQGHGMP
<u>Particulate matter generated by operational activities do not exceed relevant criteria nor significantly impacts on neighbouring landowners and/or residents.</u>	11.3 <u>Continue to implement the approved Air Quality Management Plan. That Plan would be reviewed, in consultation with the Environment Protection Authority, following modification of the development consent and, if required, it would be revised.</u>	<u>Within 3 months of approval and ongoing</u>
	11.4 <u>Disturb only the minimum area necessary for mining operations.</u>	<u>Ongoing</u>
	11.5 <u>Use water sprays/sprinklers or water carts on internal, unsealed roads and in other areas to minimise dust emissions, as required.</u>	<u>Ongoing</u>
	11.6 <u>Clearly mark all haul roads and other roads and tracks and ensure that signposted speed limits are complied with.</u>	<u>Ongoing</u>
	11.7 <u>Minimise drop heights during loading and unloading of waste rock and ore and avoid tipping material down a tip face.</u>	<u>Ongoing</u>
	11.8 <u>Apply water to material stockpiles prior to loading, transportation and unloading to limit dust emissions, as required.</u>	<u>Ongoing</u>



Table A2.2 (Cont'd)
Revised Statement of Commitments

Desired Outcome	Action	Timing
11. AIR QUALITY (Cont'd)		
<u>Particulate matter generated by the Project is monitored and procedures developed and implemented to respond to ensure compliance is maintained.</u>	11.9 <u>Monitor meteorological conditions (including via automated alerts) to identify periods of adverse weather (little or no rainfall and wind speeds above 30km/h) and implement appropriate additional mitigation measures, including:</u>	<u>Ongoing</u>
	11.10 <u>increased use of water sprays and water carts; and</u>	<u>Ongoing</u>
	11.11 <u>relocation or ceasing operations likely to generate significant dust emissions.</u>	<u>Ongoing</u>
	11.12 <u>Undertake visual monitoring and mandatory reporting of visible dust emissions to site supervisors and implement measures to minimise or reduce observed dust emissions.</u>	<u>Ongoing</u>
12. BLASTING AND VIBRATION		
Minimise impacts from blasting on surrounding receptors and infrastructure.	12.1 Undertake blasting in accordance with an approved Blast Management Plan (BMP).	Ongoing
	12.2 Ensure that all blasts are designed by a suitably qualified and experienced blasting engineer or shot-firer.	Continuous for the life of the Project
13. TRAFFIC AND TRANSPORTATION		
Achieve safe and efficient transport operations.	13.1 Undertake all transport operations in accordance with an approved Traffic Management Plan (BMP).	Ongoing
	13.2 Enforce a Code of Conduct for all drivers for all heavy vehicles that travel to and from the Mine Site regularly. The Code of Conduct will stipulate safe driving practices must be maintained at all times.	During site establishment operations
	13.3 Investigate immediately any complaints received and substantiated incidents acted on decisively, which could include the banning the offending driver(s) from the Mine Site.	Continuous during the life of the Project
	13.4 Prepare an individual <i>Traffic Control Plan</i> for each over mass and overweight delivery.	As required
14. SOILS AND LAND CAPABILITY		
Maintenance of soil value for rehabilitation and minimisation of soil loss through erosion.	14.1 Strip soil material as nominated within an approved MOP.	Ongoing
Create a final landform that is safe, stable and is amenable to the nominated land use(s).	14.2 Undertake final landform construction and rehabilitation in accordance with an approved RMP or MOP.	Ongoing
15. WASTE		
Manage waste appropriately on the Mine Site.	15.1 Maintain a register of the types and quantities of wastes produced on the Mine Site.	Ongoing
	15.2 Design and maintain storage areas to contain spillages.	Ongoing
	15.3 Segregate and retain recyclable and non-recyclable waste in designated storage areas prior to removal from the Project Site.	Ongoing
	15.4 Keep the Project Site in a clean and tidy condition.	Ongoing
	15.5 Ensure waste is regularly removed from the Project Site by a licensed contractor.	Ongoing



Table A2.2 (Cont'd)
Revised Statement of Commitments

Page 6 of 6

Desired Outcome	Action	Timing
16. SOCIO ECONOMIC SETTING		
Maximise the positive impacts and minimise any actual or perceived adverse impacts on the social fabric or facilities available to the community surrounding the Mine Site.	16.1 Engage the community surrounding the Project in regular dialogue in relation to the proposed and ongoing operation of the Project and maintain an "open door" policy for any member of the community who wishes to discuss any aspect of the Project.	Ongoing
	16.2 Proactively and regularly consult with those residents most likely to be adversely impacted by the Project.	Ongoing
	16.3 Continue to support community organisations, groups and events, as appropriate, and review any request by a community organisation for support or assistance throughout the life of the Project.	Ongoing
	16.4 Advertise and maintain a community complaints telephone line.	Continuous for the life of the Mine
	16.5 Make available excess water from the water supply bores and pipeline to Narromine Shire Council for supply to the residents of Tomingley.	As feasible
	16.6 Ensure that infrastructure and services installed for the Project, including the water supply bores and pipeline, electricity transmission line, appropriate buildings and hardstand areas, remain available for alternative uses following completion of the Project, provided that such uses are consistent with the final land uses identified in this document or any subsequent approval.	Post-mining
17. CONSULTATION		
Maintain ongoing consultation with the local community and Council.	17.1 Maintain a Community Consultative Committee (CCC), including representative members of the community and Narromine Shire Council.	Within 6 months of receipt of project approval
	17.2 Regularly brief the CCC on activities within the Mine Site and seek feedback in relation to Project-related impacts whether real or perceived.	Quarterly
Respond to environmental complaints.	17.3 Maintain an environmental complaints line and register of complaints in accordance with the requirements of the Environment Protection Licence, once issued.	Ongoing
	17.4 Respond promptly to any issue of concern or complaint raised by the community or a government agency.	Ongoing