

Toms Gully Underground Project EIS Supplement

Appendix G – Commitments Summary Table



Appendix G

Environmental Impact Statement Commitments

TOMS GULLY UNDERGROUND PROJECT



The Terms of Reference (ToR) required the EIS to include a table listing commitments made by Primary Gold, which are linked to the EMP in order to assess the performance of the actions. The commitments provided in the draft EIS were revised following the NT EPA comments on the draft; the commitments have been updated to meet S.M.A.R.T criteria where possible. In addition, any added commitments are highlighted in blue text with modified commitments highlighted in orange text.

Table 1 below outlines the commitments made by Primary Gold, actions and performance indicators have been assigned to each commitment to allow for the assessment of Primary Gold's performance in meeting these commitments. The commitments table will be revised on a regular basis (annually) during operations to ensure they are being adhered to. A number of management plans are required to be implemented as part of the commitments, these management plans will be revised on an annual basis to ensure their relevancy and effectiveness.

Category	Commitment	Timeline	Actions/ Performance Indicators	Section from the EIS
	Designs and remediations for TSF1, TSF2 raise (or new contingency TSF) and WSD to be ANCOLD compliant		Sign-off of design and construction by qualified engineer	
Water	Develop manual detailing appropriate tailings and water management	Pre-mining	Sign-off of operating manuals by qualified engineer	
(engineering)	Install instrumentation (i.e. piezometers, movement monitoring) to enable monitoring		Installation report by qualified engineer	6.4.3.1
	Grout drill holes within base and compact base of proposed water storage dam. (Section 3.3 EIS Supplement)	Pre mining	As built construction report confirm grouting and compaction.	
	Undertake regular routine and intermediate surveillance inspections		Maintain freeboard at defined	
	Establish sufficient freeboard to contain excess water and pump infrastructure to transfer excess water to alternative locations	LOM	levels. Inductions, inspections, daily, weekly, monthly, annual reports	

Table 1: EIS Supplement Commitments Table August 2018

Toms Gully Underground Project



EIS Commitments Table

Category	Commitment	Timeline	Actions/ Performance Indicators	Section from the EIS
	Complete water treatment strategy	Pre-mining, MMP	Implement strategy and achieve /maintain water quality below SSTV as per strategy report	
	Complete discharge management plan		Management report completed and approved	
	Complete groundwater bore census		Complete census report	
Water (concept)	Complete Ongoing groundwater modelling	LOM	Completed Revise model report and integrated groundwater management	6.4.3.2
Water (general)	Complete Ongoing contaminant transport modelling		Completed Revise model report and integrate groundwater management measures	0.4.3.2
	Treat the water from EP1 and EP2 as part of the pit dewatering procedure	Pre-mining	Achieve water quality results within SSTV	
	Assess underground dewatering quality and treat if required (Comment 2, EIS Supplement)		Achieve water quality results within SSTV/ fit for purpose	
	Finalise design for the WSD and provide to the Department of Mines and Energy for review and approval prior to construction		Provide to Department of Primary Industry and Resources in MMP and receive approval	
	Finalise the TSF2 detailed design, provide to the Department of Mines and Energy for review and approval prior to construction		Provide to DPIR in MMP and receive approval	
	Install flow meters and water storage gauges to validate the water balance model	Pre-mining	Provide installation report/details to DPIR	
	Weekly readings will be collected on all transfers across site and storage levels		Readings provided in an internal weekly report	
	Gather sufficient relevant Update data and complete an annual update of Water Balance Model	LOM	Annual updated water balance model to be provided to DPIR	



Category	Commitment	Timeline	Actions/ Performance Indicators	Section from the EIS
	Develop manual, detailing appropriate tailings and water management	Pre-mining	Engineered sign off of manual. Distribute manual to site operators	
	Instrumentation (i.e. piezometers, movement monitoring , tailings beach indicators) to enable tailings management monitoring		Installation report completed by qualified engineer	
	Implementation of AMD Management Plan including ore and waste rock controls and tailings controls	LOM	Compliance with AMD Management Plan. Pit water and groundwater treated to achieve water quality	
	Capture water within the pit/underground and transfer for treatment and on-site storage		requirements.	
	Investigation to establish required mitigation measures SWRD and OWRD	Closure	Closure report approved by DPIR	
	Manage disposal of wastes in accordance with the <i>Waste Management and</i> <i>Pollution Control Act 2009</i> and the TGU Project EMP	LOM	Inductions, inspections, daily, weekly, monthly, annual reports	6.4.3.3
	Chemical and hydrocarbon storage facilities bunded and managed in accordance with the Hazardous Materials Management Plan and the TGU Project EMP	Pre-mining	Construction/installation sign-off by qualified person	
	Waste rock left in or returned to underground or stored within base of pit		Comply with commitments.	=
	All of the Ore unit is considered to be PAF and shall only be stockpiled underground, in the base of the pit or on the ROM pad	LOM	Inductions, inspections, daily, weekly, monthly, annual reports	
Water (contaminant	No waste rock is to be moved beyond the pit base-boundary		Develop PAF procedure for	
source control)	No waste rock is to be used for construction purposes, other than the distal- hanging wall unit		placement of waste rock	
	No waste rock from the existing sulfide or oxide waste rock dumps is to be used for construction purposes			
	Waste rock and tailings will be sampled to document the geochemical conditions (Section 7.1, Acid and Metalliferous Drainage Management Plan)		Sample data stored in database	



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Category	Commitment	Timeline	Actions/ Performance Indicators	Section from the EIS
	The existing SWRD and OWRD are to be maintained to ensure their integrity			
	All metallurgical tailings to be treated as PAF and placed in upgraded TSF ₂	Pre-mining	No reported disturbance of waste	
	The existing TSF1 is to be maintained to ensure its integrity until removal and rehabilitation or rehabilitation.		rock dump Develop TSF operating manual and have signed off by engineer. Distribute to responsible personnel.	
	Maintain a minimum freeboard on TSF2 for water management purposes	Ongoing during LOM		
	All tailings decant water is to be treated as contaminated and retained within the process circuit or treated to SSTVs other than in an emergency situation			
	Review existing site drainage, retain and renovate to ensure they drainage are fit for purpose	Pre-mining	Inspection and construction report to be undertaken and signed off by engineer	6.4.3.3
	Clean sumps and drains at least annually before each wet season	LOM	Develop drainage procedure and strategy	
Water (Surface)	Prepare a water treatment plan based on Bioaqua Process and SSTVs including proposed water treatment methodology and target outcomes for review and approval as part of the Waste Discharge Licence and Mining Management Plan	Pre-mining	Develop Treatment plan, WDL, and MMP and receive approval by required government agencies.	
	Design and install water retention ponds sized to capture an Average Recurrence Interval (ARI) rainfall event appropriate to their hazard category plus an appropriate freeboard allowance for sedimentation	Pre-mining	Approval of construction design and construction/installation report. Maintain water levels at appropriate freeboards.	
	Monitor and manage water levels in the retention ponds to maximise available storage capacity prior to the Wet Season	LOM	Conduct inductions, inspections, daily, weekly, monthly, annual reports	
	Establish a Discharge Management Plan and apply for a Waste Discharge Licence to reduce volumes of water stored on-site	Pre-mining	DPIR approval of Discharge Management Plan, obtain WDL and adhere to all license conditions.	

Category	Commitment	Timeline	Actions/ Performance Indicators	Section from the EIS
Water (Surface)	Rock armor protection on northern TSF2 embankment to protect against 1 in 100yr ARI flood level	Pre-mining	TSF upgrade in adherence with design report and sign off of	
	Upgrade of embankment levels on existing infrastructure above 1 in 100 year ARI flood levels		construction report by qualified engineer. Provide reports to DPIR	
	Installation of clean water diversion channels			
	Installation of rip-rap protection on earthwork embankments adjacent to drainage channels			
	Regular inspections of bunds/embankments by a suitably qualified engineer and maintenance as necessary	LOM	Weekly inspections and reports undertaken	
	Undertake regular routine and intermediate surveillance inspections	LOM	Weekly inspections and reports undertaken	
	Drainage to be designed to capture runoff from infrastructure and transfer to retention basins	Pre-mining	Construction of drainage aligned to approved design report	
	Install and/or rehabilitate groundwater monitoring wells to provide upstream, mid and downstream coverage of infrastructure and underground operation. The installation will include MB1A, MB1B, MB2A, MB2B, MB3A, MB3B, MB4, MB5A, MB5B, MB6A and MB6B;	Pre-mining	Installation and construction reports to be provided to DPIR.	
	Ongoing Investigation on the degree of interconnectivity between Mount Bundey Creek and associated alluvium. The investigation will assess life of mine and closure impacts in relation to the potential for contaminated groundwater migration off lease boundary and potential impacts on GDEs;	LOM	Contaminant modelling has been undertaken. Report will be provided in EIS supplement and recommendations /results taken into consideration.	
Water (groundwater)	Groundwater bore census to confirm if bores meet minimum construction requirements for water bores in Australia and decommission or rehabilitate in accordance with the guidelines	Pre-mining	Undertake census report and provide to DPIR. Undertake any required actions as required by report results.	6.4.3.5
	Groundwater model and monitoring to establish cone of depression from dewatering and proposed LOM underground shells	LOM	Provide annual updated groundwater model and monitoring results report to DPIR.	

PRIMARY GOLD



Category	Commitment	Timeline	Actions/ Performance Indicators	Section from the EIS
	Undertake investigation to establish quality of sediment and determine management requirements (i.e. removal, on-site landfill, cap).	LOM	Undertake investigation report and provide results to DPIR. Use results to inform management measures.	
	Implement Groundwater Monitoring Program	LOM & Closure	Provide annual groundwater monitoring report to DPIR.	
Acidic and metalliferous drainage (general)	All PAF material will be compacted and encapsulated under water or within NAF material	LOM & Closure	Develop PAF management procedure for operations. Operations & closure plan implemented to design	7.4
	PG will undertake an extended sediment sampling program in Mt Bundey Creek between SWTG1A downstream to SWTG3 during the dry season, the results of which will be integrated with existing baseline geochemistry data to clarify the efficacy of the rehabilitation of historic structures, and determine, along with water quality results, requirements for further work, if any.	LOM & Closure		AMD Manageme nt Plan
Acidic and metalliferous drainage (ore & waste	All waste rock is to be disposed of underground or in the base of the pit Ore is only to be stored underground, in the pit or on the ROM Pad	LOM	Developed AMD management plan which includes PAF/AMD procedure. Inductions, inspections, daily,	7.4.3.1
rock design measures)	Effective drainage keeping clean water out of the pit and directing dirty water from ROM Pad to the storm water sump	-	weekly, monthly, annual reports	
	Pit is to be flooded for mine closure to minimise oxygen availability to PAF waste rock	Closure	Inspection report ensures sufficient water cover over PAF material.	7.4.3.1
	Annual design review accompanying MMP that verifies the AMD standards shall be implemented for the MMP term	Annually during LOM	Provide updated annual review report in MMP.	
	Material will be placed using boggers in accordance with the mine development schedule under the supervision of the Mine Geologist	Ongoing during LOM	Development of PAF/AMD procedure within AMD Management	

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Category	Commitment	Timeline	Actions/ Performance Indicators	Section from the EIS
	Water that has been in contact with the waste rock will be treated as contaminated and managed accordingly		Plan. Site mine engineers, manager and geologist to be aware of	
	Suitable locations for the underground placement of waste rock are to be determined by the Mining Engineer in consultation with the Mine Manager. These would be communicated to the Mine Geologist for implementation		responsibilities in WRMP. Inductions, inspections, daily, weekly, monthly, annual reports	
Acidic and metalliferous drainage (operational measures)	Preparation and implementation of AMD Management Plan and site AMD procedure	Pre-mining	Developed AMD MP and PAF/AMD procedure and provided in EIS Supplement.	7.4.3.2
		Ongoing during LOM	Adherence to AMD Management Plan during operations. Inductions, inspections, daily, weekly, monthly, annual reports	
	Preparation and implementation of the TGU Project WMP that includes the AMD water monitoring analytes	Ongoing during LOM	Implementation of WMP. Water quality within SSTV. Annual report on water monitoring results. Inductions, inspections, daily, weekly, monthly, annual reports	
Acidic and metalliferous drainage (tailings		Pre-mining	TSF design meets design report specifications. Design and construction report signed off by	7.4.4.1
design measures)	TSF2 will have an engineered geomembrane installed over the historic- tailings during the first lift to minimise the risk of leakage		qualified engineer.	
	All tailings from TSF1 and potentially TSF2 to be placed into the pit post- closure for AMD management purposes	Closure	Adherence to Mine Closure Plan and PAF/AMD Procedure. Closure	
	If not placed into the pit, all tailings in TSF2 to be capped in-situ in accordance with an approved closure design		reports of TSF to be signed off by engineer.	
	The pit is to be flooded for mine closure to minimise oxygen availability to PAF tailings			

PR MARY GOLD

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Category	Commitment	Timeline	Actions/ Performance Indicators	Section from the EIS
Acidic and metalliferous	All metallurgical tailings to be treated as PAF and placed in TSF2	LOM	Inductions, inspections, daily, weekly, monthly, annual reports	7.4.4.2
drainage (operational measures)	Preparation and implementation of AMD Management Plan and AMD site procedure		Implementation of AMD MP & site procedure during operations. Inductions, inspections, daily, weekly, monthly, annual reports	
	The existing TSF1 is to be maintained to ensure its integrity, until removal and rehabilitation or rehabilitation after reuse.		Inductions, inspections, daily, weekly, monthly, annual reports	
	Development of a TSF2 operating manual / procedure	Pre-mining and ongoing during LOM	Develop operating manual / procedure and issue during operations. Ensure roles and responsibilities are made known.	
	All tailings decant water is to be treated as contaminated and retained within the process circuit or treated to SSTVs other than in an emergency situation	LOM	Inductions, inspections, daily, weekly, monthly, annual reports	
Acidic and metalliferous drainage (construction material)	Underground waste rock from the TGU Project shall not be used as construction materials	LOM	Adherence to PAF/AMD Procedure and Management Plan. Inductions, inspections, daily, weekly, monthly, annual reports	7.4.5
Acidic and metalliferous drainage (drainage)	The TSF water circuit is designed to be closed during operations, with decant water being the priority water source for the processing operation	LOM	TSF design process manual / procedure to be implemented.	7.5.1
	Drainage from the ROM pad shall be directed to the Storm water Sump which shall be managed to prevent overflow		Adherence to water management plan. Inductions, inspections, daily, weekly, monthly, annual reports	
	Water from the Storm water Sump shall not be released directly to the environment. It shall be utilised in the process as first priority or treated.		Adherence to water management plan. Inductions, inspections, daily, weekly, monthly, annual reports	

PR MARY GOLD



Category	Commitment	Timeline	Actions/ Performance Indicators	Section from the EIS
Biodiversity (flora, vegetation and fauna habitat)	 A Ground Disturbance Permit System shall be implemented to restrict the number and extent of cleared areas to the minimum needed for safe and efficient implementation of the TGU Project. The system shall include: Checks that clearing requirements are consistent with approvals Geographical Information System (GIS) information identifying significant flora and fauna features for use when planning Project activities A communication and approval system that requires Management signoff; and Specifications for clearing 	_	Implement ground disturbance procedure and permit system which requires sign off. Inductions to ensure personnel are aware of procedure. No incidents of unapproved clearing.	8.4.1
	Vegetation clearing shall occur within approved boundaries		Adherence to ground disturbance permit system. Annual reporting on clearing areas in MMP. No incidents of unapproved clearing.	
	Disturbance of riparian vegetation shall be avoided wherever practicable		Inductions and weekly inspections.	
	 Required clearing shall be minimised, for example: Material from excavations will be used for construction where practicable Pre-disturbed areas shall be used wherever possible 			
	Rehabilitate cleared areas in accordance with the MCP	Closure	Develop MCP and receive DPIR approval. Inductions, inspections, daily, weekly, monthly, annual reports	-
	Machinery hygiene procedures shall be implemented to manage the risks of weed introduction and export to and from the site	Pre-mining and LOM	Implement Weed Management Plan and Weed Hygiene Procedures.	
	Movement of topsoil between sites where weeds could be spread to new locations shall be restricted		Inductions, inspections, daily, weekly, monthly, annual reports.	
	All ground engaging equipment shall be required to arrive on site clean of plant and soil material from other sites or hygiene work areas		No new weed infestations.	



Category	Commitment	Timeline	Actions/ Performance Indicators	Section from the EIS
	Weed surveys shall be conducted as soon as practicable after construction to determine whether construction of the TGU Project has increased the population or distribution of weeds. If determined that the TGU Project has caused an increase in the population or distribution of weeds corrective actions (spraying, removal etc.) shall occur after consultation with relevant government authorities and weed experts as to the preferred course of action		Implement Weed Management Plan and Weed Hygiene Procedures. Consultation with relevant agencies. Implement weed control measures.	
Biodiversity (fauna)	Fencing shall be installed around the TGU Project site	Pre-mining	Fence already constructed report to be provided to DPIR in annual MMP. No incidents of livestock entering site.	8.4.2
	Speed limits shall be applied and enforced within the TGU Project site	LOM	Signage, inductions, inspections, daily, weekly, monthly, annual reports. No vehicle incidents/near misses.	
	Selected personnel shall be trained in wildlife rescue protocols. All other staff shall notify trained staff of any incidences of fauna injury or death. Incidents shall be investigated with follow up measures implemented.		Training, inductions, reports, investigations, follow-up measures. Implementation of biodiversity management plan. No incidents of fauna death.	
	A qualified wildlife handler present during proposed clearing. (Section 4, EIS Supplement)		Wildlife handler present during clearing. No incidents of fauna death.	



Category	Commitment	Timeline	Performance Indicators	Section from the EIS
	Pit water shall be treated to livestock SSTV water quality standards Treated water shall be released to Mt Bundey Creek to meet SSTVs 80% ANZECC & ARMCANZ (2000a) criteria at the downstream compliance point	Ongoing during LOM	Implement water management plan and water monitoring. No incidents of exceedances.	
	Clean water shall not to be mixed with dirty water		Adherence to water management plan. Inspections, water quality analyses, daily, weekly, monthly, annual reports	
Biodiversity (fisheries & aquatic	A bio-monitoring programme shall be implemented downstream of the mine site in Mount Bundey Creek	LOM	Undertake sampling and develop monitoring report to be submitted with annual MMP.	8.4.3
ecosystems)	Water quality and water release shall be monitored in accordance with the WMP		Implement WMP and results in report to be submitted with annual MMP.	
	Stockpiled vegetation and topsoil shall be stored away from water courses to prevent sedimentation		Implement WMP. Undertake inspections, daily,	
	Impact on active creek beds shall be minimised through the use of culverts, to help protect riparian vegetation		weekly monthly, annual reporting.	
	Monitoring of riparian vegetation health shall be undertaken to ensure that surface hydrology management measures are suitable	-	Implement biodiversity management plan. Vegetation health monitoring report to be provided in annual MMP.	
	All waste rock shall be assumed to be PAF and shall remain underground, or if not practicable, placed in the pit		Adherence to PAF / AMD procedure.	
	No waste rock from the existing sulphide or oxide waste rock dumps shall be used for construction purposes		Inductions, inspections, daily, weekly, monthly, annual reports. No incidents of misplacement of	
	All metallurgical tailings shall be treated as PAF and placed in TSF2		waste rock.	



Category	Commitment	Timeline	Performance Indicators	Section from the EIS
	A minimum freeboard shall be maintained on TSFs2 for water management purposes		Adherence to TSF operating manual. Inductions and weekly inspections.	
	All tailings decant water shall be treated as contaminated and retained within the process circuit or treated other than in an emergency situation			
	The mitigation measures as outlined within the TGU Project EMP shall be implemented		Adherence to EMP. And annual compliance reporting provided.	
Biodiversity (introduced or invasive species)	Where feral animal numbers are increasing as a result of Project activities, mitigation measures as outlined in the relevant Threat Abatement Plans shall be implemented where required and practicable	nt Threat Abatement Plans shall able LOM Inductions and weekly inspections of fences. Annual reporting of fer	management plan. Inductions and weekly inspections of fences. Annual reporting of feral	8.4.4
	Existing stock proof fencing shall be upgraded and extended where required to restrict access to the site by stock and larger sized feral animals		animals in MMP. No increase in feral animal numbers on site.	
	All personnel shall undertake an induction that outlines their requirements in relation to historic and cultural heritage management		Inductions and implementation of heritage procedures.	
	All personnel shall be informed of the need to identify and protect historic and cultural heritage sites		No incidents of heritage / cultural site disturbances.	
	All clearing shall be undertaken in areas approved to be cleared in accordance with an approved Ground Disturbance Permit		Adherence to Ground Disturbance Permit System. No incidents of unapproved clearing.	
Historic and Cultural Heritage	In the event of a discovery of objects suspected to have historic and/or cultural heritage significance, work at that location shall stop immediately until the object/s can be assessed and authorisation given to continue activities	LOM	Stop work, assessment, authorization and reporting.	9.4
	Should the objects discovered be human remains, the NT Police will be immediately notified		Inductions and implementation of heritage procedures. Notification of NT police.	



Category	Commitment	Timeline	Performance Indicators	Section from the EIS
Historic and Cultural Heritage	If a historical or cultural heritage site is determined, the area shall be flagged on the ground and demarcated on drawings. No works shall be undertaken within this flagged area until approval to disturb is granted		Inductions and implementation of heritage procedures. Demarcation on- ground and mapped. Annual reporting in MMP. No incidents of heritage / cultural sites disturbed.	9.6
	Where a determined historical or cultural heritage site is required to be disturbed, approval shall be sought for its disturbance. Works shall then be undertaken in accordance with the Heritage Act, the conditions of the Works Approval and in consultation with TOs		Consultation with TOS, approval, and adherence to Sacred Site and/or Heritage Act.	
	Although there are currently no historic or cultural heritage sites within the Project site, any newly discovered sites shall be flagged and the condition of the flagging will be regularly monitored		Implementation of heritage procedures. Demarcation of site, monitoring of site. No incidents of disturbances to heritage sites.	
	The site will be inspected and any impacts or disturbance will be recorded		Monthly inspections and annual reporting.	
	Sites and flagging shall be inspected weekly during the construction phase of the Project and monthly thereafter		Weekly, monthly inspections. Annual reporting in MMP.	



Category	Commitment	Timeline	Performance Indicators	Section from the EIS
Infrastructure integrity and suitability (proposed and renovated infrastructure)	Roads and tracks will be renovated to be fit for purpose, with safety bunds, drainage, signage all reviewed and upgraded as required	Pre-mining and maintenance during LOM	Assess current status of roads/tracks. Develop construction/renovation report. Monthly inspections of roads and regular maintenance. No road safety incidents. No erosion or significant impacts to surface water flows (flooding) due to poor road design.	
	On-site road and traffic risks will be managed as a safety issue and have been considered in the risk assessment	LOM	Implement mitigation measures as per risk assessment. No road safety incidents.	10.4.1
	Additional controls will include education and training (including records of same), qualifications and competency assessment, vehicle inspections and maintenance, radio and communications requirements and regular reporting		Implement vehicle pre-start procedures. Inductions, training, assessments, inspections, reporting. No road safety or vehicle incidents.	
	Renovations to the processing plant area will be completed to ensure it is fit for purpose with all infrastructure being subject to engineering inspection prior to and post-renovation	Pre-mining	Develop engineers report pre & post renovation, ensure approved sign off. No major safety incidents relating to processing plant.	
	The existing evaporation ponds will continue to be regularly inspected	LOM	Weekly inspections and reports. Maintain appropriate freeboard and structural integrity.	



Category	Commitment	Timeline	Performance Indicators	Section from the EIS
	The water currently residing within the evaporation ponds will be treated along with the pit water to provide additional water storage in the ponds	LOM	Water quality analyses and monitoring reports. Results of water monitoring within	
	 TSF1, TSF2 (if required new contingency TSF) and the new WSD design and construction to be consistent with the: Guidelines on Tailings Dams - Planning, Design, Construction, Operation and Closure (ANCOLD 2012); Code of Practice, Tailings Storage Facilities in Western Australia (Department of Mines and Petroleum 2013); and AS 1726-1993 SAA Geotechnical Site Investigations. 	Pre-mining	SSTV. Sign-off of design and construction by qualified engineer. No failure of structural integrity during operations.	
Infrastructure integrity and suitability (proposed and renovated infrastructure)	 Additional mitigation measures will be defined by the detailed design and the accompanying operating manual for TSFs2. This will include industry standard measures including: Identification of freeboard requirements to enable retention of a 1:100 year 72 hour rainfall event at all times Monitoring of pond size Spill prevention and containment measures including bunding, inspections and reporting Embankment integrity monitoring including inspections, annual audits Use of a GCL to limit seepage of tailings slurry water Additional groundwater monitoring around TSF2 Continued surface water monitoring around TSF2 Commitment to a detailed closure plan including cover specifications for TSF2 should sufficient suitable cover materials be identified 	Pre-mining and	Sign-off of design and operating manual by qualified engineer Development of approval of MCP Continued TSF groundwater and surface water monitoring. Results provided in annual monitoring report. No incidents of failure of structural integrity. Surface and groundwater monitoring results within SSTV.	10.4.1



Category	Commitment	Timeline	Performance Indicators	Section from the EIS
Infrastructure integrity and suitability (existing infrastructure)	The proposed raising of the TSF2 embankment will provide additional protection against inundation of the tailings by floodwater. At completion, the embankment height will ensure that a 1:100 year flood event would not inundate the tailings	Pre-mining	Flood modelling undertaken. Design and construct TSF embankment to flood model specifications. Design and construction report signed off by engineer. No incidents of structural integrity failure due to flooding.	10.4.2.1
	TGU operations will not result in any changes to the construction, structural integrity or rehabilitation status of SWRD ¹ or OWRD ²	LOM	Inductions, inspections, daily, weekly, monthly, annual reports. No evidence of changes to integrity or rehabilitation status of WRD1	10.4.2.2
	 As part of the ongoing investigations to plan for the remediation of both the SWRD and OWRD, the risk of ongoing contamination will be mitigated by: Conduct an investigation into water management for the WRDs that assesses the potential for water to enter the structure, the quality of runoff and seepage water, the locations for seepage exit and options for capture; and Review the options for long term remediation of the WRDs. 		and WRD2. Investigations undertaken and managed through water management plan. Remediation of WRD outlined in MCP.	
Infrastructure integrity and suitability (existing infrastructure)	Capping or removal of the tails from TSF1 and TSF2 such that they are placed in the bottom of the pit (potentially via re-processing), or capped and rehabilitated in-situ should with sufficient suitable materials be located and a detailed closure plan for TSFs1 approved.	Closure	Development and approval of Mine Closure Plan. Closure reporting outlining any trending issues of TSF. Safe, stable and non-polluting TSF.	10.4.2.4
	Rehabilitation of the TSFs1 footprint with materials suitable to ensure revegetation and the capacity to resume pastoral land use on the site	Closure	Rehabilitation of TSF in accordance with MCP specifications. TSF achieves suitable agreed end land use (pastoralism)	



Category	Commitment	Timeline	Performance Indicators	Section from the EIS
	Oxbow Wetland area (used as passive treatment for runoff from WRD1) is seen as an asset and will be retained for ongoing use. The existing monitoring sites for surface water will be retained and continue to be monitored	LOM	Surface water monitoring and analysis. Water results within SSTV. Annual reporting of results in MMP.	10.4.2.5
	The existing pit will be retained and used as a low oxygen storage location for any TGU generated PAF waste rock unable to be retained underground and potentially for PAF tailings from TSF1	Closure	Waste rock and pit closed as per Mine Closure Plan specifications. Closure reporting.	10.4.2.6



Category	Commitment	Timeline	Actions/Performance Indicators	Section from the EIS
	All PG mine employees and contractors are expected to comply with all requirements of the EH&S MS.		Inductions, safety reporting. No major safety incidents.	11.3
	Notify all relevant agencies if changes to road usage occur. Comment 22, EIS Supplement)		Recorded in stakeholder engagement register	
	Primary Gold proposes to provide a bus service for the transfer of employees to and from work		Implemented bus services contract	
Human Health and	PG will ensure that the dedicated bus driver is a competent driver with the necessary driving permits in place	LOM	Driving permits	
Safety (vehicle accidents)	PG will ensure that the bus is kept in good condition and serviced on a regular basis		Service reports	
accidents	 Management measures to minimise such vehicle accidents include: Drivers shall have the required permits/licences in place; Drivers shall be aware of and comply with the Project Traffic Management plan; Speed limits shall be applied and enforced within the Project site; Pedestrian areas shall be demarcated 		Implementation of traffic management plan. Inductions which require evidence of permits. Signage and incident reporting. No road safety incidents.	11.4.1
	Road signage shall be installed on the Northern and Southern approaches of Arnhem Highway warning of the mine entrance and the potential for entering and exiting vehicles	Pre-mining and during LOM	Signage in-place. Signage inspection report. Weekly inspections of signage	
	This signage shall be in accordance with Austroad requirements and to the satisfaction of the Northern Territory Department of Transport	-	integrity. No road safety incidents.	
	Signage shall be installed along the site entrance road warning of the upcoming intersection with the Arnhem Highway			
	A stop sign shall also be installed on the entrance road at the intersection point			
	Vehicle speed limits shall be set and signposted within the Project site			



Category	Commitment	Timeline	Actions/Perform	ance Indicators	Section from the EIS
	Use of plant and equipment shall require competency based training delivered and assessed by a trained and certified person		Inductions and take-5 procedures.		
Human Health and	The induction process shall include specific hazard awareness training regarding plant and equipment both on and off-site		Certified training & assessment. Records of training completed and undertaken. Annual reporting of safety incidents.		
Safety (plant & equipment)	Plant and equipment shall be maintained through a robust maintenance regime by competent and appropriately experienced personnel	LOM	Service reports and rec		11.4.2
	An equipment specification for each type of equipment shall define the risk controls necessary to ensure the safe operation of equipment	_	Equipment specificat		
	Personnel shall wear high visibility clothing and maintain direct radio contact when working alongside or within heavy plant		Inductions, reporting No safety incidents.	-	
	All underground mobile mining equipment shall be fitted with fire suppression		Daily inspection	Implement Fire Management Plan. Annual refresher training for firefighting. No fires on site.	
	An equipment specification for each type of equipment shall define the risk controls necessary to ensure the safe operation of equipment		Equipment specification		44.4.2
Human Health and Safety (fire)	Equipment shall be maintained through a robust maintenance regime by competent and appropriately experienced personnel	- LOM	Service reports		11.4.3
	Fire extinguishers shall be placed on all mobile equipment and at strategic locations in and around all fixed infrastructure		Daily inspection		
	Refuge chambers shall be installed underground		Installation report		
	All personnel who are underground shall be trained and use a self-rescuer and they are inducted and trained in its use		Induction, training, usage		
	Equipment fire risk, mitigation, and contingency action shall be included in all operator training		Training records		



Category	Commitment	Timeline	Actions/Performance Indicators	Section from the EIS
	All designs for underground openings, pit walls, and dam walls shall include geotechnical input and sign off	Pre-mining	Geotechnical assessment report and design sign-off. No underground portal failures.	
Human Health and Safety (mine collapse and	When working underground, no person shall be permitted to work under unsupported ground		Inductions, barricades No safety incidents underground.	11.4.5
flooding)	Slope management plans shall be developed for any active surface mining activity where wall failure is identified as a high or extreme risk	LOM	Develop and implement approved Slope and ground control Management plan	
	The ground control management plan shall include the necessary requirements to mitigate ground failure risks			
	Mine pumping capacity shall include contingency volume and also includes backup diesel pumps to mitigate against power loss		Contingency pumps and power installed pre-wet season	
Human Health and Safety (hazardous materials and	H&S and Environmental management will support line management with assistance to identify and evaluate alternate products	LOM	Implement Environmental Management Plan and Hazardous Material Management Plan. List of alternates. No incidents relating to hazardous materials.	11.4.6.1
storage)	Should a new chemical be required (at Project commencement all hazardous materials will be treated as new products), a request form is to be completed and for approval by the relevant Coordinator	_	Implement Hazardous Material Management Plan. Request form. No incidents relating to hazardous materials.	
	If the product is classified as Hazardous, Dangerous, or is one of its ingredients or is suspected of being carcinogenic, teratogenic / mutagenic (reproductive toxicants), a Hazardous Substance Risk Assessment (see Senior H&S Adviser) must accompany this application.		Hazardous Material Handling procedure to be developed and implemented. Risk assessments to be part of this procedure. No incidents relating to hazardous materials.	

Category	Commitment	Timeline	Actions/Performance Indicators	Section from the EIS
	Hazardous materials shall be stored in a secure, limited access area until disposal	LOM	Barricade, demarcation. No incidents relating to hazardous materials.	11.4.6.2
	Hazardous materials storage as per MSDS recommendations		Audit. No incidents relating to hazardous materials.	
	Hazardous materials storage areas and bunding constructed as per Australian Standard AS1940		Weekly Inspections.	
	Incompatible hazardous materials shall not be stored together	LOM	Weekly Inspections.	11.4.6.2
	Appropriate first aid equipment shall be made available	•	First aid kit installed	
Human Health and Safety (hazardous	Hazardous materials storage practices and physical arrangements shall be regularly audited		Audit report	
materials and storage)	Transport and use of hazardous materials in accordance with relevant regulations, and directions given on the MSDS for the substance		Inspections, MSDS sheet	
	Suitable signage shall be used during transport of hazardous materials		Installed signage	
	Decanting and labelling carried out in accordance with the National Code of Practice for the Labelling of Workplace Substances NOHSC (1994)		Audit	
	Containers used for decanting hazardous materials shall be as per the MSDS requirements of the substance and all containers labelled appropriately		Audit, labels	
	Hazardous materials that are no longer required on-site shall be stored in the salvage yard until disposal. The substance shall be suitably packaged, include a sealed copy of the MSDS with each container and returned/disposed of at an appropriately licensed facility		Inspect packaging, storage & MSDS	
	In the event of a hazardous materials spillage, the MSDS shall be consulted for spill procedures and clean-up in accordance with the HMMP & ECMP	LOM	Check against MSDS & HMMP	11.4.6.3

Category	Commitment	Timeline	Actions/Performance Indicators	Section from the EIS
Human Health and Safety (falls from height)	All works to be undertaken at height shall require either a documented work procedure or a Job Hazard Analysis (JHA) prior to commencement. A Take 5 shall also be used immediately prior to the task	LOM	Documented procedure, JHA & Take 5 records management. Annual reporting. No incidents relating to working at heights.	11.4.7
	Risk assessments shall apply the hierarchy of avoiding working at heights where other safer options can be implemented.		Undertake risk assessment before any works undertaken. Safer option implemented. Records management. No incidents relating to working at heights.	
	Fall prevention shall be used to prevent personnel from falling from height if reasonably practicable]	Fall prevention used	

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Category	Commitment	Timeline	Performance Indicators	Section from the EIS
Human Health and Safety (falls from	Where fall prevention cannot be used then fall arrest shall be used through PPE		Fall arrest used	
neight)	Any person using fall prevention or fall arrest harness shall be trained in the use of the equipment		Documented training. No incidents relating to working at heights.	
	Target Opex costs in lower quartile of Australian production costs combined with a forward gold price hedging strategy		Monthly & annual management reports	
	Target Opex costs in lower quartile of Australian production costs consider foreign exchange hedge	Pre-mining		
	Target Opex costs in lower quartile of Australian production costs consider and review any potential advantages of a diesel fuel price hedging strategy			
	Implement a ground monitoring programme that effectively captures changes in ground conditions and stress	LOM	Implement Ground Control Plan Annual reporting.	
Social and Economic	Ensure adequate pumping capacity available at all times. Ensure availability of effective drainage which can be used during high rainfall events. Install and maintain effective water drainage control bunds around potential water ingress channels		Implement WMP. Weekly site drainage inspections. Weekly reporting. No incidents of un- controlled drainage on site.	
Environment (economic risk)	Metallurgical recovery testing of exploration samples on an appropriate density to undertake recovery modelling, monitor in production reconciliation studies		Test work, modelling, daily, weekly, monthly reporting.	12.4.1
	Ensure appropriate warranties in place and maintain appropriate critical mechanical spares inventory		Warranties, spares	
	Grade control and mapping programmes combined with effective production reconciliation studies both present and historical		Reconciliations	
	Use of Australian Standards for preparation of applicable and appropriate contract conditions. Conduct appropriate legal and commercial due diligence. Use only reputable established contract companies with record of successful completion.		Commercial contracts	
	Primary Gold will seek to employee locally	LOM	Maximise of local employees where practicable.	12.5.1



Category	Commitment	Timeline	Performance Indicators	Section from the EIS
Social and Economic Environment (workforce)	Provide bus services to transport employees to and from work.		Bus contract	
Social and Economic Environment	If it is necessary to recruit from outside the area, the individuals concerned will be accommodated at currently operating accommodation service premises in the local area	All phases of project	Provision of accommodation services is local.	
(accommodation & housing)	Occasional overnight visitors to the TGU Project will be accommodated in currently operating accommodation service premises in the local area	_project		12.5.2
Social and Economic Environment (traffic & transport)	 The safety risk associated with the transport of hazardous goods to site (diesel fuel, cyanide, caustic) will be minimised by ensuring transport of such goods is in accordance with the Australian Code for the Transport of Dangerous Goods by Road and Rail (NTC Australia 2014) and the following mitigation measures: Ensure supply of hazardous goods is by recognised and approved suppliers; and Ensure transport of hazards goods is as per directions of the MSDS. 	LOM	Audit. No road safety incidents relating to hazardous goods.	12.5.3
Social and Economic	Vegetation placement and good design to minimise visual impacts		Positive consultation outcomes. No complaints received.	
Environment	Seek commercial terms from NT based providers	LOM	List of providers	12.5.7
(summary)	Where possible, recruit locally		Proportion of local employees	
	Operate within the existing access agreement	-	Positive consultation outcomes	
Rehabilitation and closure (planning)	Sufficient resources shall be made available to enable detailed closure planning to be completed ensuring mine closure standards are implemented	Planning and Operations	Detailed plans for closure and rehabilitation, implemented via MCP.	13.4



Category	Commitment	Timeline	Actions/Performance Indicators	Section from the EIS
	Planning shall include consultation with key stakeholders	Closure	Consultation records. No complaints received.	
Rehabilitation and closure (post- mining land use)	The mine closure process shall enable the TGU Project to be closed and rehabilitated so that pastoral grazing land use may be fully resumed over the majority of the land	Post- closure	Pastoral grazing resumed over rehabilitated and closed areas	
	The mine pit, WRDs and associated drainage controls shall be retained post closure.	Post- closure	Mine drainage retained during closure. No incidents of un- controlled drainage.	
Rehabilitation and closure (tailings)	All tailings shall be stored in safe, stable long term facilities that. may include in-situ encapsulation within, or placement in the base of the pit (or underground workings) prior to flooding the pit	Closure	Approved capping design. Safe, stable and non-polluting structure at closure.	13.4
	The tailings stored in the TSF1 site shall be either re-processed or placed- directly in the pit (including underground workings) or and have in-situ encapsulation	Closure	TSF1 tails removed comply with rehabilitation strategy.	
Rehabilitation and closure (waste rock)	Existing WRDs are to be retained with management focusing on investigating causes of AMD and potential solutions, maintenance of drainage controls and monitoring	Closure	Implementation of Mine Closure Plan. Investigation and Options report to inform final designs. WRD is safe, stable and non-polluting.	
Rehabilitation and closure (pit and underground workings)	The pit and underground workings shall be used for long term storage of AMD materials then allowed to flood	Closure	Implement AMD Management Plan. AMD materials records, AMD audit at mine closure. Annual reporting to DPIR.	
	The abandonment bund shall be reviewed at closure to prevent inadvertent vehicle access.	Closure	Bund in place and designed in accordance with relevant guidance.	

Category	Commitment	Timeline	Actions/Performance Indicators	Section from the EIS
Rehabilitation and closure (water)	Closure of TGU Project shall be designed and completed to ensure that water quality of Mount Bundey Creek and the post-mining pastoral land use areas is protected.	Closure	Water quality monitoring record trends show results within agreed water quality.	
	Site drainage shall be configured to minimise risks associated with the existing WRDs.	Closure	MMP approved site drainage plan. No evidence of uncontrolled drainage or sedimentation post closure. Annual site inceptions post closure and reporting.	
Rehabilitation and closure (processing area and ancillary infrastructure)	At closure, the processing area shall be cleaned, equipment sold and relocated or removed from the area and disposed of at a suitable location (in-pit or landfill).	Closure	Disposal records provided. Only equipment taken over by a third party left on site.	
	At closure, surface material from the processing area that is contaminated with ore, waste rock or tailings shall be removed and placed in-pit or TSF. Suitable growth medium shall then be spread over the processing area and it shall be revegetated with native species.	Closure	Completion criteria are being met as per MCP. Post-closure annual inspections and monitoring. Reporting.	

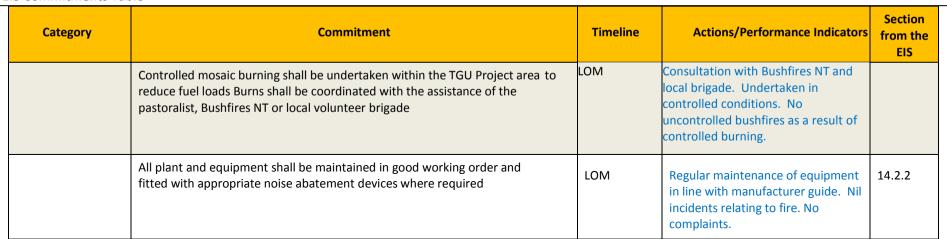
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Category	Commitment	Timeline	Actions/Performance Indicators	Section from the EIS
Rehabilitation and closure (rehabilitation)	Areas to be cleared of vegetation shall have any useful materials (seed, timber) salvaged, before vegetation is pushed aside, topsoil (notionally 10 cm) and other useful growth media or construction materials are stockpiled for later use	Closure	Ground Disturbing Permits (GDP) for clearing, Audits of GDP compliance. Internal mapping and topsoil inventories.	
	Topsoil that is likely to be infested with weed seed shall be stockpiled separately from clean topsoil	Closure	GDP records, GDP audit records. Internal GIS mapping.	
	Areas designated for rehabilitation (TSF footprints) shall be prepared with topsoil spread to specified thicknesses, ripped and seeded with native species		Implementation of MCP, completion criteria being as per MCP. Post- closure inspection and annual monitoring.	
	Weed infested topsoil shall only be used in areas designated as appropriate by the site Manager. A weed control programme shall be used to control weeds if necessary		Implement weed management plan and weed hygiene procedures. GDP records, Weed mapping. Post- closure inspections and reporting.	
Rehabilitation and closure (post closure monitoring and reporting)	Rehabilitation monitoring shall be completed in the first wet season and any remedial actions identified and implemented by the next wet season	Closure	Rehabilitation monitoring reports provided. Completion criteria being met as per MCP.	
	Annual reporting on rehabilitation and closure progress and plans shall be provided to DPIR for a minimum of five years post-closure			
Rehabilitation and closure (record keeping)	Records of rehabilitation and closure activities shall be retained by Primary Gold and submitted to DPIR annually	Closure	Rehabilitation monitoring reports submitted annually to DPIR. Rehabilitation results trending towards Completion criteria as per MCP.	
Other factors (fires and bushfires)	Prior to hot works commencing on-site, the surrounding area shall be cleared of all combustible material and a fire extinguisher and some other means of fire suppression shall be provided and available	F C LOM	Implement hot works procedure and Fire Management Plan during operations.	
	Cigarette smoking shall be restricted to approved areas only, with appropriate cigarette butt disposal facilities available		Nil fires on site	14.1.2



Category	Commitment	Timeline	Actions/Performance Indicators	Section from the EIS
Other factors (fires and bushfires)	No burning of rubbish or open fires shall be permitted on-site		Implementation of Fire Management Plan during operations. Regular maintenance of vehicles and machinery and in line with manufacturers guide. Nil fires on site.	14.1.2
	Vehicles shall be restricted to existing roads and tracks where practicable	LOM		
	Vehicle undersides shall be checked and any material stuck around exhaust manifolds shall be removed as part of normal vehicle pre-start check routines			
	Firebreaks shall be established around key facilities and shall be maintained on a seasonal basis (as required)			
	All buildings on-site should comply with Australian Standards and Fire Safety regulations	Pre-mining and Regula LOM Impler Plan d started operation		
	Firefighting equipment including fire extinguishers or other control equipment shall be made available in all vehicles and at designated work area points			
	Firefighting equipment shall be maintained to comply with relevant fire safety standards			
	A fire management works/action programme shall be implemented which will detail spatial and temporal aspects of wildfires and hazard reduction burns, mapping of fire extents and documentation of fire effects and control outcomes			
	Fire breaks shall be slashed or graded at the end of the wet season (or when access is permissible)		Regular maintenance of firebreaks. Implementation of Fire Management	
	A 5 m buffer zone shall be installed and maintained either side of the site boundaries and the constructed stock fence		Plan during operations. No fires started as a result of mining operations. No incidents of equipment damage or injury /loss of life due to fires.	



PRIMARY GOLD



Category	Commitment	Timeline	Performance Indicators	Section from the EIS
	During the construction phase, works which have the potential to result in excessive noise or vibration shall be undertaken as per regulatory requirements. Where excessive noise and vibration works are required to be undertaken outside these hours, the pastoralist and station manager shall be notified	LOM	Noise levels within noise regulations. Nil incidents or noise related complaints. Implementation of blast management plan during operations. No safety incidents relating to blasting.	
	A complaints register shall be maintained to record any community and/or worker complaints received concerning excessive noise and vibration levels			14.2.2
Other factors (noise and vibration)	Workers shall wear hearing protection when undertaking tasks that exceed occupational health and safety limits for noise (above LAeq, 8h of 85 dB(A)). Hearing protection shall meet Australia Safety Standards in accordance with AS/NZS 1269.3			
	Areas where people may be exposed to excessive noise levels should be sign-posted as hearing protector areas			
	A blast management plan shall be prepared prior to the commencement of blasting. This shall include details of nearest receptors, potential impacts and appropriate mitigation measures			
	All workers and visitors shall be made aware of the blast schedule			
Other factors (air emissions)	Construction works that have the potential to generate high dust levels shall be restricted during times of high wind in the direction of station dwellings	LOM	Implementation of Dust Control during operations which outlines dust mitigation measures. Nil incidents or dust related complaints	
	Water shall be applied to unsealed tracks and open areas during times of increased dust levels			
	Ore shall be wetted prior to crushing			14.3.2
	Dust shall be controlled using sprays over the conveyors at crusher and mill feed during processing			
	Vehicle speed limits shall be set within the TGU Project site			
	Clearing shall be restricted to the minimum required			



Category	Commitment	Timeline	Performance Indicators	Section from the EIS
	Vehicles shall keep to designated tracks as far as practicable			
	All plant and equipment shall be regularly inspected and maintained to minimise exhaust emissions			
	No burning of waste shall be permitted on-site			
	Mining will be restricted to underground and there shall be no surface expansion of the pit	- LOM	Implement AMD Management Plan during operations. Implement dust management measures during operations. Ensure GDP is being adhered to and minimal clearing is being undertaken. No complaints received regarding visual amenity. Positive consultation outcomes	
	Waste rock material shall be disposed of underground or in the bottom of the existing pit to avoid the need to create additional WRDs			14.4.2
Other factors	Options to rehabilitate the existing sulphide and oxide WRDs shall be investigated			
(visual amenity)	Areas required to be cleared shall be restricted to the minimum required			
	Existing cleared areas and tracks should be used for laydown and temporary construction areas in preference to undertaking new clearing			
	Water shall be applied to unsealed tracks and open areas during times of increased dust levels			
	Where practical, dam walls should be constructed with steep sides (45 degree slope) to prevent the establishment of semi-aquatic vegetation that will provide suitable breeding habitat	LOM	Inductions No complaints relating to mosquitos. No new infestations of mosquito breeding sites.	
	Surface water drainage shall be designed to minimise potential for ponding			
Other factors (mosquito breeding)	Areas of frequent surface water ponding shall be filled in or drained where practicable		Weekly inspections and reports.	14.5.2
	Stockpiles shall not be placed in areas that may impede drainage and shall be contoured to prevent ponding of water		Nil mosquito reports	
	Sedimentation ponds shall be designed to drain and empty following rainfall events			



Category	Commitment	Timeline	Actions/Performance Indicators	Section from the EIS
	Unless in use, all rainwater tank access points, (excluding inlet and outlets), shall be kept shut to prevent mosquito access. Inlets and outlets shall be covered with closely fitting removable insect-proof screens	Implement pest management plan during operations. No complaints relating to mosquitos. No new infestations of mosquito breeding sites. Weekly inspections and reports.	during operations. No complaints relating to mosquitos. No new infestations of mosquito	
	Wastewater treatment and storage systems shall be designed and constructed as per DoHCS guidelines			
Other factors	Dead and lodged reeds shall be removed from Bazzamundi lake on an an annual basis where practicable			
(mosquito breeding)	Where Project activities have created active breeding sites, these sites shall be modified where practicable to prevent further breeding	-	Inductions No complaints relating to mosquitos. No new infestations of mosquito breeding sites. Weekly inspections and reports. Nil disease reports	14.5.2
	Where active breeding sites are unable to be modified, options for chemical control shall be investigated in consultation with the Medical Entomology Branch of the DoHCS			
	Workers shall wear long sleeved shirts, long trousers and mosquito repellent during times of high mosquito activity	LOM		
	Site offices and cribs shall be screened and air conditioned to discourage the presence of mosquitos			
	Workers shall be educated in the prevention and early identification of mosquito and biting insect borne diseases			
Other factors (Erosion and Sediment)	Develop and implement an Erosion and Sediment Control Plan (Section 4, EIS Supplement)	Construct	Sediment and Erosion no greater than surrounding environs	