APPENDIX I

Environmental Risk Assessment

Ref	Environmental Factor	Risk scenario description	Risk Source	Activity			Code of Practice	Control / mitigation measures	Detect	Recover	Risk rating (final)			ALARP criteria achieved?	Residual risk ALARP and Acceptable Statement	Acceptable criteria achieved?	Scientific Uncertainty Ranking
				Construction & commissioning	Ops & emergency management	Decommissioning & rehabilitation		Prevent			Consequence	Likelihood	Risk Rating				
1	**Hydrological processes**	Contamination of aquifer from surface activities (chemical and waste storage, handling, treatment, piping, recycling and spills) impacting a receptor (groundwater user or GDE).	Storage, handling and transportation of chemicals, hydrocarbons and wastes, including during the wet season. Surface spills from the handling and transferring of process water (including process water pipelines). Storage and management of oily waste.	X	X		A.3.8 Containment of Contaminants C.3 Wastewater Management Framework C.7.1 Wastewater Management Plan C.7.2 Spill Management Plan	- No wastewater will be generated at the SWP during routine operations. - Process water will be raw water mixed with reject from the SWP with the only 'contaminant' being sediment. Reject sand is primarily inert silica dioxide with no identified contaminants present. - Process water will not be released from the site. - Captured stormwater may be reused as process water in preference to release, in which case the stormwater will be transferred to settlement basins and be considered to be process water. - All chemicals stored in designated areas with secondary containment. - Spill Management Plan implemented to prevent, detect and respond to spills. - Chemical storage & handling areas to have secondary containment, with an impermeable membrane with coefficient of permeability of <10-9 m/s. - Separation between pipework/ chemical/ waste storages and closest aquifer over 70 m, with interbedded clays likely to limit any contaminant migration. - Licenced chemical and waste transporters are used for all dangerous goods and listed waste transportation. - No chemical transportation during the wet season, unless transportation is undertaken in accordance with a risk assessment that has determined the activity is safe and low risk. - Nearest pastoral extraction bore 2.5 km away. - Spills and leaks to be cleaned up immediately. - No major GDE linked to CLA within 20 km of extraction point, although stygofauna eDNA has been detected in the Amungee NW1 bore; impact likely to be localised.	- Weekly inspections to identify any potential leaks or spills from storage and handling areas. - Transport incident statistics collected and monitored. - Onsite assurances and fit for work assessments completed periodically on transport companies.	- Spill management plan implemented outlining leak classification, response and reporting requirements - All leaks to be cleaned up as soon as practicable. - Emergency Response Plan implemented to prevent, detect and respond to spills. - Contractor performance reviews completed where breaches in requirements are escalated and actions implemented to rectify defects. - Any contamination event to be characterised and have remediation plans developed and executed in accordance with the process outlined in Appendix A National Environment Protection (Assessment of Site Contamination) Measure 1999 (the ASC NEPM).	2	1	L	Yes	The regulatory regime legislating the storage, handling and transportation of dangerous goods and combustible liquids in Australia is mature. Regulatory requirements covering wastewater and containment of contaminants is extensive. Double lined tanks will be used which will reduce the potential for spills/ leaks. Any spillage is likely to be locally restricted, small and rapidly detected. Consequences are considered moderate, with impacts spatially restricted to the SWP pad, primarily located on the surface and is likely to be of a short term (days to weeks). The likelihood of contamination is influenced by the rapid detection, separation distance between aquifer and the surface and rapid detection of any spills. The likelihood of a groundwater event from chemical spills is considered remote with a <1% probability. This is primarily influenced by the lack of spill sources, separation distance between aquifers and the surface, and implementation of the spill management plan that will rapidly detect any spills.	Yes	Low
2	**Inland water environmental quality**	Contamination of surface water or soils from surface activities.	Storage, handling and transportation of chemicals, hydrocarbons and wastes/ wastewater, including during the wet season. Surface spills from storage, handling, treatment, piping and transportation of process water. Chemical and waste transportation accident.	X	X		A.3.8 Containment of Contaminants C.7.2 Spill Management Plan	- No wastewater will be generated at the SWP during routine operations. - Process water will be raw water mixed with reject from the SWP with the only 'contaminant' being sediment. Reject sand is primarily inert silica dioxide with no identified contaminants present. - Process water will not be released from the site. - Captured stormwater may be reused as process water in preference to release, in which case the stormwater will be transferred to settlement basins and be considered to be process water. - All chemicals stored in designated areas with secondary containment - Spill Management Plan implemented to prevent, detect and respond to spills. - Chemical storage & handling areas to have secondary containment, with an impermeable membrane with coefficient of permeability of <10-9 m/s. - All oily water tanks to be double skinned - Separation between surface and closest aquifer over 70 m, with interbedded clays likely to limit any contaminant migration. - Licenced chemical and waste transporters are used for all dangerous goods and listed waste transportation in accordance with the NT Dangerous Goods Act and Waste Management Pollution Control Act. - No chemical or waste oily water transport during the wet season, unless transportation is undertaken in accordance with the EMP stated controls and a risk assessment that has determined the activity is safe and low risk. -All wastes, to be disposed of to offsite licenced facilities using authorised transporters under the WMPC Act. - Nearest pastoral extraction bore 2.5 km away. - Spills and leaks to be cleaned up immediately. - No major GDE linked to CLA within 20 km of extraction point, although stygofauna eDNA has been detected in the Amungee NW1 bore; impact likely to be localised.	- Daily inspections during operations - Weekly site inspections to check levels, identify any potential leaks or spills from storage and handling areas. - Daily wet season inspections during rainfall events to check levels -Weekly dry season inspections of all secondary containment. - Transport incident statistics tracked through incident management system - Onsite assurances and fit for work assessments completed periodically on transport companies.	- Spill management plan implemented outlining leak classification, response and reporting requirements - All leaks to be cleaned up as soon as practicable. - Emergency Response Plan implemented to prevent, detect and respond to spills. - Contractor performance reviews completed where breaches in requirements are escalated and actions implemented to rectify defects. - Any contamination event to be characterised and have remediation plans developed and executed in accordance with the process outlined in Appendix A of the ASC NEPM.	3	1	L	Yes	The transportation of wastes and chemicals is a tightly controlled industry with mature practices designed to prevent, detect and respond to transportation spills. Any accident is likely to be restricted to road corridors and result in "serious", short term (days-weeks) reversible impacts. All contractors must be appropriately licenced, with National uniform legislation in place to offer a high level of regulatory protection. This risk is considered identical to that of bulk diesel and other dangerous goods transportation- a common activity throughout Australia. Fuel and chemical transport accidents are rare given the number of transportation movements in Australia. The likelihood of an event occurring is therefore considered "remote", what a probability of less than 1%.	Yes	Low
3	**Inland water environmental quality**	Contamination of surface water or soils from surface activities.	Release of contaminated stormwater from activities to surface water, including during flooding. Land clearing and access track sediment releases	X	X		A.3.1 Site selection and planning A.3.4 Erosion and sediment control and hydrology	- Clearing under this EMP has been minimised to 11.2 ha by utilising existing excillary infrastructure where possible (Kyalla 117 camp, existing access tracks, etc. - All oily water tanks to be double skinned - External stormwater to be diverted around the site using bunds, etc. - Erosion and sediment controls implemented around the sites and access tracks to minimise erosion and sediment releases. - Existing access tracks used, with maintenance completed to minimise erosion and sediment releases. - Stockpiled debris to be used to discourage water concentration. - Site to be maintained, with vegetation cover on exposed (non-operational) bunds/ stockpiles established and erosion and sediment controls kept in working order.- - No offsite releases of process water - Operational settlement basins installed onsite will be operated with at least 300mm dry season freeboard (1:1000 ARI dry season rainfall) and a 580mm Wet season freeboard (1:100 7-day rainfall event) with additional volumetric capacity to be availble to prevent the release of process water. - Decant ponds/basins will be operated with a minimum 300mm freeboard, with a spillway to divert any releases into the settlement basins to utilise the available volumetric freeboard - Raw water ponds pose no risk to the environment, however will be maintained with a 300mm freeboard with any overflow to be directed to a settlement basin to utilise the available volumetric freeboard - Captured stormwater may be reused as process water in preference to release, in which case the stormwater will be transferred to settlement basins and be considered to be process water. - Routine weekly monitoring of sediment/settlement basin water quality and freeboard during wet season and monthly during dry season. - Daily monitoring of sediment and settlement basin levels will be undertaken during periods of high rainfall Contaminated stormwater (e.g. from fuel/chemical spills) to be transferred to wastewater tanks. - All wastes to be disposed of to offsite licenced facilities using authorised transporters under the WMPC Act.	- Pre-wet season site assessment completed to identify any maintenance requirements on pads and access tracks. - Stormwater captured in the SWP sediment basins and process water stored in the settlement basins to be routinely tested and levels checked. - Weekly site inspections designed to identify any issues during the wet season.	- Maintenance to be undertaken on erosion and sediment controls to ensure ongoing functionality - Any spills to be investigated and corrective actions implemented. -Pumping/decanting of process water between settling basins to maintain freeboard levels -Washing to cease where operational settlement basin levels are above freeboard.	1	2	L	Yes	External stormwater to be diverted around the site using bunds, etc. All stormwater within the SWP site will be directed to a sediment basin where it will be allowed to settle out sediment. Weekly testing of the sediment basin during the wet season will ensure no contamination has occurred. Captured stormwater may be reused as process water in preference to release, which will involve its transfer to a settlement basin to become part of the process water inventory. Process water will not be released from the site. Dirty stormwater from drip trays and bunds will be collected and treated, with wastewater sent to the existing wastewater tanks. The segregation of clean and dirty water ensures the risk of contamination is minimised. The likelihood is reduced down to remote (<1% probability of occurring) based on the 27 km separation distance between the SWP site and the nearest mapped water course.	Yes	Low
4	**Inland water environmental quality**	Contamination of surface water or soils from surface activities.	Uncontrolled release of waste oily water, chemicals or fuel from site due to regional flooding.		X		A.3.1 Site selection and planning A.3.4 Erosion and sediment control and hydrology	- No offsite release of chemicals or oils. - Stormwater collected in bunds and drip trays/ other contaminated stormwater to be transferred to SS2 wastewater tanks. - Area is remote with closest watercourse 27 km to the west of the SWP - No major wetlands in the vicinity of the SWP site, with Longreach Lagoon 50 km+, Lake Woods 90 km+. - Flood modelling of well pad, including SWP pad completed to optimise site location, away from regional flow paths with low erosivity of flood anticipated. - External stormwater to be diverted around the site using bunds, etc. - Erosion and sediment controls implemented around the sites to minimise erosion and sediment releases, including diversion bunds. - Stockpiled debris to be used to discourage water concentration. - Settlement basin installed onsite with significant airspace/operational freeboard to prevent release of process water. - Captured stormwater may be reused as process water in preference to release, in which case the stormwater will be transferred to settlement basins and be considered to be process water. - Weekly monitoring of sediment/settlement basin quality during wet season and monthly during dry season. - The site will be maintained, with vegetation cover on exposed (non-operational bunds/ stockpiles established and erosion and sediment controls kept in working order. - Spill Management Plan implemented to prevent, detect and respond to spills. - Regional flooding would involve order of magnitude larger volume of low electrical conductivity water (many GL) mixing with relatively small volumes of contaminants. - Dilution would reduce any potential contamination impact down to negligible.	- Pre-wet and post season site assessment completed to identify any erosion/sediment maintenance requirements. - Stormwater captured in sediment basin to be routinely tested and released offsite in a controlled manner.	- Maintenance to be undertaken on erosion and sediment controls to ensure ongoing functionality.	1	2	L	Yes	External stormwater to be diverted around the site using bunds, etc. All stormwater within the SWP site will be directed to a sediment basin where it will be allowed to settle out sediment. Weekly testing of the sediment basin during the wet season will ensure no contamination has occured. Captured stormwater may be reused as process water in preference to release, which will involve its transfer to a settlement basin to become part of the process water inventory. The area is not in close proximity to major watercourse with 27 km separation distance between the SWP site and the nearest mapped watercourse. The likelihood is reduced down to remote (<1% probability of occurring).	Yes	Low
5	**Terrestrial environmental quality**	Loss in long-term soil productivity and viability through soil destabilisation, increased risk of erosion and sedimentation, compaction and dust.	Soil compaction of the SWP pad. Soil erosion from cleared areas.	X	X		A.3.1 Site selection and planning A.3.4 Erosion and sediment control and hydrology A.3.9 Rehabilitation	- Clearing under this EMP has been minimised to 11.2 ha by utilising existing excillary infrastructure where possible (Kyalla 117 camp, existing access tracks, etc. - The SWP pad will be rehabilitated to reduce impacts associated with compaction. - The total disturbance area is small (<0.01% of EP 98 and <0.006% of total tenure area). - Average grade of SWP site is <1%. - Erosion and Sediment Control Plan in place and maintained in functioning condition. - The site will be maintained, with erosion and sediment controls kept in working order. - Stockpiled debris to be used to discourage water concentration. - Sediment basin used to settle out sediment from run-off. - Captured stormwater may be reused as process water in preference to release, in which case the stormwater will be transferred to settlement basins and be considered to be process water.	- Pre-wet season site assessment completed to identify any erosion/sediment maintenance requirements. - Rehabilitation monitoring to assess soil productivity impacts.	- Maintenance to be undertaken on erosion and sediment controls to ensure ongoing functionality. - Areas with poor rehabilitation will be maintained to reduce impact.	1	3	L	Yes	The site will be compacted/sheeted as required during construction. Long term impacts of this compaction will be addressed during the rehabilitation of the site. A loss of productivity is anticipated in the earlier stages of rehabilitation, returning back to pre-disturbed state within ~10 years. This will be accelerated through removal of hard stand areas, ripping and scarifying compacted surface. the consequences is likely to be "moderate", being locally restricted, with a moderate- long (years) recovery time. The likelihood of long term productivity impairment is considered "unlikely" (probability <30%), given the observed rehabilitation from previous disturbance activities.	Yes	Low

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				Construction & commissioning	Ops & emergency management	Decommissioning & rehabilitation		Prevent			Consequence	Likelihood	Risk Rating				
6	**Terrestrial ecosystems**	Impact to listed threatened habitats and listed threatened flora and fauna, including habitat fragmentation, impacts to non-listed fauna and livestock from SWP activities.	Activity (vehicle, machinery and equipment) noise and lighting.	X	X	X	A.3.1 Site selection and planning A.3.3 Noise	- Site location avoids areas of high conservation value as a priority. - Areas are not considered high conservation value, are not threatened/endangered and not fragmented, with impacts unlikely to result in significant disturbance to threatened/endangered species. - Impacts likely to be temporal, with fauna able to move to adjacent areas to escape impacts. - Fauna monitoring at Kyalla has not identified any impacts, with fauna identified in areas around operations. - Noise and activity at SWP likely to deter fauna from interacting with facility. - Site will be fenced. - Buried raw water pipelines will be limited to the section which underlies the nearby access tracks (<20m). When this section of the pipeline is being deployed, it is expected that the associated trench will be open for ~1 hour with mobile plant and personnel in attendance during this time, minimising the liklihood of fauna entrapment.	- Anecdotal evidence form pastoralists and Traditional Owners. - Impacts are likely to be temporal, with detection extremely difficult.	- Where impacts are identified, practices will be reviewed and modified to reduce impact on fauna.	1	3	L	Yes	Fauna may be disturbed through transport movements along access tracks around the SWP. The consequence of activity nuisance is anticipated to be minor, with localised, short term impacts to areas immediately adjacent to access tracks. The likelihood of the risk is reduced through the isolated location (lack of environmental and community receptors), regionally extensive vegetation communities (good outside refuge away from access tracks and limited transport movements during the evenings. The impact to fauna is considered highly unlikely given the ability of fauna to move to other areas of refuge away from SWP activities.	Yes	Low
7	**Terrestrial ecosystems**	Impact to listed threatened habitats and listed threatened flora and fauna, including habitat fragmentation, impacts to non-listed fauna and livestock from SWP activities.	Introduction and spread of weeds from the SWP site. Poor rehabilitation of the site reduces regional habitat and promotes weeds. Land clearing.	X	X		A.3.1 Site selection A.3.6 Weed management A.3.9 Rehabilitation	- Clearing under this EMP has been minimised to 11.2 ha by utilsing existing excillary infrastructure where possible (Kyalla 117 camp, existing access tracks, etc.) - Activity located away from threatened species nesting locations. - Land clearing undertaken in accordance with NT Land Clearing Guidelines. - Vegetation clearing at SWP to be conducted with visual checks to identify fauna/fauna habitat during clearing- specifically grey falcon nests. - Large habitat trees to be avoided where possible (none identified to date). - Scouting completed prior to clearing to identify threatened species - All equipment and vehicles to be washed-down and to have a Biosecurity Declaration Certificate prior to access to site - Areas of proposed exploration have been surveyed and are deemed to have low weed abundance - Activity will be restricted to defined SWP site and exisitng approved ancillary activity areas such as access tracks, gravel pits, etc. - A site specific Rehabilitation Plan has been developed and will be implemented progressively. - Areas will have infrastructure and wastes removed, topsoil respread and vegetation re-introduced. - Rehabilitation timing will consider seasonal constraints, with rehab completed prior to the wet season to maximise revegetation.	- 6 monthly monitoring implemented around infrastructure to detect the spread/ introduction of weed species. - Tamboran assurance activities to target equipment wash-down certificates to ensure standards are being met. - Rehabilitation monitoring to be undertaken to track rehabilitation progress.	- Where weed outbreaks are identified associated with Tamboran's activities, infestations will be treated in accordance with the Weed Management Plan. - Corrective actions implemented where ongoing biosecurity breaches are identified. - Rehabilitation maintenance will be undertaken periodically to fix any defects.	2	2	L	Yes	The area in the vicinity of the SWP is free of weeds. Weeds are present across the broader property. Any introduction of weeds is likely to result in localised impact, with weed management requirements likely to reduce the consequence down to "moderate, short term. Risks associated with land clearing and rehabilitation are well known. Due to the inherent nature of weed prevention the risk likelihood is considered unlikely, with a probability less than <30%.	Yes	Low
8	**Terrestrial ecosystems**	Impact to listed threatened habitats and listed threatened flora and fauna, including habitat fragmentation, impacts to non-listed fauna and livestock from SWP activities.	Accidental ignition of fire during civil construction	X			A 3.7 Fire management	- Activity located away from threatened species nesting locations. - Scouting completed prior to clearing to identify threatened species. - Bushfire management plan implemented to prevent and respond to bushfires- including establishment of communication and fire response protocols with pastoralists. - Bushfire awareness included in site inductions. - Designated smoking areas on-site. - Firefighting equipment to be available to deal with fires. - Fire breaks will be constructed around the SWP site. - SWP activites do not involve any flaring/naked flames/signficant ignition sources - Permit to work system to be utilised for all operational and maintenance activities with the potential to cause ignition - Activities will comply with pastoralist and regional bushfire management plans. - Area in the vicinity of the SWP site have had recent (within 1-2 years) fire activity, reducing the fuel load.	- Annual fire preparedness assurance activities completed where activities are proposed during high fire risk periods. - Daily monitoring of bushfires in the region during periods of high fire danger. - Annual fire frequency mapping using the Northern Australia fire Information fire history database. - Risk based equipment/ piping inspection and condition monitoring program.	- Fire hazard reduction strategies (such as back burning) to be implemented to reduce the risk of fire ignition/ impact as required. - Where a bushfire is started and cannot be controlled, Tamboran to engage with pastoralist to coordinate response activities.	3	1	L	Yes	Fire is a common occurrence within the Barkly Region. A fire is likely to have a serious impact, with moderate term reversible impacts (years). With the appropriate controls, such as separation distances, firebreaks, and adherence to the Bushfires Management Act 2016, the likelihood of causing a fire from operation of the SWP is anticipated to be remote, with a predicted occurrence of <1%.	Yes	Low
9	**Terrestrial ecosystems**	Impacts to listed threatened habitats and listed threatened flora and fauna, impacts to non-listed fauna and livestock from SWP activities.	Contaminants in water and soil pass through the food chain and bioaccumulate in fauna causing detrimental impacts to local species and communities.	X	X		A.3.8 Containment of Contaminants C.7.2 Spill Management Plan	- No wastewater will be generated at the SWP during routine operations. - Process water will be raw water mixed with mixed reject from the SWP with the only 'contaminant' being sediment. Reject sand is primarily inert silica dioxide with no identified contaminants present. - Process water will not be released from the site. - Activity located away from threatened species nesting locations. - All chemical are stored in designated areas with secondary containment. - The SWP will be fenced to prevent livestock accesses. - All wastes to be disposed of to offsite licenced facilities using authorised transporters under the WMPC Act.	- Routine site weekly inspections to identify poor chemical handling or wastewater storage practices. -daily inspections of secondary containment during the wet season and weekly during dry season. - Monitoring of fauna interactions of the site.	- Where ongoing fauna interactions with water storages or chemicals are identified through monitoring, additional controls shall be implemented as appropriate to reduce the potential for exposure (such as additional fencing, deterrents etc.). - All spills are to be cleaned up immediately, preventing the exposure to livestock and fauna.	2	1	L	Yes	The risks associated with fauna ingestion of chemicals is well known and measures to prevent ingestion (such as fences and separation distances to activity) are deployed as standard practice. Tamboran has extensive operational experience to date with no evidence of impacts on biota from chemicals. Combined with the availability of habitat in the area which would-be impacted by a release/ spill- the risk is considered minor, with the likelihood remote.	Yes	Low
10	**Terrestrial ecosystems**	Impact to listed threatened habitats and listed threatened flora and fauna, impacts to non-listed fauna and livestock from SWP activities.	Vehicle and machinery collisions result in a localised impact to listed threatened species.	X	X	X	A.3.5 Biodiversity protection	- Activity located away from threatened species nesting locations. - SWP noise will typically deter fauna from interacting with plant during operations. - Vehicle speed limited to 60 km/hr to be reduced around areas of high risk of fauna collision. - Vehicle movements to minimise driving at night. - Fauna collisions observed during the existing activities have been minimal, with collision restricted to several wallabies along access tracks. - Absence of listed threatened species identified in the vicinity of the SWP site during the land condition assessment.	- Fauna mortality data is collected as part of Tamboran's incident and observation management procedures.	- Where ongoing fauna collisions are reported, additional controls shall be investigated, such as reduced speed limits in high risk areas will be implemented.	1	3	L	Yes	The estimated traffic increase for the SWP is ~23 vehicles per day. Fauna collisions with vehicles are a commonly associated with roads. It is anticipated that a small number of fauna collisions will be experienced during the activity (1-2 animals per month), with minor, short term, reversible impacts to local fauna populations. The likelihood of causing a localised decline in species abundance is considered remote.	Yes	Low
11	**Terrestrial ecosystems**	Impact to listed threatened habitats and listed threatened flora and fauna, impacts to non-listed fauna and livestock from SWP activities.	Encouragement of feral animals and other pest species increases leading to competition with native species. This includes the introduction of cane toads.	X	X	X	A.3.5 Biodiversity protection	- Wastes storages to be animal proof. - All food scraps to be removed from site and disposed of at a licenced facility. - Food scraps to be frozen and stored within freezer during wet season. - Experience from existing activities has not detected increased feral animal prevalence, with only 1 feral dog identified in 6 months of camp operations. - Equipment inspections.	- Feral fauna observation data is collected as part of Tamboran's incident and observation management procedure.	- Where ongoing feral animal presence is detected, additional controls will be investigated in consultation with the pastoralist (such as fencing, removal of water sources etc.)	1	3	L	Yes	Feral animals may be increased through the provision of access to water, food (camps) and hunting habitat (such as road corridors). The use of the existing site and access tracks limits the additional risk associated with the provision of additional hunting habitat. Food scraps and waste will be frozen and disposed of offsite, which will reduce the food availability for pests. The anticipated consequence is minor, with the potential pest species increase anticipated to be small. The likelihood is determined to be unlikely, with a probability of less than 30%.	Yes	Low
12	**Culture and heritage**	Disturbance of sacred site or culturally sensitive area, loss of spiritual connection with land and decline in environmental value of area used for hunting, foraging and enjoyment.	Sites disturbed directly by SWP activities. Personnel unauthorised access to sacred site.	X	X	X	A.3.1 Site selection and planning	- Exploration Agreements in place with traditional owners covering all proposed exploration activities. - All areas of the proposed activity to be cleared by NLC anthropologist and archaeologist. - An AAPA certificate for the SS E&A activities is in place, a variation to this will be obtained to include the activities proposed in this EMP . - Areas of cultural significance in the vicintiy of the SWP are identified through Restricted Work Areas - Implementation of the unexpected heritage finds procedure. - All staff, contractors and visitors to be inducted covering restricted work areas and cultural heritage. - Access off lease not permitted.	- Archaeologists complete cultural heritage assessment to identify culturally sensitive areas. - Tamboran completes assurance activities to verify that personnel/vehicles/equipment have not left the approved work area.	- N/A- no access to sacred sites anticipated.	3	1	L	Yes	All sites of the proposed activity must have Traditional Owner clearance via the NLC and informed by Cultural Heritage Assessment by a trained archaeologist. AAPA certificates are required for all activities to ensure sacred sites are not impacted by activities. The remote location of the activity, lack of sacred sites in the vicinity of the SWP and contractual requirements prohibiting access reduce the likelihood down to "remote", with a probability lower than 1%.	Yes	Low
13	**Culture and heritage**	Disturbance of sacred site or culturally sensitive area, loss of spiritual connection with land and decline in environmental value of area used for hunting, foraging and enjoyment.	Accidental ignition (fire) by site activities.	X	X		A 3.7 Fire management	- Bushfire management plan implemented to prevent and respond to bushfires- including establishment of communication and fire response protocols with pastoralists. - Bushfire awareness included in site inductions. - Designated smoking areas on-site. - Firefighting equipment to be available to deal with fires. - Fire breaks will be constructed around the SWP site. - SWP activites do not involve any flaring/naked flames/signficant ignition sources - Permit to work system to be utilised for all operational and maintenance activities with the potential to cause ignition - Activities will comply with pastoralist and regional bushfire management plans. - Area in the vicinity of the SWP site have had recent (within 1-2 years) fire activity, reducing the fuel load.	- Annual fire preparedness assurance activities completed where activities are proposed during high fire risk periods. - Daily monitoring of bushfires in the region during periods of high fire danger. - Annual fire frequency mapping using the Northern Australia Fire Information fire history database.	- Fire hazard reduction strategies (such as back burning) to be implemented to reduce the risk of fire ignition/ impact as required - Where a bushfire is started and cannot be controlled, Tamboran to engage with pastoralist to coordinate response activities	3	1	L	Yes	Fire is a common occurrence within the Barkly Region. A fire is likely to have a serious impact, with moderate term reversible impacts (years). With the appropriate controls, such as separation distances, firebreaks, and adherence to the Bushfires Management Act 2016, the likelihood of causing a fire from operation of the SWP is anticipated to be highly unlikely, with a predicted occurrence of <10%.	Yes	Low
14	**Culture and heritage**	Disturbance of sacred site or culturally sensitive area, loss of spiritual connection with land and decline in environmental value of area used for hunting, foraging and enjoyment by community (including native title holders).	Contaminants in water and soil pass through the food chain and bioaccumulate in fauna (livestock and native animals) causing detrimental impacts to local species and communities that rely on the animals for food/ livelihood / spiritual connection.		X		A.3.8 Containment of Contaminants C.7.2 Spill Management Plan	- Environmental management plan in place to prevent release of contaminants into the environment to protect country and maintain ability to forage and support Native Title Holders ongoing way of life. - Stakeholder engaging with Native Title Holders and community to provide descriptions of regulated activity and controls. - All chemicals and waste oils stored in designated areas with secondary containment. - No offsite wastewater or waste discharge. - Spill management plan implemented with all spills cleaned up immediately. - The SWP site will be fenced to prevent livestock accesses. - Air dispersion modelling confirms no impact to air quality from operations. - Sediment/settlement basins used to minimise sediment releases, with routine testing of water from facility. - All wastes to be appropriately stored onsite and removed to a licences waste facility.	- Routine site weekly inspections to identify poor chemical handling or storage practices. - Monitoring of fauna interactions on site.	- All spills are to be cleaned up immediately, preventing the exposure to livestock and fauna.	2	1	L	Yes	The risks associated with fauna ingestion of chemicals is well known and measures to prevent ingestion (such as fences and separation distances to the activity) are deployed as standard practice. Tamboran has extensive operational experience with no evidence of impacts on biota from chemicals. Combined with the availability of habitat in the area which would-be impacted by a release/ spill- the risk is considered minor, with the likelihood remote (1%).	Yes	Low

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				Construction & commissioning	Ops & emergency management	Decommissioning & rehabilitation		Prevent			Consequence	Likelihood	Risk Rating				
15	**Community and economy**	Loss of visual amenity, experience and sense of place for pastoralist, community members and tourists.	Industrialisation of landscape. Increased traffic. Light emissions impact on community receptor (e.g. pastoralist) Influx of workers to region. Noise emissions from activities.		X		A.3.1 Site selection and planning A.3.3 Noise A.3.9 Rehabilitation	- SWP site is located away from environmental and community receptors and not clearly visible from main roads. - Traffic impact assessment completed assessing the increased traffic levels as negligible: reflective of limited size and scope of activity. - Traffic impacts are expected to be primarily associated with construction, with impacts temporary. Ongoing SWP operational traffic is anticipated to be minor. - Access route is away from Hayfields Homesteads. - Activity intensity is restricted to specific periods, with most activity restricted to the adjoining well pad and SWP site. - Workers are flown in and out of Daly waters from Darwin. Buses are used to limit vehicle transport movements between the Daly Waters airport and remote camps- there is limited drive in/drive out workers into the Beetaloo, except where local or regional contractors are used. - Camps used to minimise impact on local accommodation and tourism. - Where practical, the noisiest works will be undertaken during the recommended standard hours. - Plant will be regularly maintained; equipment that becomes noisy will be repaired or replaced. - Noise modelling completed confirming impacts from noise restricted to immediate vicinity of site. - Progressive rehabilitation to occur when sites are no longer required for future operations. - Community living areas are not located near the planned activities, with Jingaloo located 35 km and Lily Hole 50 km from activity.	- Ongoing pastoralist and community engagement to monitor performance and identify potential impacts from activity on local amenity.	- N/A- site location and activity intensity is unable to be changed. - Complaints will be dealt through Tamboran's complaint resolution process. Where valid complaints are received, additional controls will be implemented to address community complaints (such as changes to vehicle load movements, etc.)	1	1	L	Yes	The SWP site is located away from major transport routes, homesteads and communities. The consequences of activities may result in minor changes to the aesthetics in the vicinity through visibility of exploration activities (e.g. presence of workers and vehicles). A noise modelling and assessment indicates all representative receptors are predicted to comply with the relevant external operational noise limits during the operation of the SWP. The probability that the activity will result in an industrialisation of the landscape is considered remote, with a probability less than 1%.	Yes	Low
16	**Community and economy**	Reduction in land productivity.	Introduction and spread of weeds in the area. Bushfire from accidental ignition.	X	X		A.3.6 Weed management A.3.7 Fire management	- All equipment and vehicles to be washed-down and to have a Biosecurity Declaration Certificate prior to access to site. - Areas of proposed exploration have been surveyed and are deemed to have low weed abundance. - Activity will be restricted to defined SWP site. - Bushfire management plan implemented to prevent and respond to bushfires- including establishment of communication and fire response protocols with pastoralists. - Bushfire awareness included in site inductions. - Designated smoking areas on-site. - Firefighting equipment to be available to deal with fires. - Fire breaks will be installed around infrastructure. - Permit to work system to be utilised for all operational and maintenance activities with the potential to cause ignition - SWP activites do not involve any flaring/naked flames/signficant ignition sources. - Activities will comply with pastoralist and regional bushfire management plans.	- 6 monthly monitoring implemented around infrastructure to detect the spread/ introduction of weed species. - Tamboran assurance activities to target equipment wash-down certificates to ensure standards are being met. - Annual fire preparedness assurance activities completed where activities are proposed during high fire risk periods. - Daily monitoring of bushfires in the region during periods of high fire danger. - Annual fire frequency mapping using the Northern Australia Fire Information fire history database. - risk based corrosion and integrity inspections of pipelines and equipment	- Where weed outbreaks are identified associated with Tamboran's activities, infestations will be treated in accordance with the Weed Management Plan. - Fire hazard reduction strategies (such as back burning) to be implemented to reduce the risk of fire ignition/ impact as required. - Where a bushfire is started and cannot be controlled, Tamboran to engage with pastoralist to coordinate response activities.	3	2	M	Yes	The area in the vicinity of the SWP is free of weeds. Weeds are present across the broader property. Any introduction of weeds is likely to result in localised impact, with weed management requirements likely to reduce the consequence down to "moderate, short term. Due to the inherent nature of weed prevention the risk likelihood is considered unlikely, with a probability less than <30%. Fire is a common occurrence within the Barkly Region. A fire is likely to have a serious impact, with moderate term reversible impacts (years). With the appropriate controls, such as separation distances, firebreaks, and adherence to Bushfires Management Act, the likelihood of causing a fire from SWP activities is anticipated to be highly unlikely, with a predicted occurrence of <10%.	Yes	Low
17	**Community and economy**	Reduction in land productivity.	Impact to surface hydrology changes water flows impacting the land use/productivity	X			A.3.1 Site selection and planning A.3.4 Erosion and sediment control and hydrology	- The SWP site is located away from watercourses and regional flow paths, with closest watercourse ~27 km west of the SWPsite. - The site is designed to divert stormwater around, without impeding natural surface water flows. - Erosion and sediment controls implemented around the sites to minimise erosion and sediment releases, including diversion bunds. - Process water will not be released from the site. - Captured stormwater may be reused as process water in preference to release, in which case the stormwater will be transferred to settlement basins and be considered to be process water. - Stockpiled debris to be used to discourage water concentration, with vegetation establish on stockpiles to reduce exposed surfaces - Area is remote.	- Erosion and Sediment Control Plan in place with routine pre and post wet season inspection and maintenance.	- Maintenance to be undertaken on erosion and sediment controls to ensure ongoing functionality and the controls are adequate.	1	1	L	Yes	The SWP has been located outside the major regional flow paths and designed to divert stormwater around the infrastructure. The consequence is anticipated to be minor, with the likelihood remote (based on the site location, soils and nature of the activities).	Yes	Low
18	**Community and economy**	Reduction in land productivity and surface water quality	Loss of sense of place and connection to land and country Reduction in foraging and support of traditional lifestyle Poor rehabilitation/ reinstatement of exploration infrastructure. Impacts on surface water quality due to sediment releases			X	A.3.1 Site selection and planning A.3.4 Erosion and sediment control and hydrology A.3.9 Rehabilitation	- All exploration activities are undertaken under Exploration agreements with Native Title Holders. - Environmental management plan in place to prevent release of contaminants into the environment to protect country and maintain ability to forage and support Native Title Holders ongoing way of life. - Existing access tracks utilised, with erosion and sediment controls in place to minimise sediment releases - Process water will be raw water mixed with reject from the SWP with the only 'contaminant' being sediment. Reject sand is primarily inert silica dioxide with no identified contaminants present. - Process water will not be released from the site. - Settlement basins installed onsite operated with at least 300mm dry season freeboard (1:1000 ARI dry season rainfall) and a 580mm Wet season freeboard (1:100 7-day rainfall event) with additional volumetric capacity to be availble to prevent the release of process water.. - Captured stormwater may be reused as process water in preference to release, in which case the stormwater will be transferred to settlement basins and be considered to be process water. - Exploration agreements have specific environmental and reporting requirements. - Native title holders receive royalties and employment from exploration activities. - On country meetings held to discuss activities, risk and controls. - Site inspections held with Native Title Holders prior to commencement of activities and routinely to inspect activities as they progress. - Cultural managers used to perform sacred site clearances and heritage surveys to identify features required to be protected. - Cultural managers used for pre-clearance surveys. - Community living areas are not located near to, or downstream of the planned activities, with Jingaloo located 35 km and Lily Hole 50 km from activity. - A site specific Rehabilitation Plan has been developed and will be implemented progressively. - Areas will have infrastructure and wastes removed, topsoil respread and vegetation re-introduced. - Rehabilitation timing will consider seasonal constraints, with rehab completed prior to the wet season to maximise revegetation chance.	- Routine meetings are held with Native Title Holders to discuss activities, with any concerns raised responded to. - Rehabilitation monitoring to be undertaken to track rehabilitation progress.	- Complaints regarding Tamboran's activities will be dealt through Tamboran's complaint resolution process. Where complaints are received, Tamboran will investigate and work with the party to attempt to come to an amicable resolution. - Rehabilitation maintenance will be undertaken periodically to fix any defects. -Pumping of process water between settling basins to maintain freeboard levels -Washing to cease where settling basin levels are above freeboard.	2	2	L	Yes	Exploration Agreements under the Native Title Act are required to be in force covering all exploration activities. These dictate ongoing engagement and consent processes with Native Title Holders. Tamboran provides information on their proposed activities, including the avoidance of impacts and risk mitigation strategies. The Code outlines extensive controls which fundamentally protect the environment and therefore the interests of Native Title Holders. Rehabilitation success will be determined through the timing of rehabilitation, with rehab activities undertaken before the wet season to maximise success. Ongoing monitoring and maintenance of rehabilitated areas will be critical to identify and repair areas where rehabilitated success is poor. Consequences are likely to be moderate, with impacts likely to have moderate, locally restricted and medium to long term (1-5 years). The likelihood is influenced by the requirement for security provisions, rehabilitation plan requirements and Code conditions. The likelihood is anticipated to be highly unlikely, with a probability below 10%.	Yes	Low
19	**Community and economy**	Reduction in land productivity.	Disruption of agricultural operations due to ongoing access, traffic, helicopter movements, etc.	X	X		A.3.1 Site selection and planning A.3.3 Noise	- All activities require engagement with pastoralists. - The site has been located to avoid disruption to agriculture operations and infrastructure. - Engagement has/will be undertaken in accordance with NT Petroleum (Environment) Regulations. - Traffic levels are anticipated to be small- as per traffic impact assessment. - Compensation to be paid tfor disruption to pastoral activities from construction and operational activities. - The implementation of the SWP will reduce the use of property access tracks to deliver imported sand.	- Ongoing pastoralist engagement to monitor performance and identify potential impacts from activity on local amenity.	- Complaints regarding Tamboran's activities will be dealt through Tamboran's complaint resolution process. Where complaints are received, Tamboran will investigate if additional controls are needed and implement to address the complaint (such as shrouds, changes to flare configuration etc.)	1	1	L	Yes	Tamboran has extensive experience in co-existing its activities with agricultural users. Consultation with pastoralists is undertaken to ensure impacts on their activities are mitigated. These impacts are addressed in the compensation agreements and access guidelines. It is noted that there is an impact on stakeholder in regards to working with proponents to plan E&A activities. this is unavoidable and required to ensure the activities can be designed to accommodate the activities of both parties. Consequences are anticipated to be minor for E&A activities, with the likelihood unlikely.	Yes	Low
20	**Community and economy**	Increased traffic movements impacts pastoralists, community (including native title holders), tourists, workers and contractors	Vehicle (light or heavy) accident.	X	X	X	A.3.1 Site selection and Planning	- Traffic impact assessment completed, with traffic levels are anticipated to be small. - Alcohol and drug policy implemented with zero tolerance (0.00% BAC and no illicit substances). - Land Transport Procedures. - Workers are flown in and out of Daly waters from Darwin. Busses are used to limit vehicle transport movements between the Daly Waters airport and remote camps- there is limited Drive In/Drive Out workers into the Beetaloo, except where local or regional contractors are used. - The camp is located away from major roads with most movements on internal property access road between the camp, SWP and other approved areas. - The implementation of the SWP will reduce the use of local and regional roads and property access tracks to deliver imported sand. - Stuart Highway intersection design to be approved by DIPL with appreciate line of site provided for vehicles to identify turning vehicles. -Stuart Highway upgrade to be upgraded with turning lanes as per DIPL requirements and approvals. - Ongoing engagement with DIPL. - Community living areas are not located near the planned activities, with Jingaloo located 35 km and Lily Hole 50 km from activity.	- Ongoing community engagement to monitor performance and identify potential impacts from activity on local amenity.	- Complaints regarding Tamboran's activities will be dealt through Tamboran's complaint resolution process. Where valid complaints are received, additional controls will be implemented to address community complaint. - Emergency response plan implemented.	4	2	M	Yes	Cumulative E&A activities will increase traffic levels up to an estimated 31 vehicles per day during the peak. This traffic volume is well below the Level of Service for the highway, which is estimated to be above 1100 vehicles per hour. Accidents from trucks turning into access tracks or from general vehicle accidents could have a major consequence, with an injury to community members/ tourist requiring hospitalisation. Upgrades to the intersection required by DIPL will reduce the likelihood of this incident from occurring. Smaller volumes of traffic are required for Beetaloo, combined with the lack of road users, traffic management plan for all access track turn ins, zero tolerance for alcohol and drugs and use of trained drivers to minimise the risk. Given traffic accidents can result in injuries, the consequence remains major with a likelihood probability of <10%.	Yes	Low
21	**Community and economy**	Labour competition with local businesses and agricultural procedures.	SWP activities compete with agricultural industry for resources.	X	X	X	N/A	- Proposed activity is temporary with no major labour requirements. - Ongoing stakeholder engagement to ensure they know the temporal nature of work. - Local and regional contractors will be utilised where available, representing a significant benefit to local suppliers. - Some operational and maintenance work will require a skilled workforce sourced regionally/interstate. - Contracts will be structured to reduce 'boom and bust' cycle (clear understanding of limited scope of work).	- Ongoing community engagement to monitor performance and identify potential impacts from activity on local amenity.	- Complaints regarding Tamboran's activities will be dealt through Tamboran's complaint resolution process. Where valid complaints are received, additional controls will be implemented to address community complaint.	1	1	L	Yes	Labour competition is a consequence that may occur in a full scale shale development and is not anticipated to have a major impact during E&A activities (including the SWP) which are generally short term campaigns and are completed similar to most small infrastructure projects (such as road upgrades). Local contractors are to be used where available, with a priority on using Traditional Owner businesses. The consequence of labour competition during E&A is minor, with a likelihood of remote (<1% probability).	Yes	Low

Ref	Environmental Factor	Risk scenario description	Risk Source	Activity			Code of Practice	Control / mitigation measures	Detect	Recover	Risk rating (final)			ALARP criteria achieved?	Residual risk ALARP and Acceptable Statement	Acceptable criteria achieved?	Scientific Uncertainty Ranking
				Construction & commissioning	Ops & emergency management	Decommissioning & rehabilitation		Prevent			Consequence	Likelihood	Risk Rating				
22	**Air quality**	Reduction in air quality.	Emissions from the combustion of diesel engines and generators. Air emissions from chemical releases during SWP activities.	X	X	X	A.3.1 Site selection and planning D.4.1 Baseline assessment	- Low emission equipment to be used, with catalytic converters used on selected engines. - All equipment to be maintained in accordance with the manufacturer's recommendations. - No community receptors within 15 km. Nearest environmental receptor (pastoral bore) is 2.5 km away. - National Occupational Health and Safety Codes: Code of Practice for the Control of Workplace Hazardous Substances. - Chemical handling and mixing practices to reduce particulate emissions. - Community living areas are not located near the planned activities, with Jingaloo located 35 km and Lily Hole 50 km from activity.	- Regular equipment condition monitoring and maintenance. - Routine site inspections and assurance undertaken to ensure equipment is maintained and operated as per manufacturers' requirements. - Routine site inspections and assurance undertaken to ensure ongoing chemical handling practices do not result in an offsite release of substances.	- All equipment defects identified by site inspection and assurances to be rectified promptly. - Corrective actions implemented to address poor chemical handling and mixing practices.	1	1	L	Yes	Impacts to environmental or community receptors are not anticipated, with the closest receptor at least 15 km away. Low emission equipment, such as catalytic converters is a standard practice to minimise emissions. Potential air quality issues from the SWP are not anticipated due to lack of regional sources and low emission intensity of activity. Due to the limited scale of activities, overriding occupational health safety requirements to limit worker exposure and lack of local receptors, the consequence is anticipated to be minor. The likelihood of a receptor being exposed to emissions above the NEPM guidelines is remote (<1%), given the large separation distances between the activity and closest receptors, being >15 km.	Yes	Low
23	**Air quality**	Increased nuisance from dust and particulate emissions associated with the SWP activities caused impacts to regional ecosystems and fauna	Traffic movements. Dust emissions from SWP activities Bushfire from accidental ignition source.	X	X		A.3.7 Fire management	- Water trucks will be used to decrease dust emissions; roads maintained to prevent bull dust generation during construction. - Roads appropriately maintained to minimise bull dust generation. - The implementation of the SWP will reduce the use of local and regional roads and property access tracks to deliver imported sand and associated dust emissions. - Bushfire management plan implemented to prevent and respond to bushfires- including establishment of communication and fire response protocols with pastoralists. - Bushfire awareness included in site inductions. - Firefighting equipment to be available to deal with fires. - Fire breaks will be installed around infrastructure. - Activities will comply with pastoralist and regional bushfire management plans. - Vehicles to be equipped with fire extinguishers. - Activities will comply with pastoralist and regional bushfire management plans. - Permit to work system introduced to control routine and non-routine activities within SWP. - Community living areas are not located near the planned activities, with Jingaloo located 35 km and Lily Hole 50 km from activity.	- Routine site inspections and assurance undertaken to identify and rectify high dust emissions. - Annual fire preparedness assurance activities completed where activities are proposed during high fire risk periods. - Daily monitoring of bushfires in the region during periods of high fire danger. - Annual fire frequency mapping using the Northern Australia fire Information fire history database. - Incident management system to detect complaints and incidents associated with dust generation.	- Dust control to be implemented where unacceptable dust from transport activities occur. -maintenance of roads triggered where unacceptable dust generation occurs. - Fire hazard reduction strategies (such as back burning) to be implemented to reduce the risk of fire ignition/ impact as required. - Where a bushfire is started and cannot be controlled, Tamboran to engage with pastoralist to coordinate response activities. -Emergency response plan in place to respond to bushfires	3	2	M	Yes	Dust will be generated through operation of the SWP and transport movements along access tracks and around the site. The consequence of dust is anticipated to be moderate, with localised, short term impacts to areas immediately adjacent to access tracks. The likelihood of the risk is reduced through the isolated location (lack of environmental or community receptors), regionally extensive vegetation communities (good outside refuge away from access tracks and use of dust suppression. Fire is a common occurrence within the Barkly Region. A fire is likely to have a serious impact, with moderate term reversible impacts (years). With the appropriate controls, such as separation distances, firebreaks, and adherence to total fire bans (including permit exemptions), the likelihood of causing a fire operation of the SWP is anticipated to be highly unlikely, with a predicted occurrence of <10%.	Yes	Low
24	**Atmospheric processes**	Greenhouse gas emissions from the activity have a direct and measurable adverse impact on climate	Combustion of diesel for SWP	X	X		A.3.1 Site selection and planning	- Australian emission standards adopted for all equipment ensures minimum operating efficiency. - All equipment to be maintained in accordance with the manufacturer's recommendations. - Total worst case emissions from activity are not significant- being ~1.3% of NT's Total GHG emissions and 0.05% of Australia's GHG emissions.	- Equipment condition and maintenance to be built into contract - Routine site inspections and assurance undertaken to ensure equipment is maintained and operated as per manufacturers requirements.	- All equipment defects identified by site inspection and assurances to be rectified promptly. -Emergency response plan implemented.	2	2	L	Yes	The risks associated with GHG generation are well documented in literature and domestic/international greenhouse policy (such as NGERS and IPCC). The SWP activities can be conducted with minimal GHG emissions. The consequences of GHG generation from exploration activities is moderate, with less than 1% of the NT emissions generated. The likelihood of the level of GHG production being unsustainable is considered remote, with a probability less than 1%.	Yes	Low
25	**Cumulative risk**	Cumulative impacts on groundwater quantity, including unsustainable groundwater extraction impacts on pastoralists and GDEs.	Groundwater take from surrounding land users exceeds the natural recharge rate of the Basin.	X	X		Water extraction licences under the NT Water Act	- Estimated groundwater take for the SWP is minimal: <100 ML/year over the life of the Project due to recycling/reuse of process water. - Groundwater take is authorised under a Water Allocation Plan which considers cumulative, current and future groundwater users. - Petroleum allocation under the Water Allocation Plan is 10,000 ML/year or 4% of total allocation. - Water Extraction Licence value of 450 ML/year is 0.001% of total available resource The total quantity of existing petroleum activity groundwater extraction licences for the region is 752.5 ML/year. - Cumulative impacts considered in the water extraction licence under the NT Water Act. - Groundwater extraction volumes are monitored and kept below WEL. - Strategic Regional Environmental Baseline Assessment (SREBA) completed to collected baseline environmental data, with environmental impact assessments completed to address cumulative impacts from industry.	- Groundwater monitoring of control and impact monitoring bores will detect localised groundwater depressurisation before regional impacts occur.	- Where sustained groundwater depletion is observed in regional aquifers, alternative water supplies may be required, such as deeper aquifers with limited extraction. - Water Act make good provisions to ensure any impacts on users from exploration activities are "made good".	2	1	L	Yes	The regional understanding of the CLA is sufficient to understand the risks associated with groundwater extraction. The absence of users and small exploration take reduces the uncertainty of the activity. This risk has been assessed as a part of the WEL application and approval. Due to the lack of receptors, the consequence is considered moderate (i.e. 1 user within 16km) and likelihood remote (probability less than 1%	Yes	Low
26	**Cumulative risk**	Cumulative impacts on terrestrial ecology.	SWP activities (including use of ancillary access tracks etc), and other approved E&A activities in addition to existing agricultural activities results in impacts to vegetation communities, fragmentation and poses a threat to protected flora and fauna.	X			A.3.1 Site selection and planning A.3.5 Biodiversity Protection	- Area has limited development with no widespread land clearing or other pressures from agriculture or other users. - Petroleum activity is limited in scale (0.0227% of total area) and will not materially decrease availability of habitat across the region. - Cumulative clearing impacts from E&A activities are an order of magnitude lower than existing land users (~900 ha versus ~26,000 ha). - The SWP site is located in close proximity to existing access tracks to minimise disturbance and habitat fragmentation. - SREBA completed to collect baseline environmental data, with environmental impact assessments completed to address cumulative impacts from industry.	- Ongoing scouting and infrastructure design will be undertaken to ensure scope creep does not result in increased habitat fragmentation.	- All disturbance to be rehabilitated to pre-existing levels in accordance with the Code.	2	1	L	Yes	The region has low land clearing pressure with no applications for large scale land clearing present. The level of disturbance proposed is small (11.2 ha total), with field ecological scouting confirming the ecological communities present. The consequence of habitat fragmentation from this Project, posing a threat to protected flora and fauna is considered moderate from a cumulative perspective with a likelihood of highly unlikely.	Yes	Low
27	**Cumulative risk**	Cumulative impacts on amenity.	SWP activities (including use of ancillary access tracks etc), and other approved E&A activities further reduces amenity (visual, noise, traffic and lighting) through additional landscape modification, dust, noise, light and traffic.	X	X		A.3.1 Site selection and planning	- The SWP site is located in a remote/rural landscape, away from environmental and community receptors. - Cumulative clearing impact from E&A activities are an order of magnitude lower than existing land users (~900 ha versus ~26,000 ha). - Additional traffic volumes are anticipated to be small (31 additional vehicles during peak mobilisation), well below existing industries and will not impact on the level of service of the Stuart Highway. - A traffic management plan covering the intersection upgrade work will be submitted to DPIL for approval prior to the commencement of works. - Low level of development activity within the region, with activity unlikely to cause declines in amenity.	- Community complaints regarding nuisance (including dust, traffic, etc) to be used to detect cumulative impacts.	- Complaints are to be investigated and additional controls implemented where appropriate.	1	2	L	Yes	The region is under-developed with the activity located away from major transportation routes, homesteads and communities. The SWP activity is of a small size and unlikely to result in any loss of amenity. Any loss of amenity is therefore likely to be minor, with a likelihood of highly unlikely.	Yes	Low
28	**Cumulative risk**	Cumulative impacts on surface water quality.	SWP activities (including use of ancillary access tracks etc), and other approved E&A activities in addition to existing surrounding land use (agriculture) reduces surface water quality.		X		A.3.1 Site selection and planning A.3.4 Erosion and sediment control and hydrology	- Controls in place to mitigate spills and offsite releases. - Area has limited development with no widespread land clearing pressures from agriculture or other users likely to reduce water quality. - Land clearing practices and erosion and sediment controls ensure impacts to surface water from sediment and changes in hydrology are reduced to ALARP. - Clearing under this EMP has been minimised to 11.2 ha by utilsing existing excillary infrastructure where possible (Kyalla 117 camp, existing access tracks, etc. - Access tracks maintained to minimise erosion and sediment controls. - No surface water take or wastewater releases permitted. - SREBA completed to collect baseline environmental data, with an environmental impact assessment completed to address cumulative impacts from industry.	-incident management system tracks incidents which could potentially threatened regional surface water quality like spills and releases	-Emergency response plan and incident management system in place to respond to incidents ensuring regional impacts do not occur.	1	1	L	Yes	The region is under-developed with the activity located away from major flow pathways with limited topographic variation. The SWP activity is of a small size and unlikely to result in any material increase in sediment loads to surface waters.	Yes	Low
29	**Cumulative risk**	Cumulative impacts-greenhouse gas emissions from the Beetaloo have a direct and measurable adverse impact on climate	The release of GHG emissions during exploration activities materially increases the NT's and Australia's Greenhouse Gas emissions, and increasing climate change impacts on the environment		X		N/A	- Total greenhouse gas emissions for the Beetaloo Sub-basin are low compared to the total NT and broader Australia greenhouse gas emissions. The percentage of total NT and Australian GHG emissions is estimated at 1.35% and 0.04% respectively. - Climate change is a global issue resulting from a culmination of human activities and natural processes across the planet. This activity will not cause climate change, but will contribute to the carbon budget of the atmosphere. - Management of climate related impacts are required at a national and internal level. Tamboran will abate a % of residual GHG emissions in alignment with the NT net zero by 2050 trajectory. For example, emission offsets will increase year on year by 3.7% based on a baseline FY of 2023 to achieve net zero by 2050. - All emissions over 100 KT CO2 to be offset using ACCUs in accordance with the NGERS Safeguard Mechanisms. - Implementation of onsite sand processing will reduce emissions compared to imported sand. - Full development (if technically and commercially viable) likely to provide a viable transition fuel with up to 50% emissions of coal - Full development to be scope 1 neutral. - SREBA completed, with an environmental impact assessment completed to address cumulative impacts from industry.	N/A: Greenhouse gas emissions are approved prior to commencement of activity.	N/A: Greenhouse gas emissions are approved prior to commencement of activity	1	1	L	Yes	The beneficial use of gas is specifically designed to minimise GHG emissions required for long term appraisal. Tamboran has aligned its emission reductions strategies in accordance with the Code, NT Large Emitters policy, and the net zero objective of the NT and Commonwealth, and the Commonwealth NGERS safeguard mechanism emission requirements. The role natural gas plays as a low carbon intensity transition fuel to support renewable energy use is well known. Broad adoption of natural gas within the US has replaced coal in energy production and has been responsible for a continued decline in carbon emissions. The use of natural gas is one of the lowest carbon intensity fuels required to reduce carbon emissions in the near term, with wide recognition of the importance of ensuring energy security during the energy transition.	Yes	Low

APPENDIX J

Stakeholder Engagement Log

Part A - Stakeholder Engagement Log Summary

Date	Originator of communication		Company and person of contact		Contact type	Summary of contact	Does it trigger merit review?	A statement of the interest holder's response to stakeholder	Change to EMP required?	Details of changes the interest holder has made as a resulting from stakeholder engagement
					9 (1) f	9(1)c	9 (1)d	9 (1) e		9 (1)g
16-Jan-25	Tamboran	E Beresford-Cane A de la Flor Olavide R Jeffrey	NLC	[redacted]	Online meeting Ongoing fortnightly Logistics Meeting	Meeting Agenda (Meeting notes available): -Appraisal Gas Agreement - finalisation and execution process -JNWG and Negotiation Protocol -2025 Meeting Schedule and Budget -Work Program Meeting -ILUA Meeting -Sand update -SIA ToR -BUG Application -Seismic EMP	N/A	N/A	N/A	N/A
21-Feb-25	Tamboran	M Kernke F Thibodeaux E Beresford-Cane A de la Flor Olavide R Jeffrey	NLC	[redacted]	Email, Letter and documents	Email from Matt to [redacted] regarding 2025 Work program update and clearance request and Athnony Lagoon Water Extraction License Application Groundwater Impact Assessment	N/A	N/A	N/A	N/A
04-Mar-25	NLC	[redacted]	Tamboran	M Kernke F Thibodeaux E Beresford-Cane A de la Flor Olavide R Jeffrey	Email	Email from [redacted] to Matt answering his email from 21 Feb regarding 2025 Work program update and clearance request and Anthony Lagoon WEL with proposed dates and materials suggestions for them.	N/A	N/A	N/A	N/A
13-Mar-25	Tamboran	E Beresford-Cane A de la Flor Olavide R Jeffrey	NLC	[redacted]	Online meeting Ongoing fortnightly Logistics Meeting	Ongoing logistics meeting held online as per Meeting Agenda below (Meeting notes available): •BUG Agreement execution •Meeting with Legal teams and DWE •Work Program meeting •Feedback on BUG application •Negotiation Protocol execution •SIA update •Employment update •Sweetpea Report 2024	N/A	N/A	N/A	N/A
14-Mar-25	Tamboran	M Kernke A de la Flor Olavide R Wear	NLC	[redacted]	Email	Email response from Matt to [redacted] 's email 13 March accepting proposed NTHs site visit for Friday 28th March	N/A	N/A	N/A	N/A
19-Mar-25	Tamboran	A de la Flor Olavide M Kernke R Wear	NLC	[redacted]	Email	Email from [redacted] confirming he will start organising site visit logistics and asking a few general logistics questions regarding field trip.	N/A	N/A	N/A	N/A
19-Mar-25	NLC	[redacted]	Tamboran	A de la Flor Olavide M Kernke R Wear E Beresford-Cane B O'Reilly	Email	Email form Matt to [redacted] addressing NLC questions regarding well pad and sand wash plant location site visit scheduled for 28th March	N/A	N/A	N/A	N/A
19-Mar-25	Tamboran	A de la Flor Olavide E Beresford-Cane F Thibodeaux M Kernke R Jeffrey	NLC	[redacted]	Email with comments to PPT slide deck for March Work Program meeting	[redacted] sent email to Tamboran indicating the NLC comments to the ppt and Matt responded acknowledging we will ammend the slide deck as per requested.	N/A	N/A	N/A	N/A
21-Mar-25	Tamboran	M Kernke	NLC	[redacted]	Phone call	Matt indicated to [redacted] that we are taking a bit longer to address their comemnts on the WP PPT and that we will be sendign them early next week	N/A	N/A	N/A	N/A
23-Mar-25	Tamboran	M Kernke A de la Flor Olavide R Jeffrey R Wear E Beresford-Cane F Thibodeaux	NLC	[redacted]	Email	Matt email response to [redacted] email from 13 March regarding 2025 Work program update and clearance request and Anthony Lagoon WEL	N/A	N/A	N/A	N/A
24-Mar-25	NLC	[redacted]	Tamboran	M Kernke A de la Flor Olavide E Beresford-Cane	Email	Email from [redacted] responding Matts emails from 21 and 23 March regarding 2025 Work Program document	N/A	N/A	N/A	N/A
24-Mar-25	Tamboran	A de la Flor Olavide R Jeffrey M Kernke E Beresford-Cane F Thibodeaux	NLC	[redacted]	Email and PDF	Email from Armando to [redacted] attching Tamboran presentation for WP Meeting including NLC changes addressed and indicating that further chanegs will be able to be addressed on the computer format but not in the printing formats for storyboards and booklets	N/A	N/A	N/A	N/A
25-Mar-25	Tamboran	E Beresford-Cane	NLC	[redacted]	Phone call	Brief phone call between Emily and [redacted] regarding WP Meeting and various other pending topics including BUG Execution and Application, EMP, IlLUA Strategy, NLC Comms, etc.	N/A	N/A	N/A	N/A

Date	Originator of communication		Company and person of contact		Contact type	Summary of contact	Does it trigger merit review?	A statement of the interest holder's response to stakeholder	Change to EMP required?	Details of changes the interest holder has made as a resulting from stakeholder engagement
					9 (1) f	9(1)c	9 (1)d	9 (1) e		9 (1)g
27-Mar-25	Tamboran	A de la Flor Olavide R Jeffrey M Kernke R Wear F Thibodeaux P Evans (Hydrologist) Brad O'Reilly	NLC and NTHs	[redacted]	On country Work Program Meeting	On country work program meeting in Elliott with all families together. This includes information provided on the proposed sand wash plant, including location, regualted activity description and overview of key environmental risks.	N/A	N/A	N/A	N/A
01-May-25	Tamboran	M Kernke F Thibodeaux E Beresford-Cane A de la Flor Olavide R Jeffrey L Baruch B O'Reilly	NLC	[redacted]	Email and link	Email from Matt to [redacted] with link to the draft Shenandoah South Wash Plant EMP. The EMP contained the full detail of the propsoed activity, including the location, description of the regualted activties, duration, potential environmental impacts, risks and controls.	N/A	N/A	N/A	N/A
08-May-25	NLC	[redacted]	Tamboran	M Kernke A de la Flor Olavide B O'Reilly E Beresford-Cane R Wear	Email about site visit	Email from [redacted] asking if NTHs site visit of the sand wash plant location and SS2 could be done on Tuesday 20 May	N/A	N/A	N/A	N/A
09-May-25	Tamboran	M Kernke	NLC	[redacted]	Phone call	Matt called [redacted] to confirm NTHs site visit for new well pad and sand wash plant to be held on Tuesday 20 May	N/A	N/A	N/A	N/A
20-May-25	Tamboran	M Jacobsen A de la Flor Olavide A Court R Jeffrey E Cartwright (Field HSE TBN) L Jordan (Facilities Engineer DWE)	NLC	[redacted] Project NTHs	Shenandoah 2, Kyala and Sand wash plant Site visit	Visit to TBN site to show Shenandoah 2 well pad, Kyala and Sand wash plant and camp to NTHs and NLC representatives as well as ot see the flare being tested. Information booklet provided as per on country meetings.	N/A	N/A	N/A	N/A
27-May-25	Tamboran	E Beresford-Cane M Kernke A de la Flor Olavide R Jeffrey	NLC	[redacted]	Online meeting Ongoing fortnightly Logistics Meeting	Ongoing logistics meeting held online as per Meeting Agenda below (Meeting notes available): •Revised Work Program and JNWG Meeting dates (and associated materials) •Utilising 4th/5th date June for advisor/legal meeting •BUG Agreement: Execution, support letters and BUG Application •EMP update and feedback •SIA update and feedback •Ulamarri family Work Program meeting update and confirmation •Other topics - International site visit	N/A	N/A	N/A	N/A
17-Jun-25	Tamboran	E Beresford-Cane A de la Flor Olavide R Jeffrey	NLC	[redacted]	Online meeting Ongoing fortnightly Logistics Meeting	Ongoing logistics meeting held online as per Meeting Agenda below (Meeting notes available): -RL feedback -NLC budget update -JNWG Meeting - preparation -SIA update -Sand Wash EMP and Anthony Lagoons Water Extraction Licence -Sacred site clearances -BJV Annual Report Royalty Payments Matrix review and Invoice follow up -Other topics	N/A	N/A	N/A	N/A
20-Jun-25	Tamboran	D Armstrong	APN Pty Ltd	Val Dyer	Email, pdf attachment (Sand Wash Plant EMP Stakeholder Engagement Pack (SEP)	Email from David Armstrong to the pastoralists with Sand Washplant EMP Stakeholder Engagement Pack	N/A	N/A	N/A	N/A
30-Jun-25	NLC	[redacted]	Tamboran	E Beresford-Cane A de la Flor Olavide M Kernke	Email and Pdf with comments on Sandwash Plant EMP	Email from Rory to Matt and Emily with NLC comments Sand Washplant EMP, and brief email from Matt acknowledging he received it.	No	Tamboran has considered NLC responses and has made the appropriate changes to the EMP where such changes were required (see 16 July 2025 entry)	Yes	Various changes to the wording within the EMP were made.

Date	Originator of communication		Company and person of contact		Contact type	Summary of contact	Does it trigger merit review?	A statement of the interest holder's response to stakeholder	Change to EMP required?	Details of changes the interest holder has made as a resulting from stakeholder engagement
					9 (1) f	9(1)c	9 (1)d	9 (1) e		9 (1)g
01-Jul-25	Tamboran	E Beresford-Cane A de la Flor Olavide R Jeffrey M Kernke	NLC	[redacted]	Online meeting Ongoing fortnightly Logistics Meeting	Ongoing logistics meeting held online as per Meeting Agenda below (Meeting notes available): -BUG execution update -BUG Application update -RL process update -JNWG Meeting: -Social Impact Assessment -Welcome to Country update -Sand Wash Plant EMP feedback -WEL feedback -NLC Budget -Other topics	N/A	N/A	N/A	N/A
10-Jul-25	APN Pty Ltd	Val Dyer	Tamboran	D Armstrong	Email and Pdf with comments on Sand Washplant SEP	Email from pastoralist to David Armstrong with pastoralists comments re the Sand Washplant EMP Stakeholder Engagement Pack/proposed activities	No	Tamboran has considered pastoralist responses and has made the appropriate changes to the EMP where such changes were required (see 20 July 2025 entry)	Yes	Various changes to the wording within the EMP were made.
16-Jul-25	Tamboran	M Kernke	NLC	[redacted]	Email and pdf with responses to NLC comments on Sand Washplant EMP	Email from Matt Kernke to the NLC with responses to their comments on the Sand Washplant EMP / proposed activities	N/A	N/A	N/A	N/A
20-Jul-25	Tamboran	D Armstrong	APN Pty Ltd	Val Dyer	Email and pdf with responses to pastoralists comments on Sand Washplant EMP	Email from David Armstrong to the pastoralists with responses to their comments on the Sand Washplant EMP Stakeholder Engagement Pack/proposed activities	N/A	N/A	N/A	N/A

Appendix J.1.1 Pastoral Stakeholder Engagement

[redacted]

From: David Armstrong [redacted]
Sent: Tuesday, 15 July 2025 2:59 PM
To: Brad O'Reilly
Cc: Tamboran Contact
Subject: Fwd: LAA- Sand Processing Area
Attachments: negotiation-notice (2).pdf; SEP - Hayfield Shenandoah Sand Wash Plant.pdf; (Draft v2) Hayfield Pastoral Property Access and Compensation Agreement - 5th Variation.docx

Brad

See below

DAVID ARMSTRONG

Managing Director
Mobile [redacted]
Address [redacted]
Email [redacted]

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Begin forwarded message:

From: David Armstrong [redacted]
Subject: LAA- Sand Processing Area
Date: 20 June 2025 at 1:35:48 pm ACST
To: [redacted]
Cc: [redacted]

Hi Val

Tamboran would like to move forward with negotiating the area for sand processing. This was included in the previous agreement just finalised but we pulled it out so we had more time to discuss and compile information. To up date you, Tamboran have run tests on the sand and they have been very positive as the right type and quality for use in the fracking process. This being the case they are very keen to move to the next stage of testing that entails this processing area. The sand stockpiled during the construction

of this area will be used in the trial. The trial involves washing and grading the sand and then it can be use in fracks maybe late this year but early next year in the wells they will start drilling shorty.

Tamboran understands your reluctance to progress with sand mining however it is critical with the viability of the basin.

Please call anytime with questions and I can organise a meeting with appropriate people if you would like.

Attached is the Form 15 Negotiation Notice, the proposed access agreement and the Stakeholder Engagement Pack with information.

Regards

Dave

DAVID ARMSTRONG

Managing Director
Mobile [redacted]
Address [redacted]
Email [redacted]

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HAYFIELD SHENANDOAH STATION

STAKEHOLDER ENGAGEMENT PACK

SAND WASH PLANT CONSTRUCTION AND OPERATION

JUNE 2025

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1. Introduction

Tamboran B2 Pty Ltd (Tamboran) is a registered holder and the operator of exploration permits (**EPs**) 76, 98 and 117 located in the Beetaloo Sub-basin. The recent drilling, stimulation and well testing of petroleum wells by Tamboran has confirmed the prospectivity of the deep Velkerri shales in the Shenandoah South area. Tamboran proposes to undertake a range of exploration and appraisal (E&A) activities to collect longer term data on the producibility of the Velkerri B shales on the Hayfield Shenandoah Station (being NT Portion 1077, 7027 and 7026). This includes the construction and operation of a sand wash plant and associated infrastructure within the Shenandoah South Exploration and Appraisal (SS E&A) area within EP 117).

Washed fine silica sand is a major component used in the hydraulic fracture stimulation (HFS) of shale wells. Approximately 10,000 to 12,000 tonnes of sand is used per well, with the volume of sand dependent on lateral length. Tamboran has historically imported sand from China or the USA to support E&A activities, with limited domestic supply available. As Tamboran begins to drill and stimulate a greater amount of wells per year, acquiring cost effective local sand sources will become extremely important.

The proposed Shenandoah South sand wash plant (SWP) will process locally sourced sand to a suitable quality for use as a proppant during the HFS of E&A wells developed by Tamboran. This includes washing sand generated incidentally from Tamboran's construction activities (i.e. sumps, pits and settlement basins), rewashing existing out of specification bagged sand stored onsite from previous stimulation campaigns or washing sand from other licenced suppliers within the NT.

The SWP is intended to commence as a trial to prove up the concept of local sand production. Produced sand will be utilised to support Tamboran's permit work program activities and will not be sold. Should the sand wash trial be successful, sand washing may be undertaken periodically on the site to supply sand for E&A activities for a period of up to 5 years.

As a part of Tamboran's forward exploration work program, an Environment Management Plan (**EMP**) must be in place covering all proposed regulated activities. Before an EMP can be submitted to the Minister for Environment for approval, stakeholder engagement in accordance with section 6 (2) of the Northern Territory (NT) Petroleum (Environment) Regulations 2016 (the **Regulations**) must be completed.

This Stakeholder Engagement Pack (**SEP**) is designed to satisfy this requirement, specifically covering the SWP and associated activities that that are intended to form part of an EMP application.

The activities described in this SEP include:

- **Site establishment** of the 11.2 ha SWP site including clearing, topsoil stripping, fencing, etc.
- **Civil construction** for the SWP site including earthworks to contour and grade the SWP pad, stockpile pads and access tracks, and excavation of settlement, decant and raw water basins.
- **Mobilisation and installation** of a mobile/modular SWP including mobilisation to site and installation on the prepared pad.
- **Operation and maintenance** of the SWP**.**
- **Stockpiling and load-out** of washed sand to well pads as required**.**
- **Management and recycling** of 'reject' sand and water**.**
- **Rehabilitation** of the SWP site: to meet the mandatory requirements described in Clause A.3.9 of the *Code of Practice: Onshore Petroleum Activities in the Northern Territory,* 19 February 2025 (the **Code**).
- **Ancillary activities** comprising:
  - Use of existing approved camp facilities.

- Use of existing gravel pits.
- Use of existing property access tracks.
- Extraction of groundwater under existing/future water extraction licenses (WELs).

A detailed description of the proposed activities is provided within the following sections of this SEP.

2. Stakeholder engagement process

The requirements of stakeholder engagement are outlined in section 7 of the Regulations. Specifically, the interest holders are required to provide the following information to each stakeholder:

- a description of the regulated activity the interest holder proposes to carry out
- the location (or locations) where it is proposed to carry out the activity
- the anticipated environmental impacts and environmental risks of the activity
- the proposed environmental outcomes in relation to the activity; and
- the possible consequences of carrying out the activity to the stakeholder's rights or activities.

Once stakeholder engagement has been completed, Tamboran will submit an EMP covering all or parts of the proposed activities as described in this document. All engagement after this allocated time will be considered "ongoing stakeholder engagement".

Tamboran proposes that any questions or feedback to the information provided in this pack is formalised via the form included in Appendix A of the SEP.

Tamboran will ensure that all responses are reviewed and responded to promptly. Tamboran also offers face to face or virtual meetings with stakeholders where subject matter experts can present the information in this pack and answer any questions. These meetings should be arranged within 14 days of receipt of the pack so engagement can be scheduled within the allocated engagement period.

3. Scope/ Limitations of Engagement

The regulated activities covered in this SEP are associated with the entire lifecycle of the proposed activities, from site preparation, through to decommissioning and all ancillary activities to support it. The EMP (or variations of such) will be in force for the next 5 years (the maximum duration of an EMP in accordance with the Regulations), with revisions required to update the activities within the EMP beyond this period. This duration may differ from that within the Land Access and Compensation Agreement (LACA).

Acceptance of this SEP and subsequent approval of an EMP by the Northern Territory (NT) Government is not an approval to commence the activities. This SEP and subsequent EMP(s) are designed to satisfy the stakeholder engagement requirements under the Regulations for the regulated activities proposed. This SEP does not cover other activity approvals, such as the LACA required to be obtained prior to commencement. The requirements for compensation and access agreements for proposed regulated activities are covered under the NT *Petroleum Act 1984* (the **Act**) and Petroleum Regulations 2020 and will occur under a separate engagement process. During the LACA process, additional engagement will be completed to provide the pastoralist with further opportunity to discuss any elements of the proposed activity of interest.

Any comments received relating to the LACA or other activity/approval not subject to this SEP or future EMP, will be addressed by Tamboran separately from this stakeholder engagement process. All comments received on the EMP will be provided to the Minister for Environment and will be published. All commercially sensitive information will be protected, and we request the pastoralist to inform Tamboran if any comments should be kept confidential. Tamboran will employ best endeavours to protect this information, noting statutory requirements may result in disclose of any information of a non-commercial/ confidential nature.

4. Background

Tamboran B2 Pty Ltd holds the EPs in the Barkly region under the Beetaloo Joint Venture (Beetaloo JV) with Falcon Oil and Gas. The Beetaloo JV is a partnership between Tamboran Resources and Daly Waters Energy. Tamboran is the nominated operator of the Beetaloo JV.

The regulated activities proposed under this SEP are anticipated to commence in 2025 on a trial basis, and potentially continue until ~2030 to support the ongoing E&A activities. Like all exploration programs, proposed activities often cover scenarios governed by a range of technical, regulatory and financial constraints. Any proposed changes will be communicated to the pastoralists through ongoing engagement to ensure any changes in activities, priorities or strategy are promptly communicated and impacts understood.

Results from the recent drilling, stimulation and well testing of E&A wells by Tamboran have confirmed the prospectivity of the deep Velkerri shales in the Shenandoah South area. Tamboran's forward work program focuses on drilling and stimulating a number of additional E&A wells to obtain longer term appraisal data to underpin future development decisions. This includes the sale of appraisal gas through the Sturt Plateau Compression Facility (SPCF).

With the increased drilling a stimulation proposed, reducing well costs is a core focus of the project. A key material required for the construction of onshore petroleum wells is fine washed sand. Given the small number of wells and limited lateral lengths, importing sand has not been a major financial burden. As the number and sizes of wells increases, the cost and logistics associated with importing sand becomes unsustainable. The use of local sand is a logical evolution of the project which will have significant commercial, economic and logistical benefits.

The proposed SWP will process locally sourced sand to a suitable quality suitable for use in well stimulation. The sand must meet a range of specifications for use in HFS, which include:

- Particle Size Distribution (PSD)
- Crush resistance
- Sphericity/roundness
- Acid solubility

Many of these parameters are directly related to the physical qualities of the raw source sand. As such, not all raw sand sources can be processed to produce a product sand that meets the required specifications. The key parameter that requires raw sand to be washed is the required PSD range, which requires the removal of oversize (coarse sand) and undersize (very fine sand, silts, clays) material from the final product sand.

Suitable raw sand to feed the SWP may be obtained from a variety of sources, including:

- incidental sand generated during Tamboran's construction activities within EPs 76, 98 and 117;
- sand sourced from existing/new extractive mineral titles held by entities associated with Tamboran locally/ regionally;
- sand sourced from existing/new extractive mineral titles held by third parties locally/ regionally
- existing proppant supplies onsite resulting from historical activities that require re-washing to remove impurities (gravel, bag fibres etc.)

The SWP is intended to provide sand for Tamboran's E&A appraisal activities only, will not be sold to a third party. The SWP is anticipated to be in place for a period of up to 5 years.

5. Location of the Regulated Activities

The proposed SWP site has been selected and sized to enable the establishment of the SWP and all required ancillary infrastructure to support efficient ongoing sand washing operations. The proposed activities will be undertaken on an 11.2 ha site adjoining an existing pastoral access track to the immediate west of the existing Kyalla 117 N2 well pad within the Shenandoah pastoral station on EP117, as described in Table 1 and illustrated in Figure 1 and Figure 2. The proposed SWP site was selected for the following reasons:

- Proximity to future drilling sites - limiting haulage distance, truck movements and associated noise and dust emissions.
- Proximity to suitable raw sand sources for processing, including sand incidentally extracted during construction activities.
- Availability of services – namely existing groundwater bores at the Kyalla 117 N2 well site.
- Availability and proximity to existing infrastructure – e.g. property access track and camp accommodation and administration facilities near the Kyalla 117 N2 well site.
- Distance from sensitive receptors.

The selection of the site was undertaken in accordance with the NT Land Clearing Guidelines, with particular attention paid to the implementation of buffers to protect drainage lines, watercourses or sensitive vegetation communities and to maintain public amenity (DEPWS 2021a).

The activities to be undertaken as part of the SWP construction and operation are similar to those undertaken as part of the development of a E&A well lease pad (e.g. the adjoining Kyalla 117 N2 lease pad) – i.e. clearing, topsoil stripping, excavation of sumps/basins, handling and stockpiling of excavated material, etc.

Table 1 New regulated activity locations

Exploration Permit (EP)	Infrastructure description	New or approved proposed disturbance area	Proposed location		
			GDA94 Zone*	Approx Easting	Approx Northing
EP 117	Shenandoah South Sand Wash Plant Site	11.2 ha located to the immediate west of the existing access track	52	355272	8141258

** Universal Transverse Mercator (UTM) geographic coordinate system is Geocentric Datum of Australia (GDA) 94.*

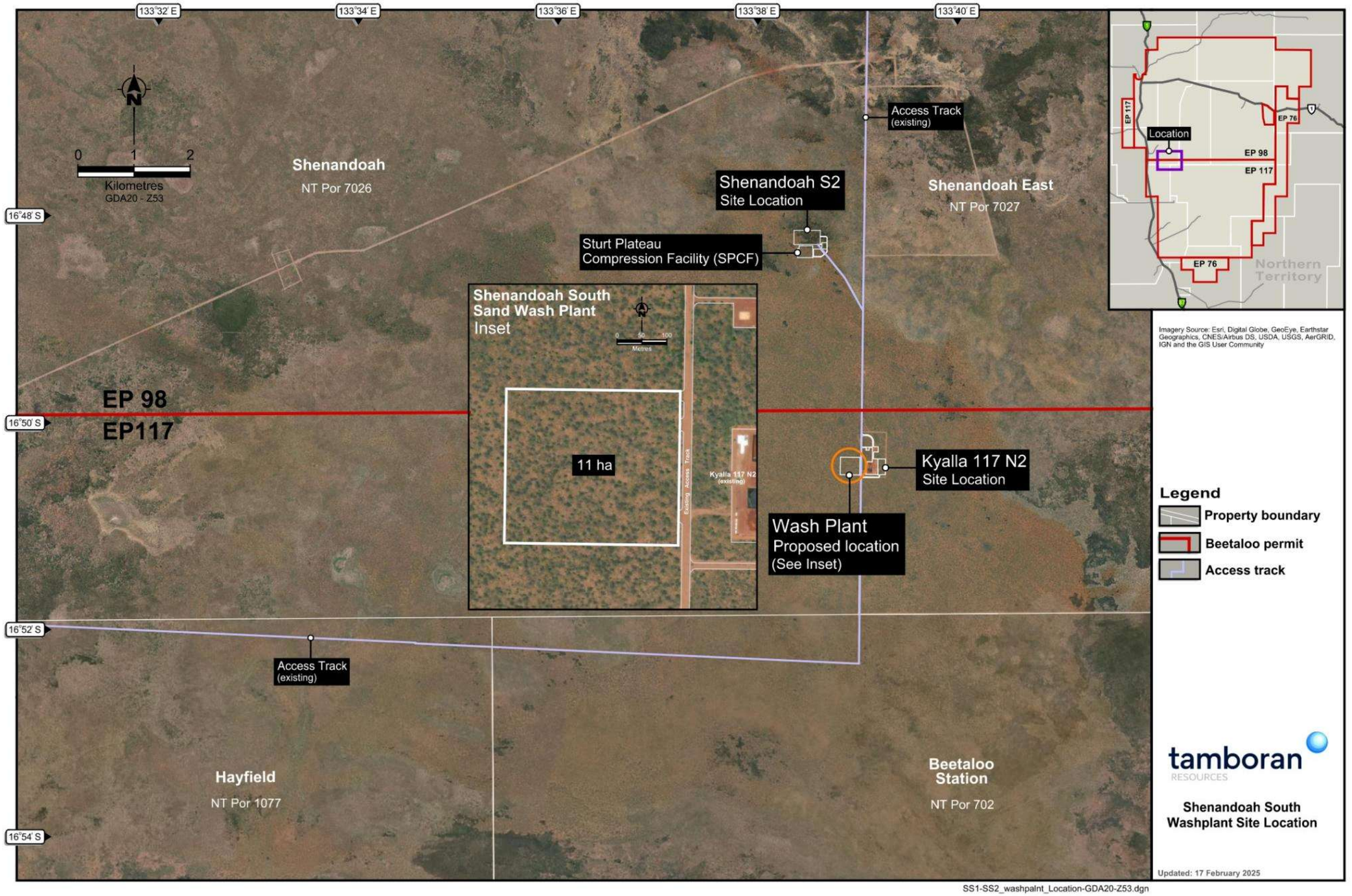


Figure 1 Proposed location of new regulated activity scope covered under this SEP

Figure 2: Typical vegetation and topography within the SWP site

6. Detailed Description of the Regulated Activity

6.1 Proposed scope summary

The regulated activities required to enable Tamboran to construct and operate the SWP site over an initial period of 5 years including:

- Site establishment for the SWP site including clearing, topsoil stripping, fencing.
- Civil construction for the SWP site including:
    - Earth works to contour and grade the wash plant and stockpile pads and access tracks
    - Gravel sheeting of access tracks and mobile plant work areas as required
    - Excavation of settlement, decant and raw water basins
    - Installation of raw water pipeline, pumps, groundwater bores (if required)
    - Installation of minor administrative facilities – temporary site office, ablutions block, and ancillary services.
- Mobilisation and installation of a mobile/modular SWP including:
    - Mobilisation to site and installation on prepared pad
    - Demobilisation/Remobilisation during periods when SWP not in use
- Operation and maintenance of the SWP including:
    - Stockpiling of raw sand for processing
    - Processing of raw sand
    - Stockpiling and load-out of washed product sand to well pads as required
    - Management and recycling of 'reject' sand and process water
- Ancillary activities including:
    - Use of existing approved camp facilities
    - Use of existing approved gravel pits
    - Use of existing property access tracks
    - Extraction of groundwater under existing/future WELs
- Demobilisation of mobile/modular SWP and buildings/other built infrastructure
- Rehabilitation of the SWP site to meet the mandatory requirements described in Cl A.3.9 of the Code.

An indicative site layout for the SWP site, as well as examples of the type of wash plants that may be utilised at the site are provided in Figure 3 to Figure 5.

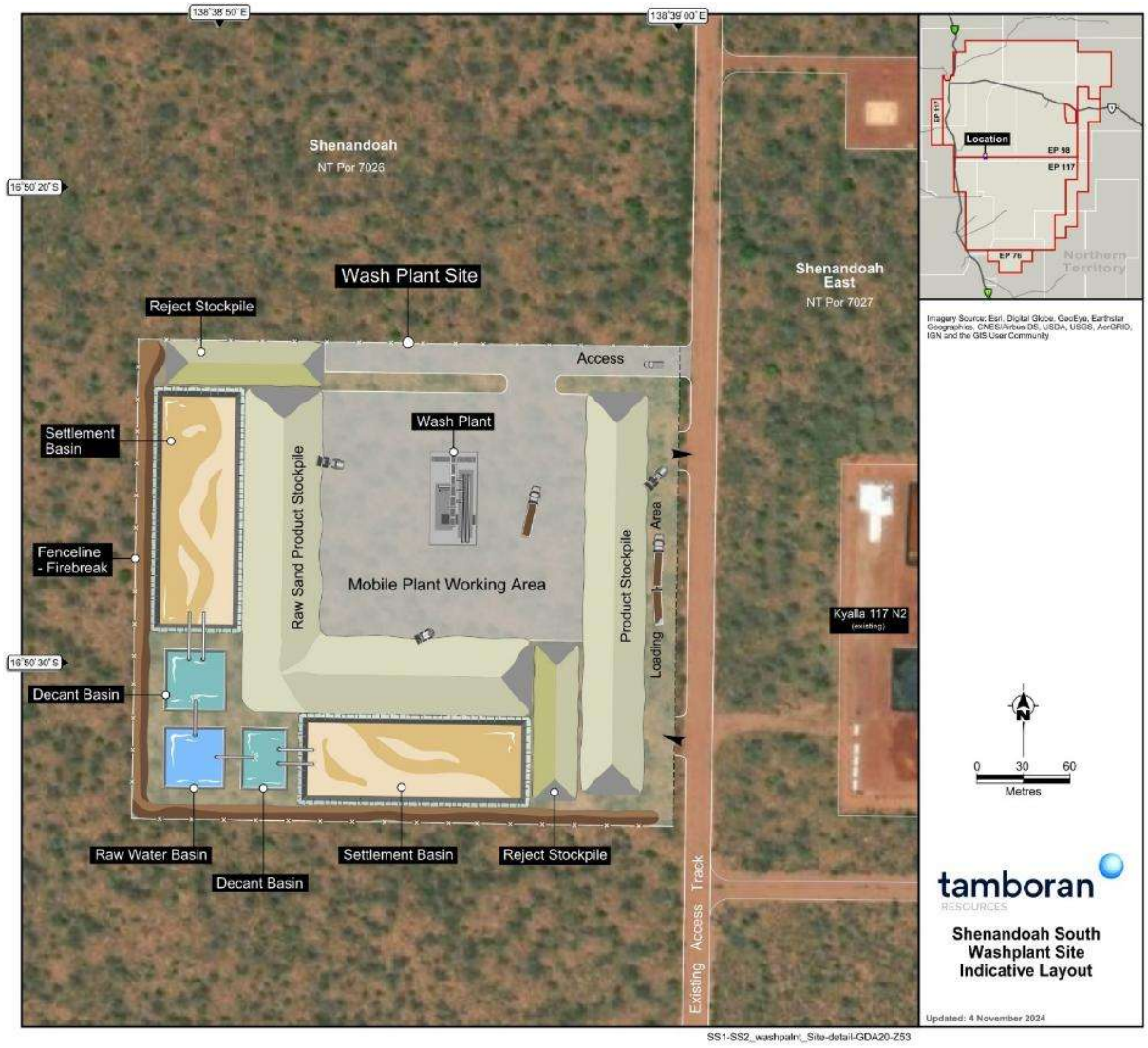


Figure 3 Indicative site layout for the SWP

Figure 4: Example of a mobile sand wash plant

Figure 5: Example of a modular sand wash plant

6.2 Activity description

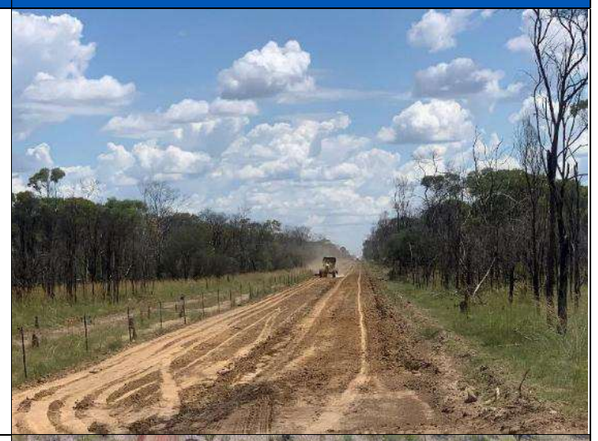
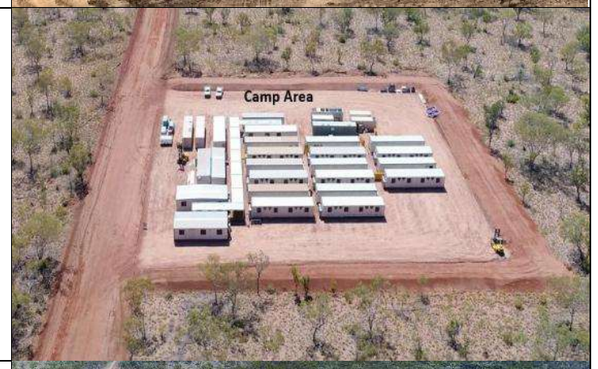
The following information details the proposed SWP activities on the Hayfield Shenandoah Station. These descriptions are indicative and general in nature. Minor departures from such descriptions are likely to occur and such departures are covered by the content of this SEP or through ongoing communication with the pastoralist. The information has also been summarised in Table 2 with the relevant activity description and picture.

Table 2 Description of proposed regulated activity

Activity description	Disturbance area	Typical personnel numbers	Timing	Duration	Activity example pictures
Civil construction of SWP, including ancillary infrastructure, fence lines and firebreaks An 11.2 ha pad adjoining the existing access track and opposite the Kyalla 117 N2 well pad will be cleared for the SWP site. Cleared vegetation will be windrowed around the perimeter of the site. The site will be fully fenced with a firebreak installed around the perimeter. Approximately 100 mm of topsoil (if present) will be stripped and pushed up into a perimeter bund around the site for future use in rehabilitation of the site. Minor bulk earth works may be required to level and grade the site, with gravel sheeting to be applied in work areas if required. A temporary site office/ablutions block will be located within the site. Settlement basins, decant basins and raw water storages for management for managing raw and process water will be progressively installed to support the operation. The SWP site will have stormwater diversions and erosion and sediment controls in place to manage erosion and offsite transport of sediment. Stormwater from within the site will be either diverted to the onsite settlement basin for preferential reuse or released from site in a controlled fashion. There are no major contaminant sources on the site, with stormwater controls designed to manage sediment levels in all offsite stormwater releases. The wash plant is intended to be a small self-contained mobile/modular plant which can be mobilised and installed onsite within minimal site preparation. The SWP components will be either trailer or skid-mounted and will include various components to aid in the separation of the raw sand. Typical wash plants contain elements such as a vibrating wash/screen box, bucket wheel dewaterer, weir system with submerged screw, hydro-cyclones, vibrating dewatering screen, onboard diesel powerpack and process water inlet/outlets. A separate hopper/conveyor will be utilized to load sand into the plant and separate stackers will be utilized to stockpile product sand and coarse reject sand. A surface pipeline will be connected to the existing water supply bores on the Kyalla 117 N2 well pad. The pipeline will either be trenched across the road or have “jump overs” installed to allow traffic to pass over. An additional 2 groundwater bores may be installed within the SWP site if required- however this is currently not anticipated.	11.2 ha- located adjacent to existing access track near Kyalla 117 N2 well pad	~6 people	August/ September 2025	~4 weeks	

Activity description	Disturbance area	Typical personnel numbers	Timing	Duration	Activity example pictures
Operation of the SWP Raw sand will be sourced from Tamboran's construction activities, , from related/third-party extractive mineral titles or from existing sand stockpiles onsite. Sand will be delivered to the raw sand stockpiles within the SWP site. Groundwater used for washing will be extracted periodically from existing bores on the Kyalla 117 N2 pad. Groundwater will be pumped to the raw water pond via the installed raw water pipeline where it will be utilised and recycled within the process. Raw sand will be extracted from stockpile using a wheeled loader and loaded into the feed hopper which feeds the SWP, where it will be screened and washed to separate the desired particle sizes from the oversize/undersize material. The sand wash plant will be configured based on the specific characteristics of the raw sand to be washed, as well as the required specifications of the product sand, and will typically involve multiple stages/components. Product sand will be discharged from the SWP via a stacker, before being placed into a larger product sand stockpile using a wheeled loader. Product sand stockpiles may be covered if required. Separated coarse reject sand will be discharged from the SWP via a separate stacker and will be stockpiled for future rehabilitation works. Fine reject material will be discharged to the settlement basin with the process water and allowed to settle. Load-out from the product sand stockpile will be undertaken using a wheeled loader to haul trucks for haulage to the point of use via pastoral access tracks. Ongoing fuelling, servicing and maintenance of the wash plant and other plant and equipment will be undertaken as required. Tamboran may, subject to the success of the wash plant trial, demobilise the wash plant when it is not required for use; and remobilise for future washing campaigns. During periods where the wash plant has been demobilised, the remainder of the wash plant site will be retained and placed into care and maintenance until such time as the wash plant is remobilised and washing recommences. **Wet season operations** Operations within the SWP area are anticipated to occur predominantly during the dry season. However, in the event sand washing activities are required to be undertaken into the wet season (1 October to 30 April) the following wet weather contingencies have been identified in the erosion and sediment control plan (ESCP) (Appendix E) and below: • Overland flow will be diverted around the SWP site to the extent practicable. • The site will be largely internally draining, containing most stormwater • Settlement basins will be maintained with sufficient freeboard to manage an entire 1:100 ARI 7-day rainfall event. Noting that the water contained within the settlement basin is not wastewater and is benign (containing only sediment). • Any release will be from a spillway which is designed to minimise erosion and reduce the velocity of the released water. • Any damage observed would be repaired as soon as practicable after the event using onsite equipment. Where required, areas within the SWP site (e.g. access road, mobile plant work areas) will be sheeted with hardstand material to enable all-weather operations.	11.2 ha- located adjacent to existing access track near Kyalla 117 N2 well pad	<6 people	Commencing October 2025, with operations primarily taking place in dry season.	Ongoing (~5 years)	

Activity description	Disturbance area	Typical personnel numbers	Timing	Duration	Activity example pictures
Settlement basin operation and process water recycling Settlement basins, decant basins and raw water storages will progressively be installed for management of raw and process water. These basins will be in-ground structures for the settlement of process water with entrained fine reject material (clay, silt and fine sand) to enable its reuse. Settlement basins have been sized for the initial ~6 months of operation of the SWP and will be progressively installed. Additional settlement basins within the SWP site will be installed as required to support the SWP operations. The settlement basins will have sufficient residence time to enable the deposition of the majority of fine sediment from the water column in a 'beach' which will progressively extend along the settlement basin. Decant water from the settlement basin will be recovered from the opposite end of the basin from the deposition point and will be pumped/overflow to the decant pond for temporary storage before being reused in the SWP. The settlement basins have been sized and designed to progressively fill with fine sediment until such time as decant water can no longer be efficiently recovered for recycling. The settlement basins are not intended to be desilted during the operational life of the facility; however, some desilting may be undertaken if required. Coarse reject sand will be stockpiled separately and will be similarly used to complete the backfill of settlement basins or for other suitable purposes. Ongoing SWP operations will likely result in the installation of replacement basins and ponds within the footprint of the SWP site beyond those shown in Figure 3. Note, this picture has been taken from an unrelated facility, with the water discoloration solely due to clays removed from the sand during the washing process which settle readily over time	N/A located within SWP site	<2 persons	During SWP operation	Ongoing (~5 years	

Activity description	Disturbance area	Typical personnel numbers	Timing	Duration	Activity example pictures
Access tracks The use and maintenance of the existing communicated access tracks connecting the Stuart Highway to SWP site will be utilised. Workers will be housed at the existing camps located at Kyalla 117 N2 or Shenandoah S2 to minimise transport movements.	N/A	N/A	N/A	N/A	
Camp operation The existing Kyalla 117 N2 camp and/or the approved SPCF camp will provide worker accommodation for the construction of the SWP. Each camp is a self-contained facility with accommodation rooms, kitchen, dining mess, offices, ablutions, gymnasium, storerooms, refrigeration, water storage, power generation, solid waste management, fuel storage, water treatment, sewage treatment and sewage irrigation area.	N/A- existing scope	<90 people (including housed staff)	For duration of activity	For duration of activity	
Gravel pit operation Gravel from the existing gravel pits (SSGP1 and SSGP2) will be used. The pits will be operated in accordance with previous clearing, operation and remediation description provided in the SEP on 6 April 2023.	N/A	<6	Constructed to support civil construction activities.	For duration of activity	

Activity description	Disturbance area	Typical personnel numbers	Timing	Duration	Activity example pictures
Site monitoring and inspections including: • **Weed inspections:** Access to the site by several contractors / Tamboran personnel in light vehicles to identify weeds. In some cases, a helicopter may be used. Contractors may perform spot sprays with a NTG recommended weed treatment. Surveys are completed pre and post wet season. • **Erosion and sediment control inspections:** Access to the site by several contractors / Tamboran personnel in light vehicles to identify erosion or stability issues. Inspection will be used to schedule maintenance to repair any defects identified. Surveys are completed pre and post wet season. • **Settlement basin:** Access to the site by several contractors / Tamboran personnel in light vehicles to check freeboard as required.	N/A	~2 people	Fortnightly/ 6 monthly (depending on activity)	1 day per inspection	
SWP site maintenance: The SWP site activities will be integrated with other activities being undertaken nearby as part of the Shenandoah South E&A activities. Maintenance activities include grading, erosion and sediment control repair, vegetation management, firebreak management, weed management, fence repair and all other ancillary activities required to maintain the site and associated infrastructure. This includes maintenance of the access track interception with the Stuart Highway. The work will be undertaken by civil maintenance contractors and Tamboran personnel.	N/A	<10 people	6 monthly; pre and post wet season maintenance	<7 days per activity, depending on the nature of the activity	

Activity description	Disturbance area	Typical personnel numbers	Timing	Duration	Activity example pictures
Chemical and fuel storage: All chemicals and fuels (diesel) required to support the SWP activities will be stored in accordance with the relevant regulatory requirements, including the use of secondary containment (bunding) onsite. The Code has implemented a range of additional controls, including requirements for routine inspections, emergency response procedures and spill management. Anticipated chemical and fuel volumes vary dependent on activity, but may involve the storage of the following types of chemicals and volumes: • Diesel – ~30 KL storage. • Other chemicals and hydrocarbons: including oils and greases, lubricants, hydraulic fluid, cleaning chemicals, domestic chemicals, biocides, corrosion inhibitors etc. used to support operations.	N/A- located on existing area	N/A	During SWP construction and operation	For duration of activity	
Waste management : Any waste generated during SWP construction and operation will be stored onsite in accordance with the *Waste Management and Pollution Control Act 1998* and Code, and transported offsite to a licenced waste management facility. All wastes will be stored within skips or equivalent and removed from site at the end of each activity.	N/A	1 -2 trucks during operations	During explorations activities	For duration of activity	

Activity description	Disturbance area	Typical personnel numbers	Timing	Duration	Activity example pictures
Groundwater extraction: Estimated groundwater extraction for the SWP is <100 ML/annum due to water recycling from settlement basins for wash plant operation and other activities such as dust suppression. Groundwater extraction to be under existing groundwater extraction licence (WEL GRF10285)/future WELs. Use of existing water extraction bores located on the adjacent Kyalla 117 N2 well pad and/or up to 2 new groundwater bores within the SWP site.	N/A	N/A	Ongoing to support exploration activities	For duration of activity	
Traffic management: Access to each of the proposed exploration sites is via the Carpentaria highway. Peak traffic volumes are anticipated to be associated with the construction of the SWP site. Traffic volumes may reach up to 7 vehicles per day during construction, with operational movements reducing to 2-4 movements per day (Additional movements may be required during maintenance/plant shutdowns). All access will be via the existing access track currently utilised to support E&A activities (i.e. not the Pastoralist station access road or other laneways). .	N/A	N/A	During SWP construction and operation	N/A	
Site rehabilitation: At the cessation of all activities within the SWP site, Tamboran will remove all facilities and rehabilitate the site consistent to surrounding land use, the Code and pastoral agreement requirements. Site rehabilitation includes: a) the removal of all surface facilities (e.g. SWP, pipelines, demountable buildings, water bores, etc), b) Drying out of solids (organics, clays, coarse and fine reject material) within sumps/basins. c) backfilling and profiling of settlement basins to the designed landform d) removal of gravel sheeting e) deep ripping of compacted surfaces, f) respreading of topsoil from the topsoil stockpiles, g) re-seeding (if required), and h) ongoing monitoring and maintenance of the rehabilitation. Any changes to the date of the rehabilitation of the SWP site will be communicated with the pastoralists.	N/A	~6 people	Within 6 months of the permanent cessation of SWP activities	~60 days, with ongoing monitoring and maintenance	

Activity description	Disturbance area	Typical personnel numbers	Timing	Duration	Activity example pictures

7. Environmental Outcomes, Impacts and Risks

The environmental outcomes, potential impacts and risks associated with the ongoing exploration activities are summarised in Table 3. This information will also be provided in an EMP covering the proposed regulated activity, which will be submitted to the Department of Environment, Parks and Water Security (DEPWS) for formal assessment and approval.

Under the Regulations, an environmental outcome means an outcome that will be achieved if the environmental impacts and environmental risks of a regulated activity are reduced to a level that is as as low as reasonably practicable (ALARP), and acceptable.

Environmental impacts are defined by the Regulations as any adverse change, or potential adverse change, to the environment resulting wholly or partly from a regulated activity.

Environmental risks are defined by the Regulations as the chance of something happening that will have an environmental impact, measured in terms of environmental consequences and the likelihood of those consequences happening.

Both the consequence and likelihood of a potential impact can be reduced through the adoption of controls, which must be applied to reduce a risk down to an ALARP and acceptable level.

Table 3 Environmental risks and controls of proposed variation

Aspect	Environmental outcomes	Environmental impacts	Potential risk	Controls
Groundwater use and quality	• To manage exploration activities to prevent unsustainable depletion of groundwater resources • Preserve groundwater quality to protect environmental and pastoral use	• No adverse changes to groundwater quantity is anticipated to be associated with SWP activities. • Impacts to aquifers levels anticipated to be negligible, with rapid recharge observed from other Gum Ridge Formation bores used within the Basin. • No material changes to groundwater quality anticipated from SWP activities. • No impact to Groundwater Dependent Ecosystems (GDE) or stygofauna from SWP activities (groundwater extraction and SWP construction and operation) • No reduction in pastoral productivity through reduced groundwater volumes	• Low risk of groundwater contamination from the storage, handling and transportation of chemicals, fuels and wastes due to the mandatory Code controls (such as mandated use of secondary containment). • Low risk of groundwater contamination from infiltration through settlement basins due to benign nature of process water (suspended sediments only). • Low risk from over extraction of groundwater for SWP requirements and other ancillary activities due to the yield of the Cambrian Limestone Aquifers and available allocation volumes (as assessed in the WEL).	• All petroleum facilities and activities are designed, constructed, operated and decommissioned in accordance with the Code. The Code outlines specific controls measures designed to protect groundwater resources. • All surface storages of chemicals to have secondary containment to prevent spills to the ground • An emergency response plan must be implemented outlining how spills and emergencies will be responded to. • All settlement basins are to be operated with a 1:100 ARI 7-day rainfall event (wet and dry season). Noting that the water contained within the settlement basin is not wastewater and is benign (containing only sediment), • All water take covered by the existing WEL GRF 10285 or any future WELs. • All water take to be metered and reported quarterly to the regulator • No pastoralists groundwater bores within 1 km of proposed site

Aspect	Environmental outcomes	Environmental impacts	Potential risk	Controls
Soils	• Avoid, minimise and control soil erosion and discharge of sediment or soil into waterways or established drainage systems. • Minimise disturbance of soil, vegetation and drainage during site activities. • Prevent the contamination of soil to maintain the viability of soil resources. • Minimise residual impacts to pastoralist usage of exploration areas.	• Clearing of vegetation for SWP site. • Soil compaction from access tracks, leases, infrastructure (pipelines and temporary gas processing facilities). • Increased sedimentation transportation from disturbed areas. • Loss of productivity of disturbed areas until final rehabilitation has been achieved.	• Medium risk of soil erosion from cleared areas (access tracks, SWP site, etc) within disturbed sites due to high intensity wet seasons. Risk is a low consequence (minor impact), possible (<50% chance of occurring) event. • Low risk of a reduction in land production through poor erosion and sediment control practices • Low risk of spills/leaks from the on-site storing and handling of fuels, hydrocarbons, chemicals, solid wastes, storage and transportation of wastes causing soil contamination. • Low risk of chemical and waste transportation accident, causing soil contamination due to licenced chemical/ waste provider use, spill response and emergency response requirements. • Low risk of contamination from water stored in settlement basin due to the benign nature of water (groundwater with suspended sediments only). • Low risk of reduction in land production through poor infrastructure placement as infrastructure is preferentially located adjacent to existing disturbed areas, with no sensitive soil types present in the immediate vicinity. • Low risk of reduction in land productivity from poor rehabilitation due to mandatory rehabilitation requirements and security bond requirements.	• Site selected to avoid sensitive soil units and slopes which may increase erosion hazard. • All land clearing to align with the requirements of the Code and *NT Land Clearing Guidelines* (2019). • Erosion and sediment control practices to be utilised at all disturbed sites to minimise erosion. • Sites maintained to minimise sediment releases, with erosion and sediment control plan in place. • All chemicals and fuels to be stored with secondary containment as per the Code. • An earthen bund will be provided to divert upstream run-off around disturbed areas. • All settlement basins are to be operated with a 1:100 7 day ARI wet season or dry season (whichever is applicable) freeboard. • Stormwater to be retained within the onsite settlement basins during operations, with preference given to reuse rather than release. • Any stormwater releases will be undertaken in a controlled manner to prevent erosion- including through purpose constructed spillways on sediment basins.

Aspect	Environmental outcomes	Environmental impacts	Potential risk	Controls
				• All spills of chemicals, fuel and oils to be cleaned up upon detection. • Site to be rehabilitated back to pre-existing/ agreed state with pastoralist input. This includes being re-contoured and have reject material reinstated to aid in vegetation regrowth.
Emissions (dust, greenhouse and combustion emissions)	• Avoid environmental nuisance at sensitive receptors • Minimise impacts to pastoralists and surrounding ecological communities from dust • Minimise greenhouse gas emissions	• Dust on vegetation in the immediate vicinity of activities reduces plant palatability • Impacts of dust nuisance to birds and fauna in the immediate vicinity of activities, specifically access tracks • Emissions from the combustion of diesel. • Generation of Greenhouse gasses	• Low risk of dust (including from washed sand) impacts generated during construction and operations due to use of dust suppression, stockpile management and routine maintenance of access tracks and infrastructure • Low risk of reduction in regional air quality resulting from emissions from the combustion of diesel due to the low-intensity and temporal nature of the activities and selection of efficient equipment. • Medium risk of bushfire from accidental ignition by site activities (clearing/construction works. The consequence of a fire is considered “serious”, with the likelihood “highly unlikely”. • Low risk of greenhouse gas emission impacts from SWP activities (climate change) as emissions are small in comparison to local, regional, domestic and international levels.	• Site located away from sensitive receptors, such as homesteads. • Dust suppression to be used on SWP site (including stockpiles) and access tracks to minimise dust emissions where practicable. • Firebreaks to be installed and maintained around SWP site to minimise bushfire risk. • Slashing, grinding and other higher risk fire activities to be undertaken with appropriate controls to mitigate the risk of bushfire (such as buffer zones, use of fire trailers, fire breaks etc.). • Vehicles/equipment to be equipped with fire extinguishers. • Vehicles/equipment to be serviced and maintained to ensure efficient operation and minimise emissions.
Surface Water	• Avoid and minimise the potential contamination caused by the discharge of	• Increased sedimentation transportation from disturbed areas (access tracks, SWP site).	• Low risk of settlement basin overtopping due to mandatory freeboard and monitoring controls	• No take of surface water from waterways permitted. • SWP site located 19 km away from the nearest mapped major watercourse.

Aspect	Environmental outcomes	Environmental impacts	Potential risk	Controls
	sediment or contaminated storm water to waterways or established drainage systems. • Contain any potential contaminants for treatment or disposal.	• Potential offsite release of contaminated water.	• Low risk of a transportation accident releasing chemical or wastewater (flowback and oily waters) due to the use of licenced wastewater/ chemical transportation providers, spill management and emergency response requirements. • Low risk of spills to surface water from chemicals and fuel storage and handling activities due to use of secondary containment and separation distance to watercourses. • Low risk of stormwater releases from activities contaminating surface water due to stormwater segregation and testing procedures. • Low risk of infrastructure changing surface hydrology and flow due to infrastructure design and avoidance of overland flow locations.	• There are no palustrine or floodplain systems in the vicinity of the SWP site. • Site selected to avoid sensitive soil units and slopes which may increase erosion hazard. • All land clearing to align with the requirements of the Code and *NT Land Clearing Guidelines* (2019). • Erosion and sediment control practices to be utilised at all disturbed sites to minimise erosion. • Site maintained to minimise sediment releases, with erosion and sediment control plan in place. • All chemicals and fuels to be stored with secondary containment as per the Code. • Site maintained to minimise sediment releases, with erosion and sediment control plan in place. • An earthen bund will be provided to divert upstream run-off around disturbed areas. • Water sources associated with the SWP include raw water, storm water, and process water stored within settlement basins for reuse/recycling. These water sources are not considered to be 'wastewater' as described in the Code. • All settlement basins are to be operated with a 1:100 ARI 7-day wet season or

Aspect	Environmental outcomes	Environmental impacts	Potential risk	Controls
				dry season (whichever is applicable) freeboard. Noting that the water contained within the settlement basin is not wastewater and is benign (containing only sediment), • Stormwater to be retained within the onsite settlement basins during operations, with preference given to reuse rather than release. • All released stormwater will be undertaken in a controlled fashion to prevent erosion and sediment releases.
Flora and Fauna	• Minimise disturbance to flora and fauna • No disturbance to high conservation areas • Avoid the introduction of weeds • Avoid the spread of existing weeds • Minimise the loss of pastoral productivity	• Clearing of vegetation and loss of fauna and flora habitat • Loss of livestock grazing area • Loss of productivity of disturbed areas until final rehabilitation has been achieved • Impact to livestock	• Low risk of impacts to sensitive vegetation communities from clearing, with high ecological areas avoided. (Vegetation communities in the location of the SWP are widespread and do not contain listed ecological communities.) • Low risk of impacts to fauna and flora with minimal clearing in drainage depressions or watercourses. • Low risk of threatened fauna mortality during clearing, with all sites to be inspected prior to clearing to avoid fauna. • Low risk of vehicle and machinery noise and lighting from SWP site and access tracks causing material impacts to threatened fauna or livestock. • Medium risk of introduction and spread of weeds in the area due to equipment washdowns, inspection and certification requirements. Monitoring and routine treatment completed on identified outbreaks.	• Site to be fully fenced during operations. • Settlement basins to have fauna ladders or liner material (such as coletanche) with sufficient friction to allow fauna to escape. • Vehicle speed limit restricted to 60 km/hr on access tracks. • Dust suppression used to limit dust impacts to vegetation. • All equipment and loads to be inspected and certified weed free prior to entry. • Routine weed inspections to be completed with all identified weeds treated. • Weeds sprayed periodically to restrict weed numbers.

Aspect	Environmental outcomes	Environmental impacts	Potential risk	Controls
			Impact from weed introductions/spread is considered moderate, with the likelihood unlikely. • Medium risk of bushfire from accidental ignition by site activities (clearing and construction) on fauna, flora and land productivity. The consequence of a fire is considered serious, with the likelihood unlikely. • Low risk of flora, fauna and livestock being trapped and drowning in settlement basins, sumps and pits due to the design of storages and fencing. • Low risk of contaminants in water and soil pass through the food chain and bioaccumulate in fauna causing detrimental impacts to local species and communities due to minimal fuels and chemicals stored onsite and chemical storage and handling practices. Fences are used to restrict livestock access. • Low risk of vehicle collisions with fauna – fauna mortality results in a localised impact to listed threatened species, due to avoidance of night-time driving, speed limit restrictions and number of vehicle movements. • Low risk of reduction in land productivity from poor rehabilitation due to mandatory rehabilitation requirements and security bond requirements. • Reduction in land production through bushfire.	• Firebreaks will be implemented and maintained to minimise fire risk to and from facility. • Site to be rehabilitated back to pre-existing/agreed state with pastoralist.

Aspect	Environmental outcomes	Environmental impacts	Potential risk	Controls
			• Low risk of impacts to flora and fauna through the encouragement of feral animals and other pest species leading to competition with native species. This includes the introduction of cane toads.	
Environmental Nuisance and Amenity- including dust, noise, light, odour and vibration	• Minimise impacts to pastoralist operations.	• Construction of infrastructure onsite changes land use from pastoral to industrial. • Increased traffic to proposed SWP site. • Noise, light, and dust emissions in the immediate vicinity of the SWP site.	• Low risk of changes in property amenity through the construction and operation of the SWP site due to location of activities and separation distance from receptors. • Low risk of increased vehicle accident as access points away from pastoral access. • Low risk of adverse impacts to fauna from traffic are anticipated, with impact levels consistent with standard road traffic levels. • Low risk of noise, dust, light and vibration impacts associated with construction and operation of the SWP site.	• Sites located away from homesteads, main station access points and local communities. • Site production of proppant will result in a net reduction in truck movements along property access tracks. • Maximum peak traffic during mobilisation and demobilisation is likely to be typically less than<8 vehicle movements per day during facility construction. <4-6 movements during operations. • Speed limit restricted on the access tracks to 60 km/hr. • Dust suppression to be used to minimise dust emissions. • Tamboran to work with pastoralist to manage livestock impacts. • SWP site has been designed to minimise aesthetic impacts and located away from homesteads and local communities. • Lighting of infrastructure (where required) designed to minimise aesthetic impacts during the evening through lighting design.

Aspect	Environmental outcomes	Environmental impacts	Potential risk	Controls
				• Existing camps to be used to minimise vehicle movements.

8. Consequences for Stakeholder Rights and Activities

8.1 Stakeholder rights

Pastoral lessees within the NT have non-exclusive rights to conduct their pastoral activities on the land granted under the NT *Pastoral Lands Act 1992*. Tamboran respects these legal rights and seeks a sustainable relationship with pastoral lessees so that both parties can co-exist on the land. Tamboran proposes to achieve this via the following key principles:

1. Formal stakeholder engagement aligned with the requirements of Section 7.2 (a) of the Regulations.
2. Structured and timely process for the execution of an access agreement and associated compensation under the NT Petroleum Regulations 2020.
3. Mutually agreed ongoing, regular engagement and communications.

Tamboran's impacts to stakeholder rights are limited to accessing and utilisation of defined sections of the pastoral lease for authorised petroleum exploration activities. Impacts to rights are restricted to a loss of pastoral productivity over the areas for which Tamboran has established infrastructure, such as the proposed SWP site, well pads, camp pads, gravel pits and access tracks. Access to demarcated zones around infrastructure (e.g. well pads) may also be restricted to ensure stakeholder and community safety.

8.2 Stakeholder activities

In accordance with s.7.2 of the Regulations, Tamboran is required to provide the pastoralists information on the potential consequences of undertaking the regulated activities on a stakeholder's rights. A summary of the potential consequences of the activity and mitigation controls are summarised in Table 3.

All impacts are anticipated to be restricted to the immediate vicinity of the proposed activities, with no long term or material reduction in pastoral productivity anticipated. Upon cessation of activities, rehabilitation will occur to bring any disturbed land back to a state consistent with the pre-disturbed level.

All potential impacts will be included in the LACA, along with make good requirements which ensure the pastoralists ongoing right to utilise the land for pastoral activities is protected.

Table 3 Potential consequences of the activity on stakeholders' activities

Pastoralist Activity	Potential Consequence to Activities	Mitigations
Pastoralist's time	• Impact to pastoralist time as required to engage with Tamboran as a part of the planning and approval for the proposed activity.	• Tamboran undertakes engagement in good faith, with information provided in a variety of formats to reduce time pressures as far as reasonably practicable. • Tamboran will endeavour to minimise the amount of impost on pastoralist activities- noting a level of initial and ongoing interaction will be required between lease holders. • Tamboran proposes to compensate pastoralists for their time.
Pastoralist site access	• Exploration vehicles along access track may interact with pastoralist activities- mustering and pastoralist vehicles. • Restricted access to SWP site along with exploration wells, compression facility and fenced areas during the	• Pastoralist engaged throughout activity planning to incorporate pastoralist feedback into activity to reduce impacts. • Camps with workers bussed to site (where possible) to minimise vehicle movements. • Hazardous areas to be fenced and signed to communicate potential safety hazards.

Pastoralist Activity	Potential Consequence to Activities	Mitigations
	length of proposed activities. Dust and noise generated from activities may cause disruption to livestock in the immediate vicinity of activity.	• Compensation to be paid for loss of available grazing land and disturbance. • Use of local sand will reduce truck movements associated with haulage of imported sand along property access tracks.
Pastoral activities- grazing and mustering	• Elevated levels of noise in the immediate vicinity of the SWP site. • Disturbance of cattle in the immediate vicinity of the activity during SWP site construction/ operation. • Dust impacts from vehicle movements and disturbed surfaces on immediate adjacent vegetation has the potential to temporarily reduce yield. • Reduction in pastoral productivity through poor rehabilitation. • Potential introduction or spread of weeds. • Potential impacts on cattle and pastoral business where gates are left open. • Potential impacts from air emissions.	• Pastoralist engaged throughout exploration activity planning to minimise impact on cattle and pastoral activities. • Compensation to be paid for loss of available grazing land and disturbance. • Full fencing of SWP site to restrict cattle. • Speed limits restricted to 60 km/hr. • Dust control utilised to reduce dust emissions. • Site to be rehabilitated back to pre-existing state, with security bond in place if company fails to rehabilitate. • Weed management plan implemented, including requirements for weed hygiene inspections and certificates on all equipment and vehicles. • Monthly weed monitoring and spraying of weeds using a NTG approved treatment. • Induction with all contractors and staff in relation to pastoral operations. This induction to be developed with input from pastoralist. • Use of grids, gate signage, inductions and regular gate monitoring and reporting to pastoralist to minimise occurrence of gates being left open. • On-going liaising with pastoralist throughout on ground operations.
Pastoral activities- ongoing productivity of area post rehabilitation	• Reduction in productivity due to erosion and sediment releases. • Reduction in productivity due to chemical/fuel spills. • Reduction in pastoral productivity through poor rehabilitation. • Potential introduction or spread of weeds.	• Routine site maintenance completed to ensure functioning of erosion and sediment control. • All fuels, oils and chemicals to be stored within secondary containment. • All spills remediated as required in the EMP/spill management plan. • End of life rehabilitation to return land back to pre-existing state or as agreed to with pastoralist- including re-contouring and reinstatement of topsoil. • Rehabilitation security with NTG retained. • Weed management plan implemented, including requirements for weed hygiene inspections and certificates on all equipment and vehicles. • Routine weed monitoring and spraying of weeds using a NTG approved treatment.
Pastoral access to groundwater	• No anticipated impacts as proposed groundwater take is to be covered under an existing/future WEL.	• All groundwater take to be authorised under a WEL. • Water extraction from pastoralist bores not proposed, unless specifically approved by pastoralist through an agreement. • Tamboran to allow access to water extraction

Pastoralist Activity	Potential Consequence to Activities	Mitigations
		bores for pastoral take (with prior agreement between the parties).
Pastoral access to surface water	• No anticipated impacts as no surface water take, interference or wastewater discharges proposed.	• Process water will report to settlement basins, with the majority to be recovered for reuse in the SWP. • No surface water proposed to be taken other than incidental rainfall/runoff from within the SWP site which reports to the settlement basins. • No activity proposed within watercourses.
Pastoralist's amenity	• Elevated levels of noise in the immediate vicinity of the infrastructure during construction and operation of the SWP. • Dust generation creates visible amenity impact. • Visual presence of infrastructure within pastoralist lease.	• Site to be located away from main pastoralist entry points and homestead. • Dust suppression to be used where practicable. • Site selection has avoided siting activities on regional high points. • Use of local sand will reduce dust and noise emissions associated with haulage of imported sand along property access tracks.

9. Stakeholder Engagement Plan Feedback

All feedback on the proposed activities and their potential impacts, risks and proposed controls should be provided to Tamboran via the feedback form in Appendix A within the 28-day time period. Where no comments on contents relating to the requirements of the Regulations are received within the 28-day period, the Regulations stakeholder engagement requirements will be considered fulfilled. Ongoing stakeholder engagement will then proceed.

All lessee comments and associated Tamboran responses will be documented and provided to DLPE as a part of the EMP approval process.

10. Ongoing Stakeholder Engagement

To keep the Hayfield Shenandoah representatives informed of the status of the regulated activities, the following ongoing engagement is proposed:

- Quarterly engagement on the status of exploration activities
- Fortnightly engagement prior to the commencement of activities under this SEP
- Ad hoc engagement as requested by the APN Pty Ltd Pastoral Representative
- Future engagement on additional petroleum exploration activities (If and when proposed) which are not covered under the EMP

Alternative engagement frequencies can be accommodated at the request of the nominated representative.

Tamboran would also like to extend an invitation to the pastoral lessees to attend any of the proposed exploration activities to further seek comfort in their understanding and to highlight the nature in which operations are conducted.

11. Acronyms and Abbreviations

Acronym	Meaning
AAPA	Aboriginal Areas Protection Authority
Act	Northern Territory *Petroleum Act 1984*
AGP	Amadeus Gas Pipeline
ALARP	As Low as Reasonably Practicable
ARI	Average Recurrence Interval
Beetaloo JV	Beetaloo Joint Venture
BOM	Bureau of Meteorology
Code	Code of Practice: Onshore Petroleum Activities within the Northern Territory, 19 February 2025
DEPWS	The former Northern Territory Department of Environment, Parks and Water Security, now referred to as the Department of Lands, Planning and Environment (DLPE).
E&A	Exploration and Appraisal
EMP	Environment Management Plan
EC	Electrical Conductivity
EP	Exploration Permit (e.g. EP76, EP98 and EP117)
ERP	Emergency Response Plan
ESCP	Erosion and Sediment Control Plan
GDE	Groundwater dependent ecosystem
GHG	Greenhouse Gas
HFS	hydraulic fracture stimulation
LACA	Land Access and Compensation Agreement
NT	Northern Territory
NTG	Northern Territory Government
PSD	Particle Size Distribution
Regulations	Northern Territory Petroleum (Environment) Regulations 2016
SEP	Stakeholder Engagement Plan
SMP	Spill Management Plan
SPCF	Sturt Plateau Compression Facility
SS E&A	Shenandoah South Exploration and Appraisal
SSGP1 and SSGP2	Tamboran gravel pits
SWP	Sand wash plant
Tamboran	Tamboran B2 Pty Ltd
WEL	Water Extraction Licence
WEL GRF10285	Tamboran's existing groundwater extraction licence for the Gum Ridge Formation. Tamboran has approval to extract 450 ML/annum under this WEL.

Acronym	Meaning
Units of measure	
ha	hectare
KL	kilolitre
km^2	square kilometres
km/hr	kilometres per hour
ML/annum	megalitres per annum
mm	millimetre

Appendix A – Stakeholder Feedback Form NT-2050-95-AQ-0003

Stakeholder:	
Document Referenced:	
Controlled Doc Number:	

#	Ref	Comment	Date	Tamboran Feedback	Date

[redacted]

From: David Armstrong [redacted]
Sent: Thursday, 10 July 2025 11:22 PM
To: Matt Kernke
Cc: Brad O'Reilly
Subject: Fwd: LAA- Sand Processing Area
Attachments: Tamboran Sand Washing Facility Stakeholder Feedback APN Pty Ltd10072025.pdf

Follow Up Flag: Follow up
Flag Status: Flagged

Matt

See email response from Dyer's on sand
Speak tomorrow

Cheers

Begin forwarded message:

From: Val Dyer [redacted]
Date: 10 July 2025 at 4:36:22 pm GMT+9:30
To: David Armstrong [redacted]
Cc: Justin Dyer [redacted], Sally Dyer [redacted], CharlieMartel [redacted]
Subject: RE: LAA- Sand Processing Area

HI Dave

Sorry this response is handwritten as I couldn't convert to a working document.

We still have some misgivings about the extent and affect of proposed sand mining. The main areas of concern identified by Justin,, Sally and I relate to

- The permanent removal of the future use of arable soils. Pretty rare in these parts as irrigation may have provide opportunities for alternative use at a later date.
- The depth of the hole to extract 12,000 tonnes. How deep will the hole be after rehabilitation.
- Rehabilitation being restricted to Mandatory requirements only. And what is that?? Rehabilitation is not included in the Agreement
- Why 5 years?

We will wait for responses prior to consideration of the Agreement.
Please call to discuss further when appropriate.

Regards
Val

From: David Armstrong [redacted]
Sent: Friday, 20 June 2025 1:36 PM

To: Val Dyer [redacted]
Cc: Justin Dyer [redacted]; Sally Dyer [redacted]
Subject: LAA- Sand Processing Area

Hi Val

Tamboran would like to move forward with negotiating the area for sand processing. This was included in the previous agreement just finalised but we pulled it out so we had more time to discuss and compile information. To up date you, Tamboran have run tests on the sand and they have been very positive as the right type and quality for use in the fracking process. This being the case they are very keen to move to the next stage of testing that entails this processing area. The sand stockpiled during the construction of this area will be used in the trial. The trial involves washing and grading the sand and then it can be use in fracks maybe late this year but early next year in the wells they will start drilling shorty.

Tamboran understands your reluctance to progress with sand mining however it is critical with the viability of the basin.

Please call anytime with questions and I can organise a meeting with appropriate people if you would like.

Attached is the Form 15 Negotiation Notice, the proposed access agreement and the Stakeholder Engagement Pack with information.

Regards

Dave

Received 20/6/25

Appendix A – Stakeholder Feedback Form NT-2050-95-AQ-0003

Stakeholder:	APN Pty Ltd.
Document Referenced:	Proposed Sand Wash Facility.
Controlled Doc Number:	

#	Ref	Comment	Date	Tamboran Feedback	Date
		Chemicals: Request a full list of chemicals used.			
		Dust Drift: Will there be dust drift?			
		• Rehabilitation: As the sand will be permanently removed what soil will be used to replace the original sand?			
		• The proposed agreement does not mention rehabilitation.			
		Term of Agreement. If 5 years, this length of time suggests more than a trial. Suggest 2 years to complete.			
		Excavation Depth • There is no mention of the depth of the hole to extract 12,000 tonnes. or how to refill.			
		• This compensation does not account for the price of sand/which suggests inadequate compensation for potential future use as arable soils.			

Brad O'Reilly

From: David Armstrong [redacted]
Sent: Sunday, 20 July 2025 4:56 PM
To: Val Dyer
Cc: Justin Dyer; Sally Dyer; CharlieMarte[redacted]
Subject: Re: LAA- Sand Processing Area
Attachments: 2507_TBN Response to APN Pty Ltd SWP Comments.pdf; Tamboran Sand Washing Facility Stakeholder Feedback APN Pty Ltd10072025.pdf

Hi Val

Thanks for your feedback and yes there is a bit to work through. Attached are some answers to your questions that Tamboran have put together. If you have a look over and we can go from there. This may be an appropriate time to have Tamboran people involved in the sand processing to come and discuss what and how it will happen in person so you can ask direct questions.

I'll touch base with you during the week to discuss

Regards

Dave

DAVID ARMSTRONG

Managing Director
Mobile [redacted]
Address [redacted]
Email [redacted]

TERRABOS CONSULTING
PASTORAL
EXPLORATION
MINING
ABORIGINAL
DEVELOPMENT

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On 10 Jul 2025, at 4:35 pm, Val Dyer [redacted] wrote:

HI Dave

Sorry this response is handwritten as I couldn't convert to a working document.

We still have some misgivings about the extent and affect of proposed sand mining. The main areas of concern identified by Justin,, Sally and I relate to

- The permanent removal of the future use of arable soils. Pretty rare in these parts as irrigation may have provide opportunities for alternative use at a later date.
- The depth of the hole to extract 12,000 tonnes. How deep will the hole be after rehabilitation.
- Rehabilitation being restricted to Mandatory requirements only. And what is that?? Rehabilitation is not included in the Agreement
- Why 5 years?

We will wait for responses prior to consideration of the Agreement.
Please call to discuss further when appropriate.

Regards
Val

From: David Armstrong [redacted]
Sent: Friday, 20 June 2025 1:36 PM
To: Val Dyer [redacted]
Cc: Justin Dyer [redacted]; Sally Dyer [redacted]
Subject: LAA- Sand Processing Area

Hi Val

Tamboran would like to move forward with negotiating the area for sand processing. This was included in the previous agreement just finalised but we pulled it out so we had more time to discuss and compile information. To up date you, Tamboran have run tests on the sand and they have been very positive as the right type and quality for use in the fracking process. This being the case they are very keen to move to the next stage of testing that entails this processing area. The sand stockpiled during the construction of this area will be used in the trial. The trial involves washing and grading the sand and then it can be use in fracks maybe late this year but early next year in the wells they will start drilling shorty.

Tamboran understands your reluctance to progress with sand mining however it is critical with the viability of the basin.

Please call anytime with questions and I can organise a meeting with appropriate people if you would like.

Attached is the Form 15 Negotiation Notice, the proposed access agreement and the Stakeholder Engagement Pack with information.

Regards

Dave

TBN Response to APN Pty Ltd Stakeholder Engagement Pack Comments (*Tamboran Sand Washing Facility Stakeholder Feedback APN Pty Ltd10072025*)

TBN Ref #	Issue	Comment	TBN Response
1	Chemicals	Request a full list of chemicals used	No chemicals other than fuel/oil and grease for mobile plant and processing equipment (similar to those already utilised elsewhere in Tamboran's activities) are likely to be utilised at the sand wash plant site. Tamboran is happy to provide a full list of these chemicals once they have been provided by the equipment providers.
2	Dust Drift	Will there be dust drift	It is expected that dust drift from the sand wash plant site will be minimal due to the following: • The raw material consists of predominantly (>90%) sand size particles which are typically not prone to contributing to wind-borne dust; • Observations of the dust levels generated from vehicle traffic generation from the section of existing haul road adjacent to the wash plant site indicates that minimal dust is generated from the in-situ material; • Tamboran will progressively clear and develop the site to the extent possible, reducing the exposed areas; • The raw material would also be expected to contain some inherent moisture upon excavation, reducing the likelihood of dust generation; • Washed sand will have a moisture of ~15% when placed in a stockpile. Sand stockpiles tend to form a crust as the dry, reducing the likelihood of wind-blown dust drift from the stockpiles; • Tamboran will have a water cart available to assist with dust suppression at the sand wash plant site if required; • Adequate water will be available in the settlement basins to use for additional dust suppression if required e.g. sprinklers on stockpiles, etc).
3	Rehabilitation	As the sand will be permanently removed what soil	As noted in the Stakeholder Engagement Pack, raw sand will be sourced from one or more of: sand generated during Tamboran's construction activities (including from excavation of settlement basins within the wash plant site) or sand from Tamboran or third-party Extractive Mineral Titles.

TBN Ref #	Issue	Comment	TBN Response
		will be used to replace the original sand?	In regards to the processing of sand generated during construction, it is noted that: • >50% of the volume of the raw sand will be rejected as oversize/undersize and will therefore be used to backfill sediment basins. The basins will therefore be progressively backfilled over time, which will likely require additional basins to be excavated. • Construction activities for Tamboran's petroleum activities elsewhere result in a net excess of cut material, primarily due to the excavation of sumps which are subsequently filled with drill cuttings. This excess material can be processed through the wash plant (if suitable) or used to backfill excavations within the wash plant site with the oversize and undersize material reporting to the settlement basins and therefore reducing the net deficit of material available within the site. • Areas of residual settlement basins which are to be permanently retained below natural ground level (typically <4m below natural ground level and <0.5ha in size) will be shaped to exclude external run-off from entering, and to shed internal run-off to pond at the lowest point of the basin area. The remainder of the basin area will be retained as a shallow slope up to natural grade. This sloped area will remain above the ponded water level and will be rehabilitated to the surrounding pre-disturbance land-use. These areas will function as 'internally draining land forms' whereby the majority of the area will function consistent with the surrounding land-use, with the low-point to become a semi-permanent watering point. An example of this type of rehabilitation at a sand extraction site in the Northern Territory is shown in the Figure below. The Sand Wash Plant Environmental Management Plan has been updated to provide further clarity on this issue.
4		The proposed agreement does not mention rehabilitation	Tamboran is happy to discuss the terms of the access agreement further. It is noted that rehabilitation is discussed in detail in the EMP, which will become binding upon Tamboran upon approval.

TBN Ref #	Issue	Comment	TBN Response
5	Term of Agreement	If 5 years, this length of time suggests more than a trial. Suggest 2 years to complete.	The term for the access agreement was intended to align with the standard term for the Environmental Management Plan. The EMP only applies to the processing of sand for Tamboran's exploration and appraisal activities (i.e. not for production development) which may be more appropriate than a specific term - Tamboran is happy to discuss the terms of the access agreement further.
6	Excavation Depth	There is no mention of the depth of the hole to extract 12,000tonnes or how to refill	Refer to response to Item 3.
7		This compensation does not account for the price of sand which suggest inadequate compensation for potential future use as arable sites	Tamboran is happy to discuss the terms of the access agreement further.

Figure 1: Example of a rehabilitated 'internally draining' landform at an NT sand extraction site

PART B Stakeholder summary of information provided and the relevant sections of the Petroleum (Environment) Regulations 2016

Section 7(2)(a)	Stakeholder	Document and content	Date provided
(i) “the regulated activity the interest holder proposes to carry out”	Pastoralist	Stakeholder engagement pack: - **Detailed description of the Regulated Activities** covered in the EMP.	Refer table, Part A
	NLC/traditional owners	- Annual on country meetings - Story boards - Annual work program communications - Face-to-face meetings - Work clearance requests - Condition of work reporting	Refer table, Part A
(ii) “the location (or locations) where it is proposed to carry out the activity”	Pastoralist	Stakeholder engagement pack: - **Location of the Regulated Activities** covered in the EMP.	Refer table, Part A
	NLC/traditional owners	- Annual on country meetings - Story boards - Annual work program communications - Face-to-face meetings - Work clearance requests - Condition of work reporting	Refer table, Part A
(iii) "the anticipated environmental impacts and environmental risks of the activity" AND (iv) "the proposed environmental outcomes in relation to the activity"	Pastoralist	Stakeholder engagement pack: - **Environmental outcomes, impacts and risks** associated with the activities covered by the EMP.	Refer table, Part A
	NLC/traditional owners	- Annual on country meetings - Story boards - Annual work program communications - Face-to-face meetings - Work clearance requests - Condition of work reporting	Refer table, Part A
(v) "the possible consequences of carrying out the activity to the stakeholder's rights or activities"	Pastoralist	Stakeholder engagement pack: - **Consequences for stakeholder’s rights or activities** associated with the activities covered by the EMP.	Refer table, Part A
	NLC/traditional owners	- Annual on country meetings - Story boards - Annual work program communications - Face-to-face meetings - Work clearance requests - Condition of work reporting	Refer table, Part A

Appendix J.1.2 NLC Stakeholder Engagement

Appendix J.1.2 01 250221 2025 Work Program Update and Clearance Request

Outlook

2025 Work program update and clearance request and [redacted]

From Matt Kernke [redacted]
Date Fri 2/21/2025 5:44 PM
To Jeremy Beckett [redacted]
Cc Rory Ross [redacted]; Tamboran Contact <tamboran.contact@tamboran.com>; Faron Thibodeaux [redacted] Emily Beresford-Cane [redacted] Armando de la Flor Olavide [redacted] Russell Jeffrey [redacted]

3 attachments (13 MB)
NLC Work Program 2025 210225.pdf; [redacted] 2025 NLC spatial file.kmz;

Dear [redacted]

As foreshadowed, please find attached a copy of the 2025 annual work program and clearance request document. We also include a spatial file of the proposed activities.

There is quite a bit of detail in this request and we would be happy to walk through this with you both early next week. Please indicate a time if this is something you think would be useful.

The 2025 proposed work program covers the following activities:

- Ongoing stimulation and testing of the Shenandoah S2 2H and 4 H wells
- Drilling, stimulation and testing of up to 4 new wells on the Shenandoah S2 location
- Construction of the Sturt Plateau Compression Facility
- Execution of a 300km^2 3D seismic program
- Commencement of a sand washing trial

Sacred site clearances are also required for future scope. This includes the following:

- Variation to subject land 2 clearance area to include a sand washing activities and to increase well pad numbers from 6 to 10.
- Expansion of subject land 1
- New subject land 6 clearance request extending an existing 2018 cleared area.

[redacted]

If you require any further information, please do not hesitate to call me to discuss.

Kind Regards
Matt

Matt Kernke
Vice President, Environment and Approvals

tamboran
RESOURCES

[redacted]

2025 Work Program Update and Clearance Request

EP 98, 117, 76 – Beetaloo Joint Venture (Tamboran /Daly Waters Energy/ Falcon)

Version:	**1**
Submitted:	Matt Kernke
Presented by:	Tamboran
Review Date:	19/02/2025

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1 OVERVIEW

Tamboran B2 Pty Ltd (ABN 42 105 431 525) (Tamboran) holds a 77.5% interest in Exploration Permits (EP) 76, 98 and 117 ("the Permits") under the Beetaloo Joint Venture ("the Beetaloo JV") with Falcon Oil & Gas Australia Pty Ltd ("Falcon"). Tamboran is the operator of the Beetaloo JV, with all representations by Tamboran being on the behalf of the Beetaloo JV.

Since 2015, the Beetaloo JV has drilled eleven (11) wells in the Beetaloo Sub-basin ("Beetaloo") across EP 76, 98 and 117. With the successful appraisal of the Shenandoah S 1H well on EP 117, Tamboran is proposing to undertake an extended appraisal program on the newly constructed Shenandoah South 2 well site, with the intent to commence the sale of appraisal gas in 2026. Extended appraisal of multiple exploration & appraisal (E&A) wells is the next step in evaluating whether full scale production is feasible and how it should be designed.

This document is designed to provide the Native Title holders with the following information, in accordance with the Exploration Agreements (EA) and our stakeholder engaging requirements:

- A summary of activities exploration and appraisal activities completed in the previous year (Section 2)
- Information on proposed activities that could be completed in 2025 (Section 3)
- Approvals anticipated to be submitted to covered forward programs (Section 4)
- Sacred site clearance requests to assist in activity planning and the submission of approvals (Section 5)
- Detailed information on the proposed regulated activity (Appendix A)
- Summary of the environmental outcomes, risks and controls (Appendix B)

Tamboran's proposed 2025 E&A scope will also include a range of additional activities designed to further define and evaluate the underlying shale resources of the area, including the drilling, stimulation and testing of new wells, the acquisition of a 3D seismic, construction and operation of a sand wash plant at Kyalla 117 N2 (Figure 1).

A summary of the proposed 2025 work program includes:

- Stimulate and well test the 2 existing E&A wells on Shenandoah S2 (Shenandoah S2 2H and Shenandoah S2 4H)
- Drill, stimulate and test up to 4 new appraisal wells on Shenandoah S2
- Construct and commission of the Sturt Plateau Compression Facility (SPCF)
- Execution of the Shenandoah South 3D seismic program
- Construction and operation of a sand wash plant including a sand washing trial
- Sacred site clearance for future E&A activities

In accordance with the Exploration Agreements (EA) between and the Native Title Holders (NTH), Tamboran is required to undertake on country meetings for all proposed activities to be completed each year. Tamboran B2 requests the Northern Land Council's ("NLC") assistance to:

- Complete the required stakeholder engagement with Native Title Holders as their legal representative.
- Undertake annual on country meetings to discuss the proposed 2025 work program scope.
- Facilitate a *Sacred Site Clearance Survey* to comply with the obligations of the Exploration Agreement(s) and to support an application for an Aboriginal Areas Protection Authority ("AAPA") Certificate for the activity as described below.

This application is also designed to provide information to satisfy stakeholder engagement requirements defined in section 7 of the Petroleum (Environment) Regulations 2016. This includes information on the proposed activity description, risks and proposed controls within the sacred site clearance areas to minimise environmental harm. This information will form part of future environmental management plans, which are a statutory document that provides additional details of how environmental risks and impacts will be managed to as low as reasonably practicable (ALARP) and an acceptable level.

Tamboran respectively request the NLC to convey all information to the NTH in an acceptable form and are happy to answer any questions and provide additional information to facilitate this task. Tamboran will present information about our proposed 2025 activities during the on country meetings, with advice sought from the NLC regarding the content and format.

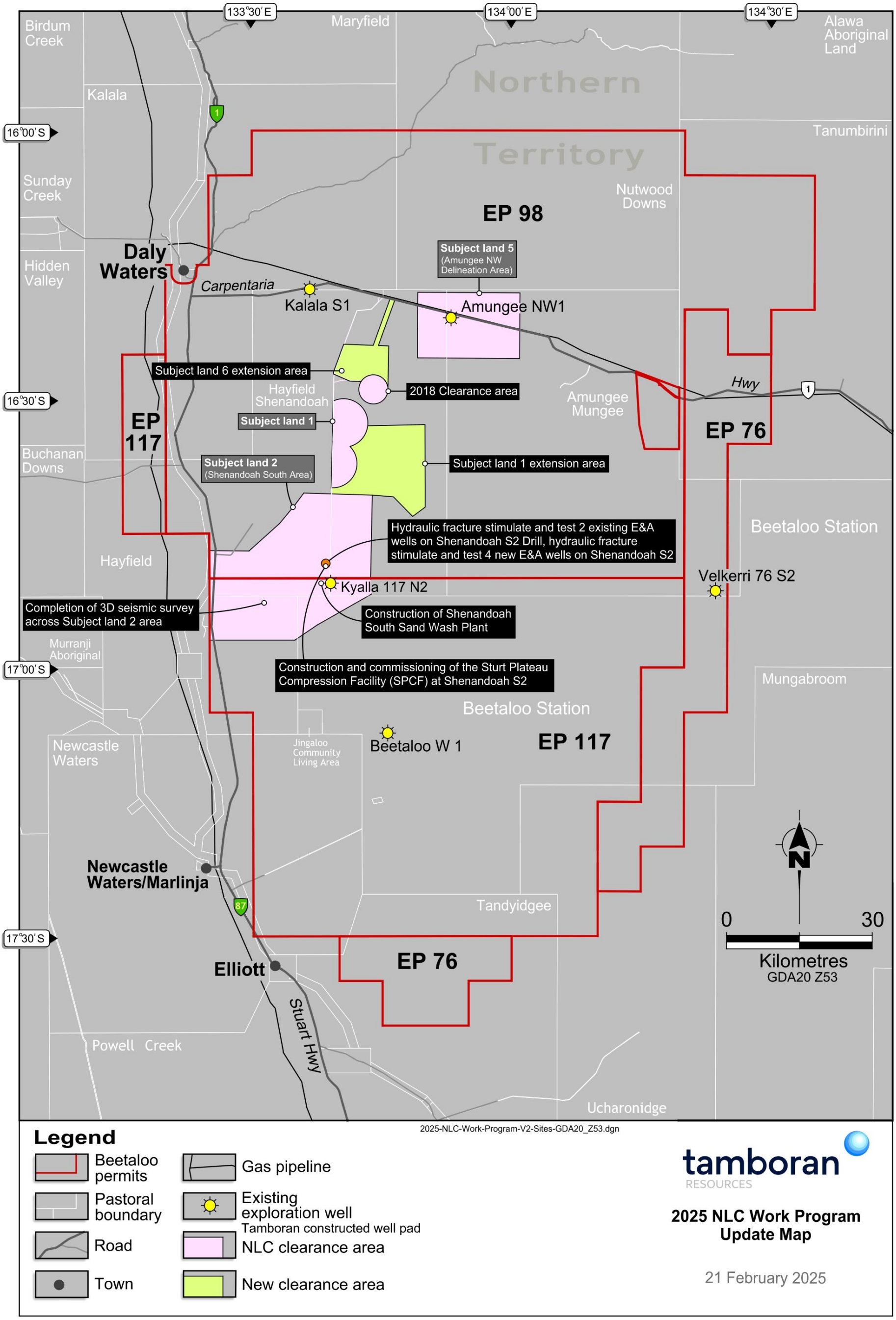


Figure 1 Overview of Tamboran's proposed focused areas and 2025 work program

2 Activity update

Tamboran is seeking to undertake E&A activities that if successful, will result in the future large-scale development of the shale resources within EP 76, 98 and 117. The size and nature of a production development is still in the conceptual phase, with information collected during appraisal required to assist in advancing the final engineering design All activities are undertaken with the intent of commencing production as soon as possible.

During Calendar Year (CY) 2024, the Beetaloo JV completed a number of important project milestones on achieving its project objectives. These milestones include:

- Hydraulic fracture stimulation (HFS) and well testing of the Shenandoah S-1H E&A well (on Kyalla 117 N2) targeted the Mid Velkerri B shale. This well achieved a 90-day sustained flow rate of 5.8 mmcfd, proving the prospectivity of the Velkerri B shale.
- Two E&A wells were successfully drilled on the newly constructed Shenandoah S2 location, located in EP 98 (Shenandoah S2-2H and Shenandoah S2-4H). The Shenandoah S2-4H well was drilled to a length of 3,000 m and is designed to demonstrate the efficiency and production potential associated with longer horizontal laterals. These wells are proposed to have a HFS and well testing completed in H1 2025.
- Planning commenced on obtaining the required approvals for the sale of appraisal gas in 2026 including:
    - NTHs have authorised the Appraisal Gas Agreement which, when executed, will provide the consent of NTHs to the beneficial use of gas pursuant to the Petroleum Act. The sale of appraisal gas rather than flaring is designed to maximise the benefits of produced appraisal gas during extended well testing and mitigate greenhouse gasses (GHG).

      The conditions in the Appraisal Gas Agreement for the recovery and sale and beneficial use of appraisal gas recovered from EP 98 include:

        - appraisal gas ‘Sold’ must not exceed 60 TJ per day calculated on an average annual basis (this 60 TJ per day limit applies to appraisal gas recovered from both EP 98 and EP117);
        - appraisal gas must only be ‘Sold’ during a 36-month period starting from when appraisal gas recovered from either of EP 98 or EP 117 is first ‘Sold’, unless the parties to the Appraisal Gas Agreement agree to a further term;
        - appraisal gas to be ‘Sold’ or otherwise beneficially used may only be extracted from wells located on or beneath the surface of the ‘Appraisal Area’;
        - all appraisal production infrastructure to be located within EP98 must be located on or beneath the surface of the ‘Appraisal Area’;
        - no additional pipeline for the transmission of appraisal gas extracted from wells on or beneath the surface of EP 98 within the ‘Appraisal Area’ to be ‘Sold’ or otherwise beneficially used, or facility for the compression of such gas, may be constructed or operated other than the SPCF and the Sturt Plateau Pipeline (to avoid doubt, this does not include gas gathering lines);
        - all appraisal production infrastructure will be of a design that is temporary or semi-permanent; and
        - the only permitted non-‘Sale’ beneficial uses of appraisal gas by the tenement holders are to provide appraisal gas for:
            - the commissioning and operation of the SPCF;
            - the construction and/or operation of the wells on or beneath the surface of the ‘Appraisal Area’; and
            - the commissioning of the Sturt Plateau Pipeline.
    - Environmental approval was obtained for the construction of the Sturt Plateau Compression Facility (SPCF) located within subject land 2. This included the granting of Aboriginal Area

Protection Authority (AAPA) clearance certificates covering the proposed appraisal are which were obtained with assistance from the NLC and NTH.

- APA commenced both environmental and ILUA approvals for the Sturt Plateau Pipeline to connect the SPCF to the Amadeus Gas Pipeline (AGP).
- A draft submission to recover petroleum on an appraisal basin was submitted to the NLC for review prior to submission to the Department of Mines and Energy (DME). The formal submission to DME is anticipated to commence in Q1 2025 upon receiving and incorporating NLC responses on the draft application.
- Three on country meetings were held to present the 2024 Work Program with relevant Native Title Holders (NTHs) were conducted in:
  - Mataranka on the 22nd of April;
  - Katherine on the 23rd of April including a number NTHs joining via Teams from NLC Darwin office;
  - Elliott on the 9th of May.
- A site visit to the Origin Energy Spring Gully and Reedy Creek Operations in the Maranoa region QLD was undertaken for 13 Native Title Holders and 4 NLC staff – 26th to 30th May.
- Two Scouting field trips were completed in 2024:
  - Land condition assessment scouting - 27 May to 1st of June.
  - Cultural heritage assessment scouting – 3rd to 7th June

The key near term (2025/2026) priority of the project is to commence an extended E&A appraisal program of the Velkerri B shale within the Shenandoah South Area, including the sale of appraisal gas and the construction and operation of a proposed sand wash plant. These activities are considered important steps on the pathway towards full-scale development to:

1. Demonstrate the deliverability of the underlying shales over an extended period.
2. Collect production information to underpin the design of future shale gas development, including well spacing and total well/pad numbers.
3. Reduce well construction costs through the acquisition of locally produced sand.

The Beetaloo JV will also commence planning to progress towards retention licences / production licences, including other approvals to support transitioning to production. This includes (amongst various other approvals) recommencement of negotiations of the production Indigenous Land Use Agreement ("ILUA"), environmental impact assessment, social impact assessment and front-end engineering design ("FEED") covering a development scenario.

A larger development will focus on both domestic and export markets. The design of a larger development and subsequent approvals will be underpinned by information collected from the CY 2025 to CY 2026 E&A programs.

3 Proposed 2025 work program update

The CY 2025 work program will focus on activities in EP 98 and 117 within the Hayfield Shenandoah Pastoral station. The following scope is proposed in 2025:

- Hydraulic fracture stimulation and well testing of the existing Shenandoah S2-2H and 4H E&A wells. This is a continuation of 2024 scope anticipated to finish within Q2 2025.
- Construction and commissioning of the SPCF.
- Drilling, stimulation and well testing of up to 4 new wells on the existing Shenandoah S2 well pad.
- Acquisition of a ~640 km^2 3D seismic program in subject land 2.
- Construction and operation of a sand wash plant, adjacent to the Kyalla 117 N2 well site.
- Ongoing site maintenance and monitoring of existing locations.

The detailed summary of the work program is proposed in Table 1, with the location provided in Figure 1 and Figure 2. Further information on the nature of the activities proposed to be completed are provided in

Appendix A. Appendix A provides information on proposed regulated activities to inform stakeholder engagement and sacred site clearances.

Photographs and schematics of typical activity phases and site layouts is provided in section 5.3.

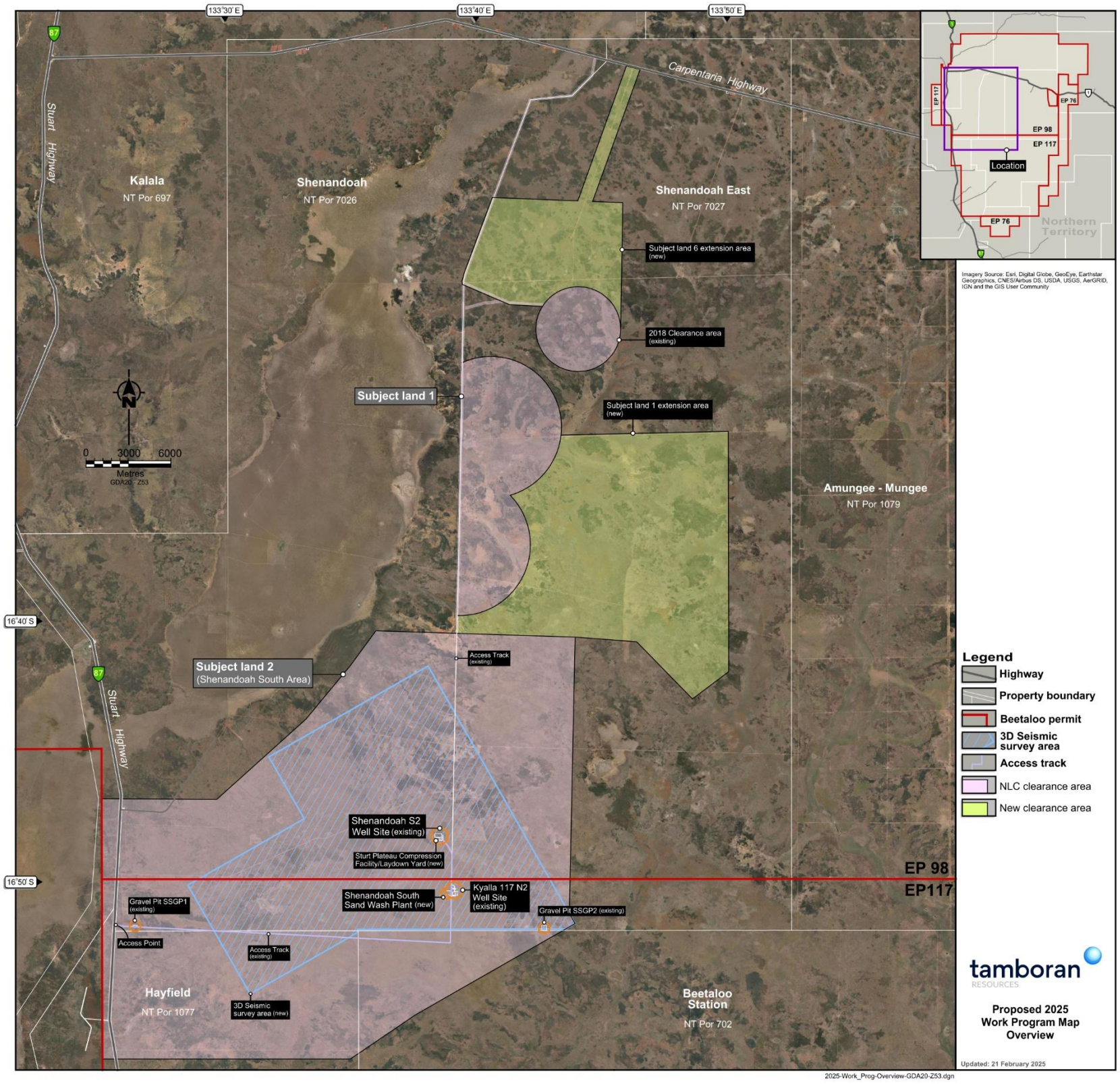


Figure 2 Detailed map of 2025 proposed activities

Table 1 EP 76, 98 and 117 CY 2025 Work Program Summary (including contingent scope)

Exploration Permit	Location	Location type	Pastoral Stations/ NT Portions	2025 work program overview
New Works				
EP 98	Shenandoah S2	2024 constructed location	Shenandoah East (NT Por 7026)	**Stimulation, completion and well testing of 2 existing E&A wells drilled on the site in 2024:** ○ Stimulation, completion, testing and maintenance of 2 new E&A well targeting the Velkerri shale. This is a continuation of 2024 scope. ○ Flowback wastewater storage and management. **Drilling, stimulation and appraisal of up to 4 new wells on Shenandoah S2** including: ○ Drilling, stimulation, completion, testing and maintenance of 4 new E&A well targeting the Velkerri shale on the existing Shenandoah S2 site. ○ Use of Synthetic Based Muds (contingent). SBMs are used at the well site for deeper, longer drilling once the aquifers have been isolated; their use reduces drag, torque and friction compared to water-based mud. ○ E&A wells are anticipated to be approximately 3300 m deep and extend for between 3,000 – 5,000 m. ○ Extraction and use of groundwater, with an anticipated water usage of ~90 – 120 ML per well (depending on the final length of the horizontal). ○ Construction of bulk chemical, fuel and sand storage areas required to execute campaign. All chemicals and fuels will be bunded and managed in accordance with occupational health and safety requirements, Dangerous Goods and Australian Standards. ○ Management of drilling waste cuttings and flowback onsite ○ Flaring of produced hydrocarbons, with appraisal gas sold from the site in 2026. ○ Recycling of flowback wastewater within stimulations. This includes the installation of small temporary water conditioning plant to remove solids and condition the flowback wastewater to a suitable standard to be mixed into stimulations. This will reduce flowback storage volumes, disposal costs and groundwater usage.

Exploration Permit	Location	Location type	Pastoral Stations/ NT Portions	2025 work program overview
				○ All ancillary work required to support the above (offices, diesel power generation, workshops, material storage, waste storage, water pumping, etc.). Refer Figures 1 and 2 for site location. Refer progressive well pad site layouts provided in Figure 10
EP98	Shenandoah S2	New appraisal gas facility	Shenandoah (NT Por 7026)	**Sturt Plateau Compression Facility (SPCF):** ○ Located adjacent to the Shenandoah S2 location on EP 98. ○ Civil construction and footings/pilings will be completed in early dry season 2025. ○ Skid mounted compressors (3-6), pipework, dehydration, power generation and ancillary equipment(work sheds, offices, ablutions, paydowns, water tanks etc.) will be installed and commissioned during the 2025 dry season. ○ Appraisal gas will be sent to a new Sturt Plateau Pipeline (SPP) constructed by APA (out of the scope of this document). APA are current obtaining all approvals for this pipeline including NTH consent. ○ First gas is anticipated to be in H1 2026, subject to weather and ongoing approvals. ○ This facility will take up to 60 TJ/day of gas from appraisal wells drilled and stimulated on Shenandoah S2 to enable the longer-term collection of appraisal data to underpin future investment decisions and reduce greenhouse gas emissions. ○ Additional wells are likely to be connected to the facility in 2026 and beyond. These will require the construction of gathering lines. ○ Construction and operation of a camp adjacent to the SPCF to host up to 200 construction workers working on the pipeline, SPCF, stimulation and drilling activities. Refer for a conceptual site layout of the SPCF, and Figures 8 and 9 for examples of temporary gas processing facility used to compress and sell gas into the domestic gas market.
EP 117 and 98	Subject Land 2	New 3D seismic program scouting	Hayfield Shenandoah (NT Por 1077, 7026 and 7027)	○ Collection of ~640 km^2 of 3D seismic within subject land 2. ○ Low impact seismic with minimal vegetation clearance (tree avoidance, use of smaller equipment etc.).

Exploration Permit	Location	Location type	Pastoral Stations/ NT Portions	2025 work program overview
				○ Hand deployment of nodes. ○ Collection of seismic data. ○ Rehabilitation of any disturbed areas.
EP 117	Kyalla 117 N2	Sand wash plant	Shenandoah (NT Por 7026)	The Shenandoah South sand wash plant (SSWP) is intended to provide sand for exploration and appraisal activities only. Sand is screened and washed to remove both fine and coarse sand, as well as rocks, sticks, dirt and other impurities. The proposed SSWP site is adjacent to the Kyalla 117 N2 well site and is anticipated to be operated as a trial proof of concept over the 2025/2026 period. Depending on the success of the trial, the life of the SSWP may be extended over the next 5 year period. Refer Figure 5 and Figure 13. Sand for the wash plant will be sourced from sand generated by the Beetaloo JV during construction, primarily from the excavation of pits, sumps and sediment/retention basins. It is anticipated that the trial will be run in partnership with a local indigenous business to wash up to 60,000 tonnes of sand. The activities will involve: ○ Site establishment for the SS sand wash plant site including clearing, topsoil stripping, fencing, etc. ○ Civil construction for the SS sand wash plant site including earthworks to contour and grade the wash plant and stockpile pads and access tracks, excavation of water storages to store raw water, recycled wash water and to settle out solids; ○ Mobilisation and installation of mobile/modular sand wash plant including mobilisation to site and installation on prepared pad. ▪ Operation and maintenance of the sand wash plant. ▪ Stockpiling and load-out of washed sand to well pads as required. ▪ Management and recycling of ‘reject’ sand and water. Ancillary activities comprising:

Exploration Permit	Location	Location type	Pastoral Stations/ NT Portions	2025 work program overview
				○ Use of existing approved camp facilities. ○ Use of existing property access tracks. ○ Extraction of groundwater under existing WELs estimated at around 30-50ML/year Refer Figure 5 or an indicative site layout of the proposed sand wash plant.
Existing sites- routine activities / care and maintenance				
EP 117	Kyalla 117 N2	Existing location	Shenandoah (NT Por 7026)	○ Ongoing access track, gravel pit and well pad maintenance and monitoring. ○ Ongoing management of flowback and drilling wastes. ○ Operation of a temporary camp at Kyalla 117 N2. ○ Groundwater extraction and monitoring. ○ All ancillary work required to support the above (power generation, workshops, material storage, waste storage, water pumping, etc.)
EP 98	Amungee NW	Existing	Amungee station (NT Por 1079)	○ Ongoing access track, camp pad and well pad use, maintenance and monitoring. ○ Ongoing wastewater (flowback and drilling fluids) storage and evaporation. ○ Ongoing well maintenance.
EP 76	Velkerri 76 S2	Existing	Amungee station (NT Por 1079)	○ Periodic access track, gravel pit, camp pad and well pad maintenance and monitoring. ○ Ongoing Velkerri 76 S2-1 well maintenance.
EP 98	Amungee NW2	Existing	Amungee station (NT Por 1079)	○ Periodic inspection and ad hoc maintenance of existing access track, and groundwater bore pad. ○ Potential site rehabilitation planned for 2025/26.

Exploration Permit	Location	Location type	Pastoral Stations/ NT Portions	2025 work program overview
EP 98	Kalala S	Existing	Kalala Station (NT Por 697)	○ Periodic inspection and ad hoc maintenance of existing access track, camp pad, and well pad. ○ Ongoing Kalala S-1 well maintenance. ○ Groundwater monitoring and extraction. ○ Potential well abandonment and site rehabilitation for 2025/2026.
EP 117	Beetaloo W	Existing	Beetaloo Station (NT Por (702) Access track: Hayfield (NT Por 1077) Access Track: Jingaloo (NT Por 5416)	○ Periodic inspection and ad hoc maintenance of existing access track, gravel pits, camp pad and well pad. ○ Ongoing Beetaloo W-1 well maintenance. ○ Diagnostic fracture injection test and monitoring. ○ Groundwater monitoring and extraction. ○ Potential well abandonment and site rehabilitation in 2025/26.
EP 76, 98 117	Beetaloo Basin wide	Surface water sites	Kalala, Beetaloo, Hayfield/ Shenandoah, Newcastle Waters, Amungee Mungee	Tamboran is continuing the regional monitoring program across both groundwater and surface water sites. Approximately surface 15 sites were included in the routine program in 2024 to demonstrate ongoing exploration and future production activities are not impacting/ not likely to impact on ground and surface water resources within the Beetaloo. This monitoring program will continue to be undertaken using a local indigenous contractor with the support of additional hydrogeologists. The program will visit each site every 6 months (pre and post wet season) for 1-2 hours and involve the following: ○ Collection of field chemistry using a calibrated water quality meter. ○ Collection of photographs, GPS coordinates and observations at each site. ○ The collection of surface water samples at each site in bottles for analysis by a laboratory. ○ The collection of sediment samples at each site for analysis by a laboratory.

Exploration Permit	Location	Location type	Pastoral Stations/ NT Portions	2025 work program overview
				○ Tamboran anticipates having sufficient data to begin preparing summative reports for the NLC and Native Title Holders in late 2025.

4 E&A Approvals

Tamboran proposes to submit a range of approvals to enable the completion of E&A activities within the 2025/2026 period. Each approval typically take 12 months+ to obtain from scoping to final approval, necessitating the early submission and allowance of activity optionality to support future E&A programs (i.e. contingent well locations or additional water volumes to allow future activity options).

Approvals in 2025 will be broken into the following headings:

- Environmental Management Plans
- Water Extraction Licences
- Retention Licence applications
- AAPA certificate applications

The proposed E&A approvals are summarised in Table 2.

Table 2 Summary of CY proposed approval submissions

Approval type	Approval name	Scope	Expected submission date
[redacted]	[redacted]	[redacted]	[redacted]
AAPA certificate	**Aboriginal Area Protection Authority (AAPA) Certificate Variation**	Variation of existing certificate **C 2024/065** covering subject land 2 to include: • Inclusion of sand extraction and a sand wash plant within subject land 2 • [redacted] • [redacted] • [redacted]	AAPA application Late February 2025 prior to on country meetings to enable AAPA to engage directly with NLC.

Approval type	Approval name	Scope	Expected submission date
[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	
New EMP	**Shenandoah South Sand Washing EMP**	New EMP covering the construction and operation of temporary sand washing plant on EP 117 to support E&A activities.	NLC submission March 2025- ideally submitted before the on country meeting

Approval type	Approval name	Scope	Expected submission date
[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]

4.1 Environmental Management Plans

Prior to undertaking any activity, an EMP must be submitted to the Environment Minister and approved. EMP's are a technical document that provides additional details of how environmental risks and impacts will be managed to as low as reasonably practicable (ALARP) and an acceptable level. This document describes how Tamboran will comply with the various requirements outlined in the Exploration Agreements , the Code of Practice for Onshore Petroleum Activities in the Northern Territory (**the Code**), the Petroleum (Environment) Regulations 2016 and any other applicable laws. The scope of EMPs is often designed to cover multiple years of activities within areas directly covered by sacred site clearance or a subset of activities. There is often confusion about why Tamboran seeks a range of activities to be included in an EMP beyond the proposed work program. This is simply due to the time it takes to obtain approvals, as it is difficult to obtain approvals and try to undertake activities within the early dry season of a given year. This is why on country meetings are so important, where Tamboran outlines the proposed scope to the NTH which is often already covered under various EMP's. A schematic of how the Sacred site clearances, EMP's and on country meetings interrelate is provided in Figure 3 Activity planning, engagement and approval process

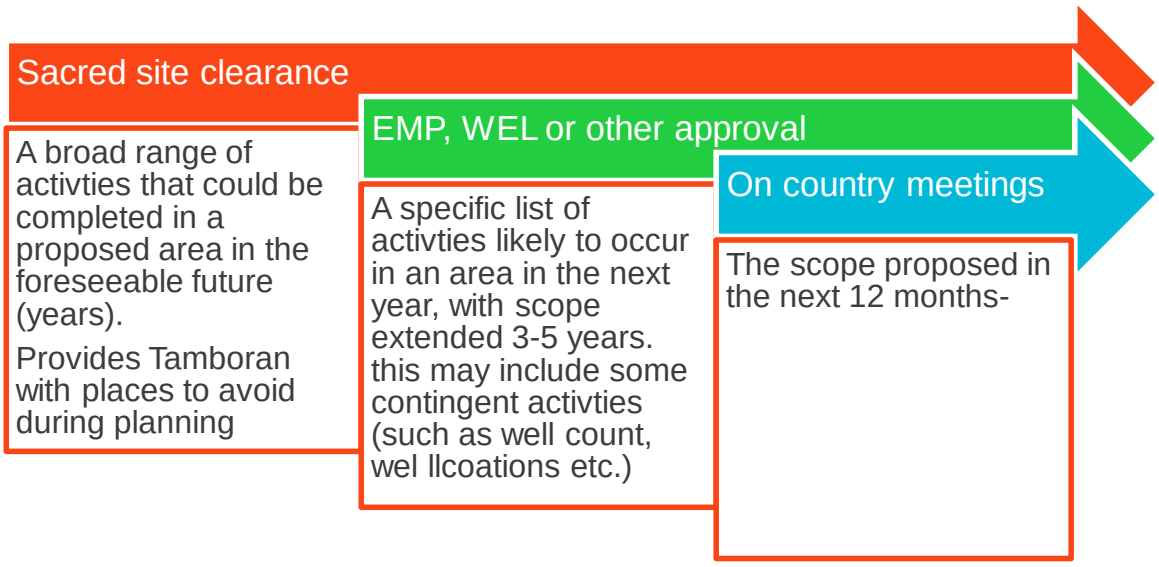


Figure 3 Activity planning, engagement and approval process

During the development of an EMP, stakeholder engagement is completed with Native Title Holders and the NLC as a part of our annual on country meetings and sacred site clearance. Information is provided in the annual work program and clearance request report (this report) which provides a basis for the engagement. This engagement aligns closely with the Petroleum (Environment) Regulation requirements for stakeholder engagement The information provide includes a description of the activity proposed, the locations of the proposed activity and information on environmental risks, controls and outcomes to be achieved. This is the first step in preparing an EMP, with information obtained through the engagement used to develop the content of the EMP.

EMP's are provided to the NLC for review prior to approval by the NTG and before commencement of activity (in accordance with the requirements of the Exploration Agreement).Tamboran will respond to each question/ comment raised by the NLC and will incorporate any required changes to the EMP scope where appropriate.

An overview of each of the proposed EMP approval proposed to be submitted during the period is provided in the following sections. Please note additional EMP's may be required to support E&A activities and these will be submitted to the NLC as an out of cycle request raised during routine operator- NLC meetings.

[redacted]

- [redacted]
- [redacted]
- [redacted]

[redacted]

4.1.2 Sand wash plant

A new EMP will be submitted covering the construction and operation of a sand wash plant within Subject Land 2. Sand is a critical input into hydraulic fracturing as proppant, with all sand to date being imported into the Northern Territory and transported to sites via road haulage.

Sand supplied to hydraulic fracturing operations must be within a specific specification, with out of specification sand potentially impacting on the physical completion of the well, as well as well productivity (gas rates). Suitable raw sand is screened and washed to obtain product sand with a suitable particle size range (particle size distribution) and remove any impurities (such as clays, silts and organic material) such that it can be utilised for hydraulic fracturing. The raw sand must also have suitable physical and chemical properties, such as yield (i.e. the percentage of the raw sand in the required particle size range that can be processed to become product sand by screening and washing), crush strength (so it doesn't break into smaller pieces down hole under the formation pressure), acid solubility (a measure of sand chemical reactivity) and roundness (which impact how it will flow and lodge in the formation during stimulation).

The wash plant site will initially be established on a trial basis, with a mobile or modular wash plant designed to wash up to 100,000 tonnes of material per year utilised to demonstrate the viability of washing local sand resources for use in hydraulic fracturing. Raw sand will be sourced either from Tamboran B2's construction activities (i.e. sand that has been stockpiled as a result of construction activities), or from local granted Extractive Mineral Permits/Leases. Tamboran generates a significant volume of material through the excavation of pits and sumps, much of which is sand which is potentially suitable to be washed and utilised for hydraulic fracturing. Use of sand generated from construction activities is specifically excluded from requiring an extractive mineral title under the NT Mineral Titles Act (unless the intended use is for sale – for clarity, Tamboran B2 does not intend to sell this sand).

Should the trial be successful, the wash plant site will continue to be utilised, whereby a wash plant will be mobilised to the site on a campaign basis (i.e. for several months or more per year) to produce the required volumes of sand for Tamboran's near term (2025/2026) and ongoing E&A activities as this is critical to reducing the unit cost of each well. It is anticipated that in the long term (2027 and beyond), required sand volumes will be larger and require a higher intensity of extraction and processing. At that time, it is envisaged that the extraction and washing of sand would be undertaken within granted Extractive Mineral Permits or Extractive Mineral Leases under the NT Mineral Titles Act. If the trial is unsuccessful, then imported sand from other parts of the NT, other States or internationally will continue to be utilised.

The sand wash plant will be located on a ~12 hectare site adjacent to the existing Kyalla 117 N2 location within subject land 2. This sis located in a centralised location in proximity to future E&A wells. The activity will involve the following:

- Civil construction for the SS sand wash plant site including land clearing, topsoil stripping, earthworks to contour and grade the wash plant and stockpile pads and the excavation of water storages to store raw water and to recycle wash plant water;
- Drilling of up to two water bores and/or pumping of water from existing bores on Kyalla 117 N2 to the wash plant site under the existing water extraction licences. Water extraction is estimated to be around 30-50ML/year during the sand washing trial, with the majority of water recycled;
- Construction and operation of small offices, maintenance sheds, sand storage sheds/covers and ablutions facilities, including irrigation of sewage wastewater as per the Department of Health requirements.
- Mobilisation and installation of a mobile/modular sand wash plant including mobilisation to site and installation on prepared pad.
- Operation and maintenance of the sand wash plant.
- Stockpiling and load-out of washed sand by haul truck to well pads as required.
- Management and recycling of 'reject' sand and water.
- Rehabilitation of the site, including removing all waste and surface equipment, backfilling water storages, re-establishing topsoil and revegetating disturbed areas.

Ancillary activities comprising:

- Use of existing camp facilities at Kyalla 117 N2/ Shenandoah S2.
- Use of existing property access tracks.
- Diesel storage and refuelling facilities

An overview of the location of the wash plant and general schematic is provided in Figure 5 and Figure 13.

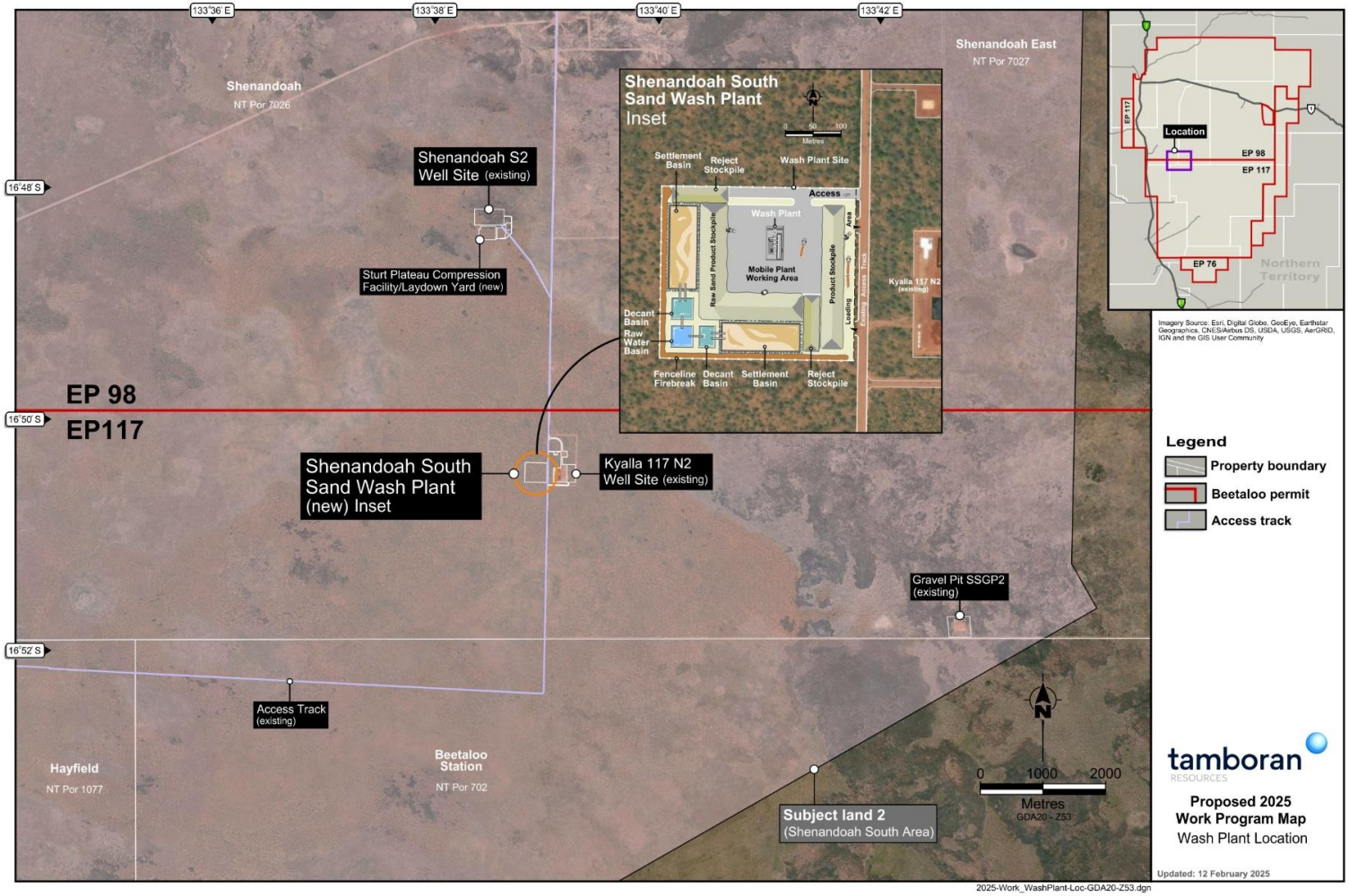


Figure 5 Overview of the Shenandoah South Wash plant

[redacted]

[redacted]

[redacted]

5 Sacred site clearance request

Sacred site clearances are a requirement of the Exploration Agreement between Tamboran and the parties to the Agreement. These clearances are designed to identify areas suitable for future E&A activities, to ensure areas of cultural significance are identified, avoided and protected early during activity planning. AAPA certificates will be generated covering the proposed cleared areas, with EMP's submitted covering specific scope. The broad scope of activities proposed during sacred site clearances ensure the same area isn't cleared multiple times in subsequent years for different E&A activities. Clearing the areas once is more efficient for the NLC, Tamboran, NTH's and AAPA.

5.1 Sacred site clearance request

The 2025 sacred site clearances requests covers 3 new clearance requests:

- Update of subject land 2 to include a sand washing plant [redacted]
- [redacted]
- [redacted]

An overview of each of the clearance requests is provided in the following section. Photographs of the key activities have also been provided in section 5.4 of this document.

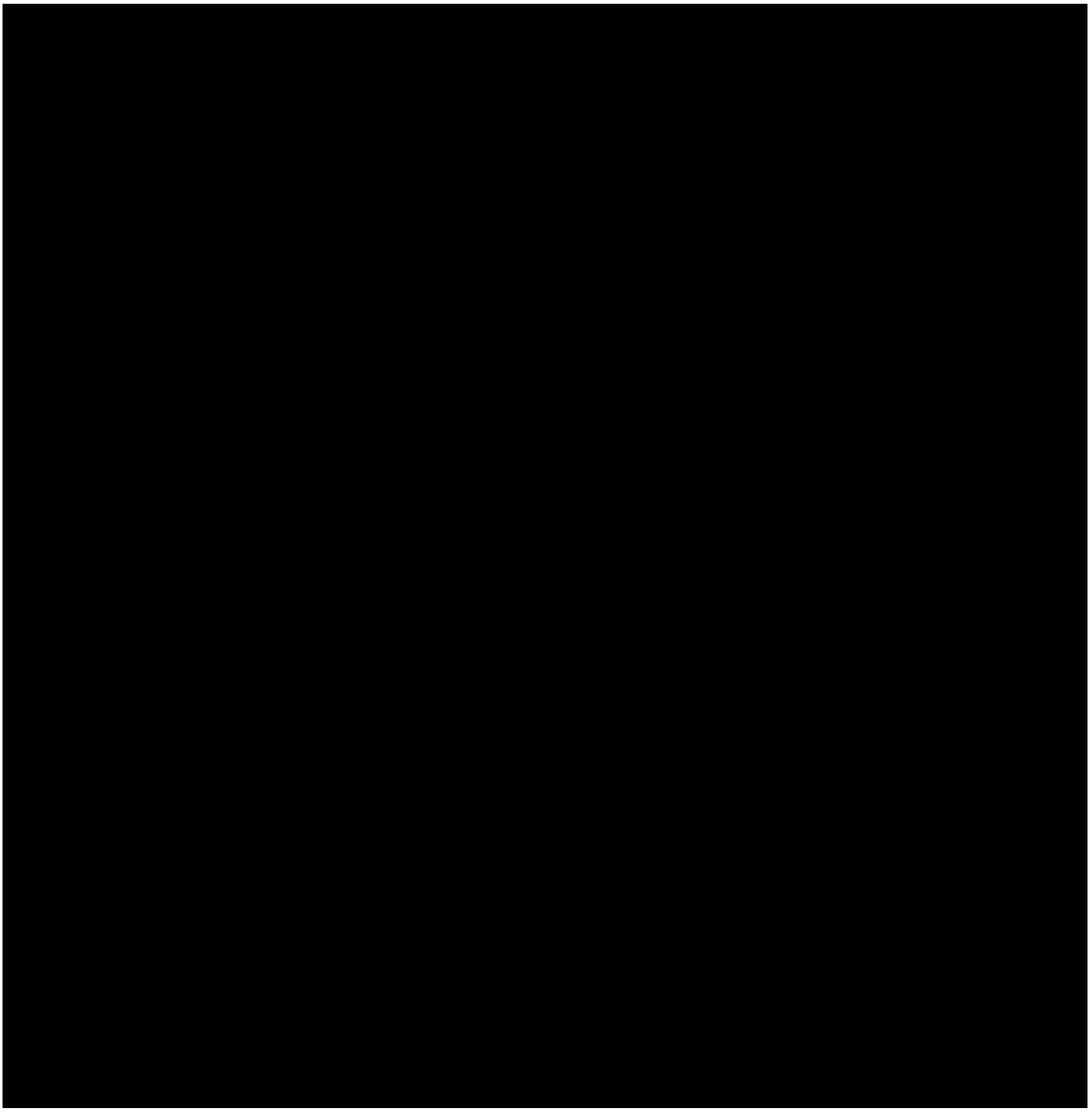
To further assist in understanding what the specific aspects of the clearance involve, a detailed description of individual component of regulated activities is provided in Appendix A. A summary of the potential environmental outcomes, risks, impacts and proposed controls of the proposed activities is provided in Appendix B.

An overview of the requested clearance areas are provided in Figure 6 with digital GIS data included in this submission.

[redacted]

[redacted]

- [redacted]
  - [redacted]
  - [redacted]
  - [redacted]
  - [redacted]
- [redacted]
- [redacted]



[redacted]

[redacted]

[redacted]

and recovery of SBM.

19. Recycling of flowback fluid into stimulation fluid, including filtration, flocculation, settling, chemical [redacted]

[redacted]

5.2 Important infrastructure placement considerations

Although the request is to place infrastructure anywhere in the clearance area, there are practicable constraints which will ultimately restrict where infrastructure can and cannot be located. Some of these constraints are enshrined in legislation (such as well spacing and proximity to some sensitive receptors), whilst others are due to environmental/ stakeholder factors. Surface features which are avoided during the placement of surface infrastructure include:

- water courses and drainage depressions - prevents infrastructure being flooded and decreases construction cost
- high valued ecological communities- identified through field scouting and avoided
- sink holes- prevents infrastructure damage (cave-ins) and reduces risk from overland spills in the remote instance they occurred.
- pastoral bores- legislative requirement to maintain 1km distance and generally this is where livestock watering infrastructure is located
- heritage features- identified during scouting. Tamboran avoids disturbance to these features
- Sacred sites- identified through sacred site clearances (these clearances)- Tamboran will not impact any identified sacred site

The broad clearance area has been requested to identify features for protection given the lateral (subsurface) component of wells may be located underneath features that span several km's from the lease pad. The horizontal laterals are anticipated to be located >2000m below ground level (noting the Velkerri B shale averages ~3000m in the area) and can be used to locate the surface pad away from the sensitive surface features for their protection i.e. locating infrastructure away from watercourses or wetlands with the laterals accessing below these areas without harm.

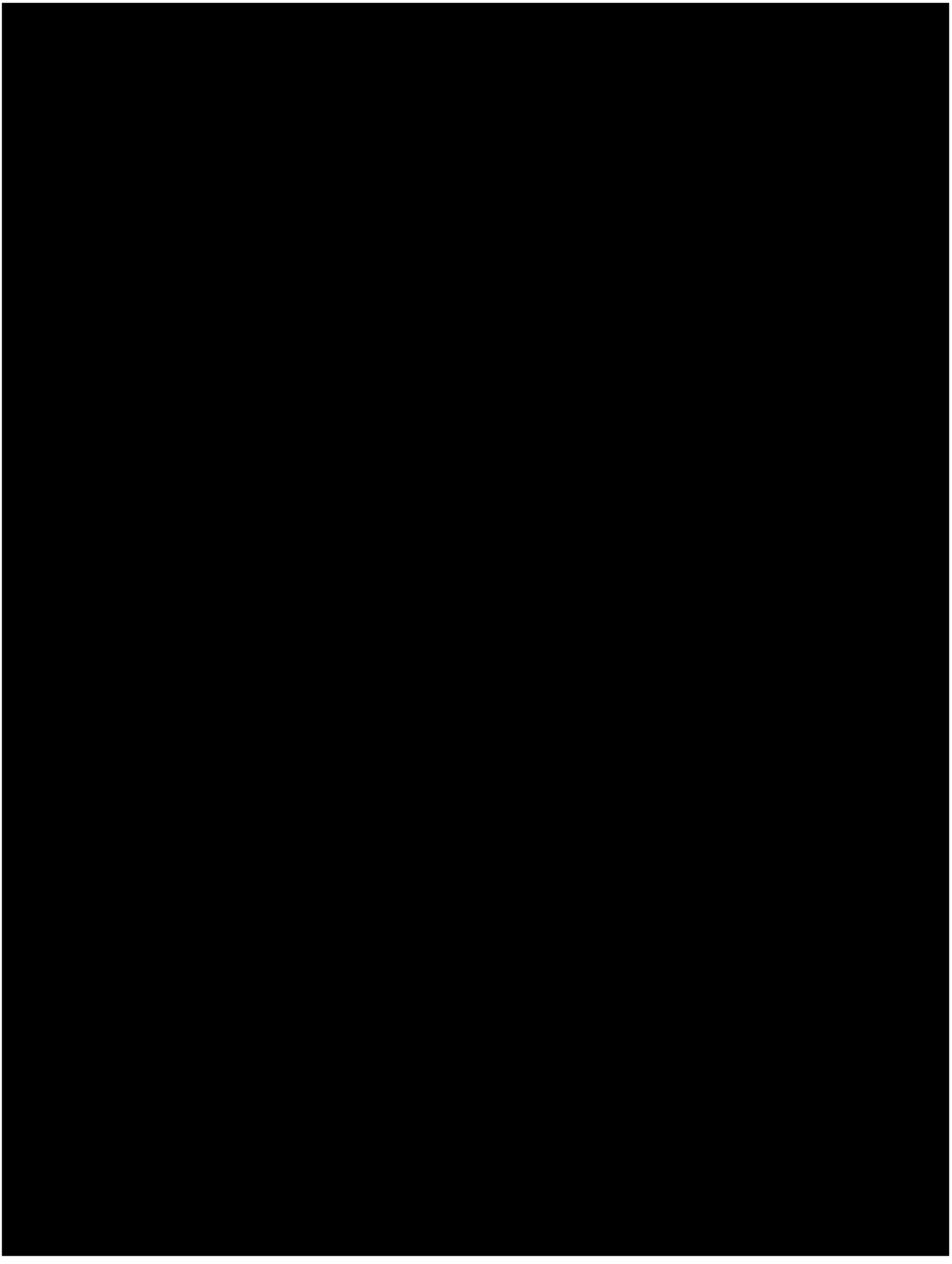
When determining how an area is to be protected, Tamboran respectively request that the NTH's consider whether some features could have horizontal wells permitted to be drilled under. The surface pads can be located several kms away, with the lateral drilled 2-3000m under the feature. This would ensure no surface impacts to the feature, while minimising the amount of resource missed. This could be achieved by nominating a minimum vertical separation within certain RWAs to ensure a minimum separation distance to underlying activities is achieved-for example 1000m. We are happy to provide additional information on our activities to provide assurance to NTH's that all sacred sites will be protected.

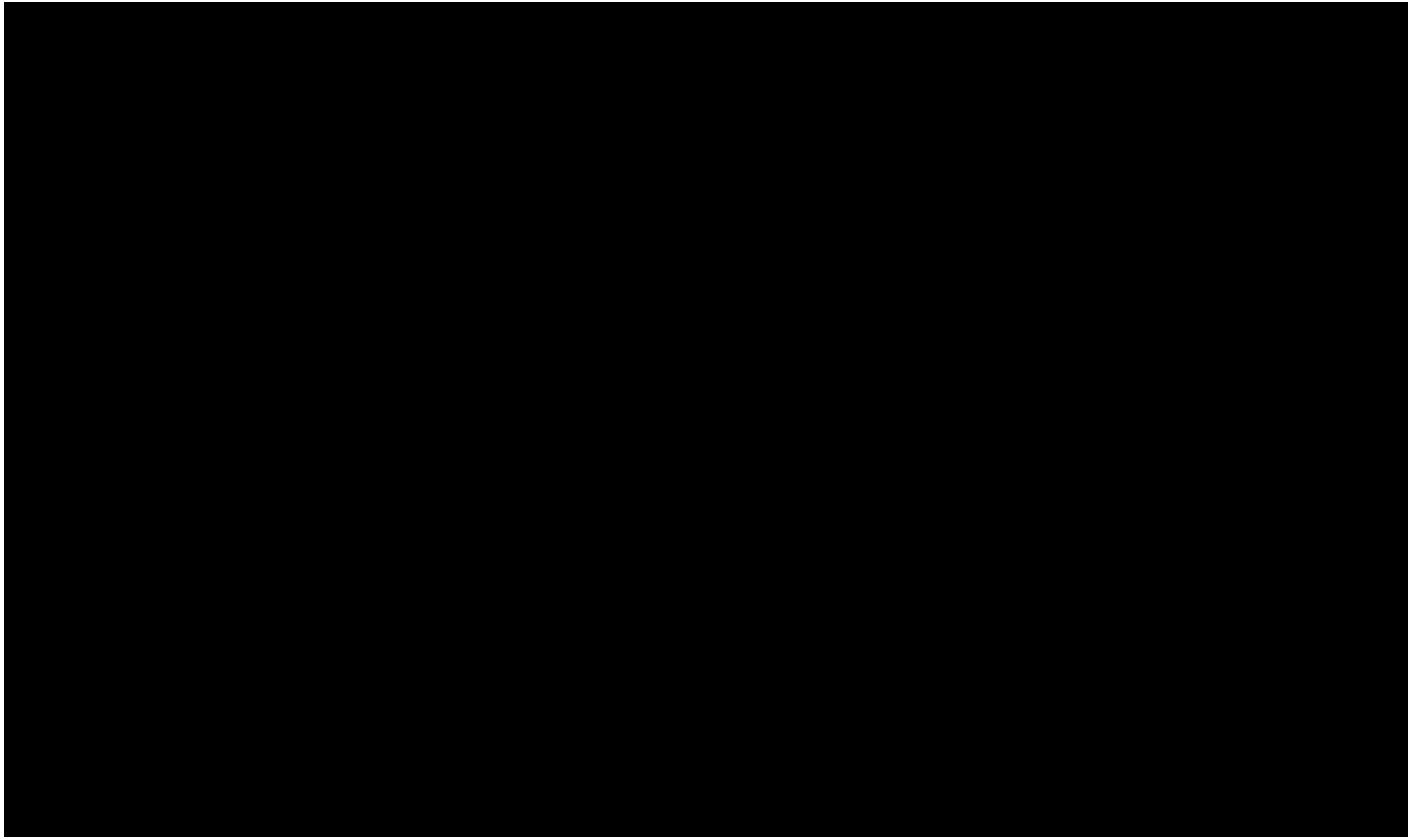
5.3 Picture of key activities

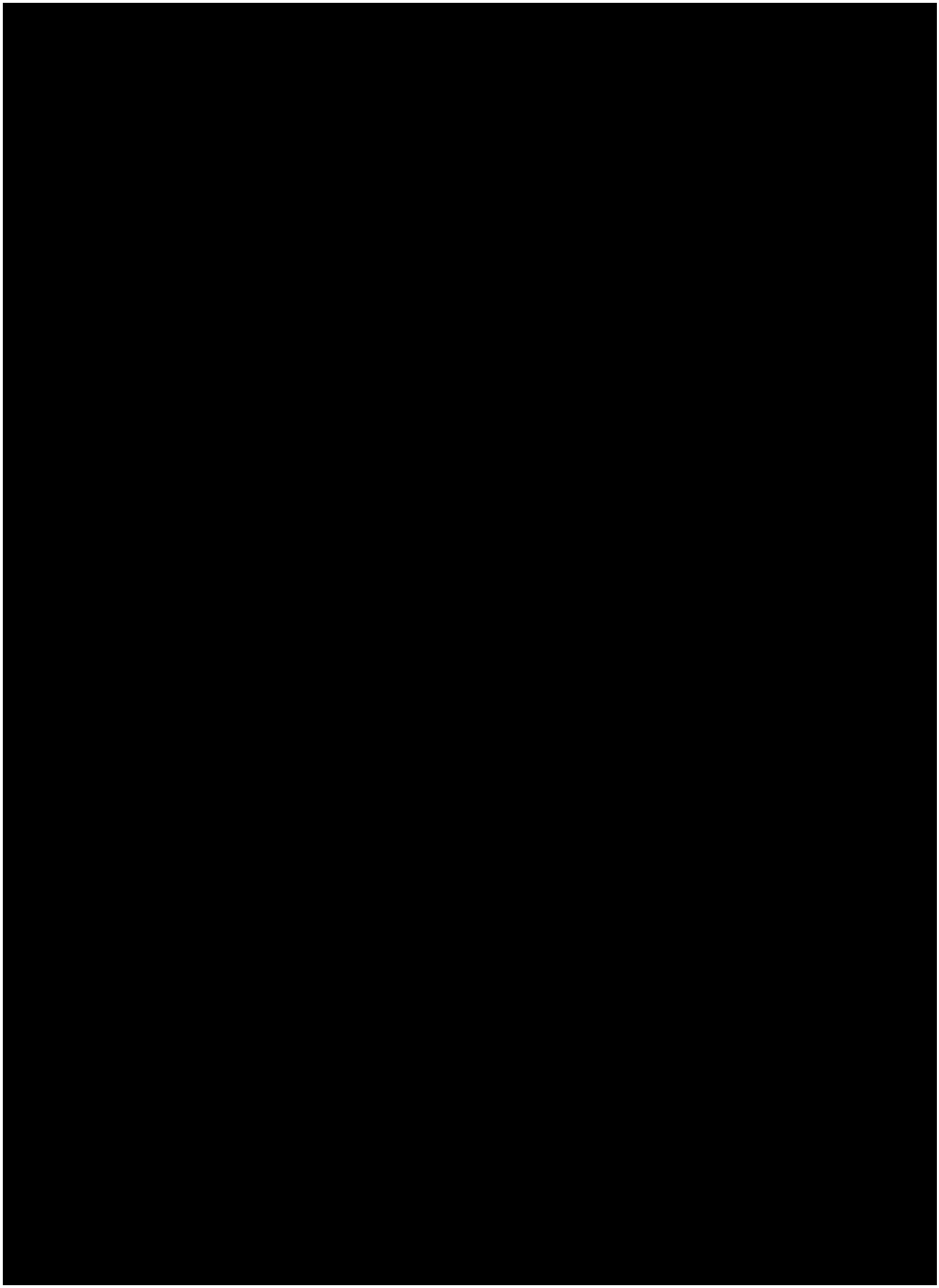
The following section provides general pictures on the core components of the activities subject to this report. Additional informational information is provided in Appendix A.

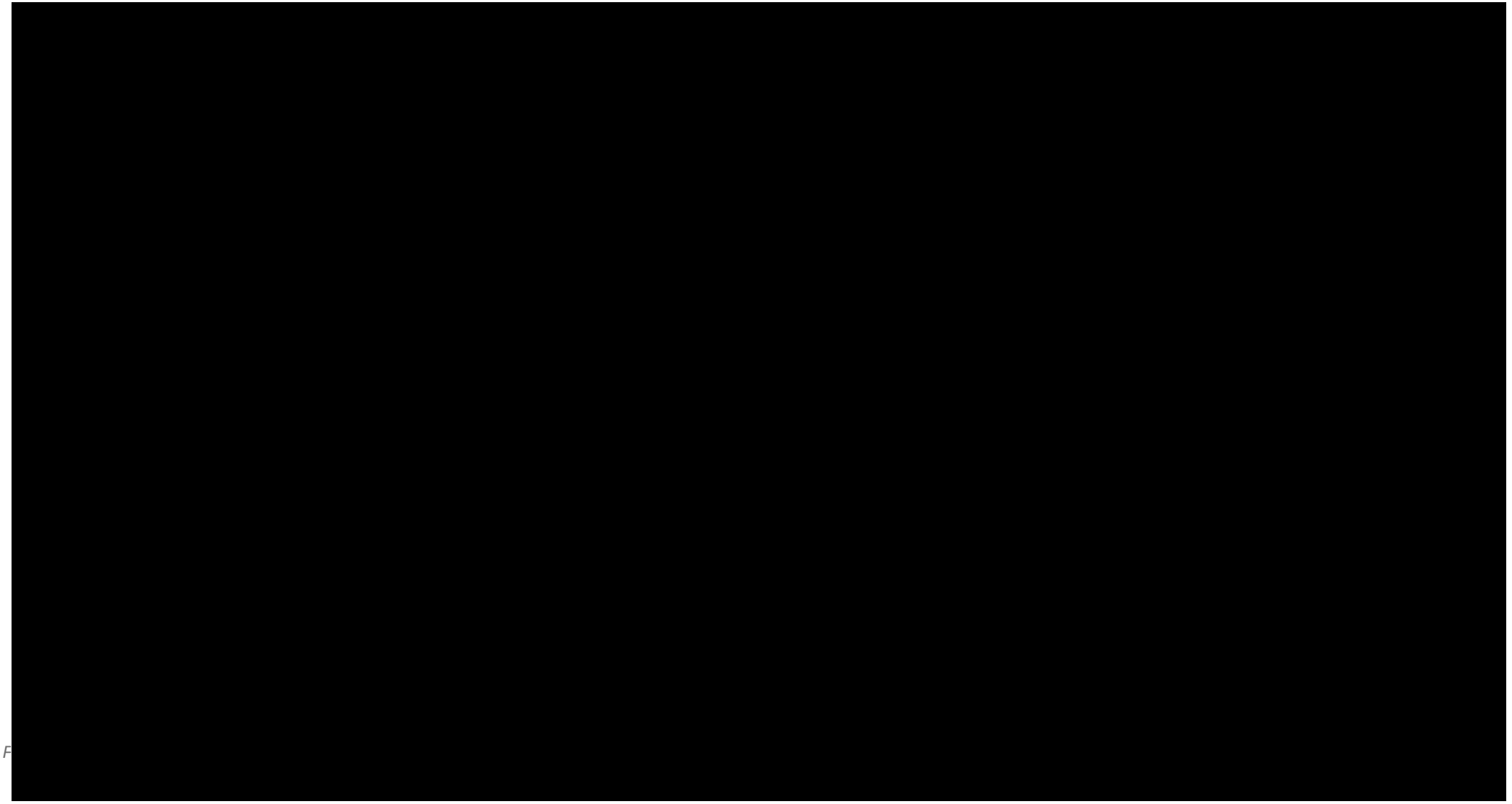
[redacted]

[redacted]









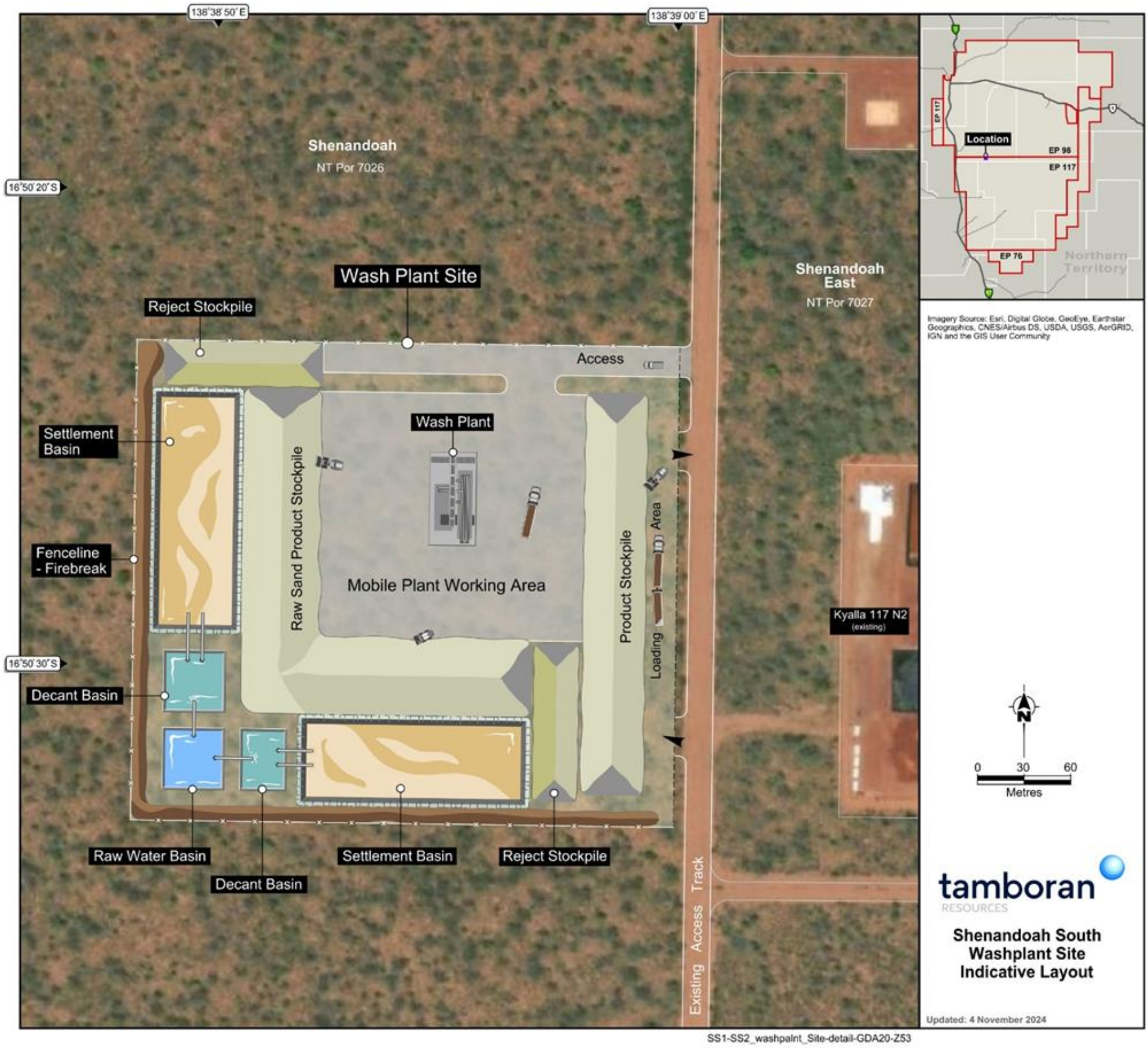


Figure 13 Indicative site layout of the Shenandoah sand wash plant on EP 117

6 2025 NLC Requests

To support the proposed E&A strategy and work program, Tamboran B2 seeks NLC support for a range of NTH engagement as per the following:

- On country meeting with Native Title holders covering CY 2025 work program, approvals and sacred site clearance scope (**March**).
- Organising engagement and input provision from NTHs on the planning for SIA consultation activities, including Environmental related activities, with Aboriginal stakeholders and the broader Elliott community **(March/April)**
- Sacred site clearance requests covering the proposed new clearance areas **(April)**
- Ecology and heritage scout for new EMP locations (**March/ April)**
- [redacted]
- Collaboration in the SIA consultation activities particularly the activities related to the Environmental component required for key approvals (**June/August**).

APPENDIX A Detailed description of regulated activity

The following table provides details of the proposed exploration activities proposed **within the requested clearance areas**. These descriptions are indicative and general in nature, minor departures from such descriptions are likely to occur and such departures are covered as much as practicably possible by the content of this activity description.

Table 3 Description of proposed regulated activity details within the clearance areas

Activity description	Disturbance area	Typical personnel numbers	Timing	Duration	Activity example pictures
Site selection and scouting The first step of the process when undertaking exploration activities is site selection. Proposed E&A sites are chosen based upon their assessed chances of exploration success and are ranked as either a priority site (highly prospective) or a contingent site (if a priority site is unavailable due to a constraint). The selection of a site from a subsurface point of view, is often based upon existing exploration information (or lack of), such as seismic data, inferred resource depth (within the oil generating window for example) and previous drilling results. It also includes an assessment of geohazards, such as known major faults or structural features. Once a location has been proposed (including for other infrastructure such as pipelines, access tracks, gravel pits etc.), each site is assessed for suitability using a multi-criteria analysis. This analysis covers several disciplines, including cultural, environmental, pastoralist, regulatory and constructability requirements. Once proposed sites have been identified, each site is assessed using a desktop screening process covering the following: • Cultural constraints: sites are chosen to avoid known sacred sites and other restricted areas identified through previous NLC field clearance reports, AAPA certificates or heritage mapping. • Environmental constraints: proximity to sensitive ecological features such as water courses, flood heights, high conservation areas, threatened species and habitats and sensitive soil units • Leaseholder constraints: proximity to existing pastoral infrastructure and activities, such as cattle yards, fence lines, access tracks, water supply networks, water bores, homesteads and laneways. At this stage, leaseholders are engaged to ensure early input into the location of potential exploration sites. Activities also considers timing constraints such as mustering. • Regulatory constraints: proximity to water bores, well pad spacing, landscape amenity and proximity to roads and communities. The number of sites are re-ranked and potentially eliminated based upon their constraints assessment. A revised list of sites will then undergo field “scouting”, to further assess their suitability. Scouting involves assessment by several different specialists with a “scouting party”. Scouting activities include: • NLC field clearance: Tamboran B2 submits its proposed work program to NLC annually and then initiates field clearance surveys. Traditional owners are then engaged by the NLC and inspect all sites/areas to determine the potential for sacred sites or other areas of cultural significance in the vicinity of the activity. A final report is submitted to AAPA by NLC to generate AAPA certificates which outline the activity constraints and no -go areas. • Environmental: areas are inspected by ecologists to ground truth for areas of potential high conservation, evidence of threatened flora and fauna, overland flow paths, drainage lines, soil erosion susceptibility, areas of high habitat value (such	N/A	2-6	During activity planning.	<4 weeks	

Activity description	Disturbance area	Typical personnel numbers	Timing	Duration	Activity example pictures
as large hollow bearing trees) buffer zones (from high conservation value areas) and future rehabilitation constraints. The infrastructure (including access tracks, well pads and associated infrastructure) is orientated to minimise clearing (such as picking open woodland rather than dense Bullwaddy or Lancewood communities) and impacts on overland flow. A land condition assessment is completed for the proposed sites. • Archaeological scouting: detailed scouting is completed by a qualified archaeologist to identify any artefacts (such as spear tips, axes, stone workings etc.), scar trees or potential heritage features at the proposed sites. This is undertaken in addition to the NLC Traditional Owner clearances. • Constructability assessment: Constructability constraints are identified including geotechnical assessments, cut/fill requirements, soil types, rig operational requirements (orientation) and access construction constraints (such as access track design, water course crossings etc.). This often includes preliminary pegging of the proposed location Once the location of infrastructure has been proposed and finalised, the final location is pegged and surveyed. The engineering designs are updated and issued for construction.					
Access track construction Access tracks will be constructed to connect the proposed infrastructure to existing roads. Tracks will generally be constructed to at least NT Standard Drawings (CS3003) for Typical Cross Section for Rural Environment – Pastoral Access Road 2. Where possible access tracks will align with the existing seismic lines or other clearances/disturbances to minimise vegetation clearing. Access tracks will typically be less than 14m wide, with sections up to 20m wide where truck turn outs, erosion and sediment control and cut out drains are required. Access tracks will have various levels depending on landform and soil types. Each road will be constructed with an appropriate fall to prevent water pooling on the road surface. Drainage channels and cut outs are constructed to manage stormwater and discharge away from the road surface. Culverts, drains and bed level watercourse crossing are used to ensure overland flow is not impeded. Construction of erosion and sediment controls will be constructed in accordance with a Certified Practitioner in Erosion and Sediment Control (CPESC) accredited erosion and sediment control plan. Gravel will be used to form up access tracks in places to enable all weather access. Where access tracks intersect with main roads (such as the Stuart and Carpentaria Highway), intersections will be upgraded to accommodate turning truck traffic in accordance with the Department of Infrastructure, Planning and Logistic (DIPL) design requirements. Access tracks are anticipated to be the first piece of infrastructure constructed to enable preliminary activities, such as the construction of groundwater monitoring bores.	<25ha (dependent on access track length)	<12 people	First activity required to enable civil construction and drilling.	Access tracks are likely to be continually maintained and surfaced throughout the life of the activity	

Activity description	Disturbance area	Typical personnel numbers	Timing	Duration	Activity example pictures

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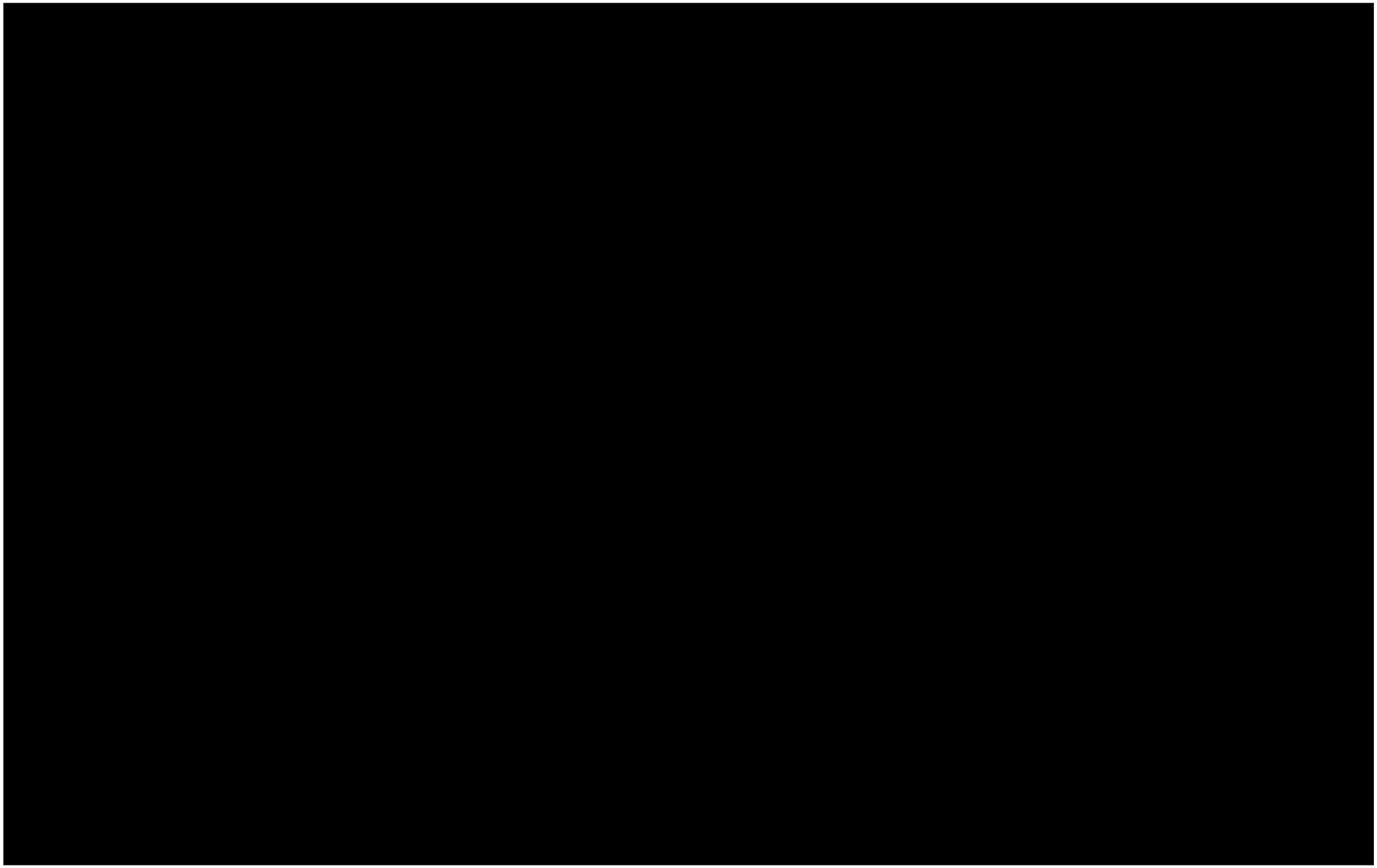
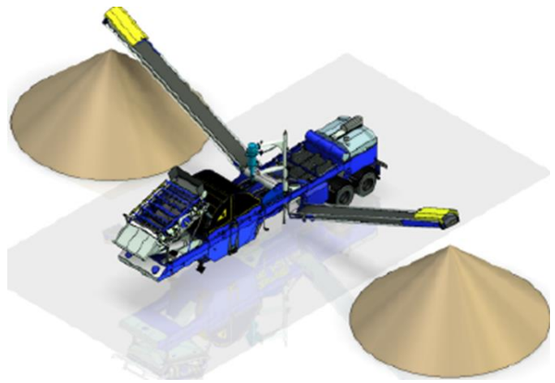


2025 Work Program Update and Clearance Request

Activity description	Disturbance area	Typical personnel numbers	Timing	Duration	Activity example pictures
Sand wash plant site establishment and operation An ~11ha site to the west of the Kyalla 117 N2 well pad has been identified as the preferred location for the establishment of a small mobile/modular sand wash plant and associated infrastructure to process local sand to enable its use in E&A well completions. Processing will initially commence on a trial basis which, if successful, will transition to ongoing processing to produce the required volumes of sand for future E&A drilling programs. The wash plant site will be cleared of vegetation, stripped of topsoil to approximately 100mm depth, and fenced. Topsoil will be stored around the edge of the wash plant site pad to form a bund, which will be used as both an erosion and sediment control measure and to prevent overland flow access to the site. Erosion and sediment controls will be constructed around the disturbed areas (such as rock check drains, diversion drains and bank stabilisation using fallen debris). Construction at the site will involve surface preparation of the wash plant and stockpile areas (grubbing, grading, sheeting and compaction as required), excavation of water management infrastructure (including raw water ponds, settlement basins, decant water ponds, above-ground water pipelines, etc), installation minor support facilities (demountable site office, ablutions block, fuel tank, etc) and construction of access tracks. The mobile/modular wash plant (including screens, conveyors, etc) will be mobilised to site and installed. Existing infrastructure (e.g. access tracks, camps, water bores, etc) will be utilised to support the sand washing operations where possible. Suitable raw sand to feed the proposed sand wash plant may be sourced from a variety of sources, including raw sand generated during Tamboran's construction activities within EPs 76, 98 and 117; and/or raw sand sourced locally from extractive mineral titles held by entities associated with Tamboran or third parties. Raw sand will be stockpiled at the wash plant site ready for washing. Raw water supply for the wash plant will be sourced under existing water extraction licences using existing water bores where possible, although an additional 2 water bores may be constructed within the wash plant site if requried. The wash plant site has been designed to maximise the recycling of water, with a recycling rate of >80% targeted. During operation, sand will be removed from the raw sand stockpiles by loader and fed into the wash plant via a hopper and conveyor. The washplant will consist of a series of stages which will likely include sizing screens, spirals, hydrocyclones and dewatering screens. The aim of the washing process is to remove oversize (coarse sand) and undersize (very fine sand, silt and clay) material from the raw sand to enable the product sand to meet the required particle size specifications. Depending on the raw sand source, it would be expected that between 50-70% of the raw sand is within the required specification and will be retained, with the remaining undersize and oversize material separated during the washing process and reporting to a 'reject' stream. The oversize reject sand will report to a separate stockpile for future use in rehabilitation or another use, while the fine reject material will report to the settlement basin along with the process water, where the fine sand will settle and the water will be recovered for reuse. Washed sand will be stored in a covered product sand stockpile ready to be loaded out for use when required. Approximately 40,000 of product sand will be required for the 2025 frac program, which will require processing of approximately 60,000t of raw sand. Future sand requirements will depend on future E&A programs.	11ha	3-4 people	Mid-2025	Initial 10-week trial period, potentially ongoing for duration of activity	 

Activity description	Disturbance area	Typical personnel numbers	Timing	Duration	Activity example pictures
The sand wash plant site may be operated on a 'campaign' basis (where a set volume of sand is washed over a nominal period of time) or on an ongoing basis. Where the wash plant is not required for a period of time it may be demobilised from the site and remobilised at a future date. Once the wash plant site is no longer required, the site will be reshaped as required. Topsoils will be spread and fallen vegetation returned to aid site stability. The area will be remain fenced (if required) to allow vegetation regrowth. Seed may be added to the site to support natural regeneration if required. Settlement ponds and other water storages may be converted to pastoral watering points where appropriate and approved by pastoralists.					

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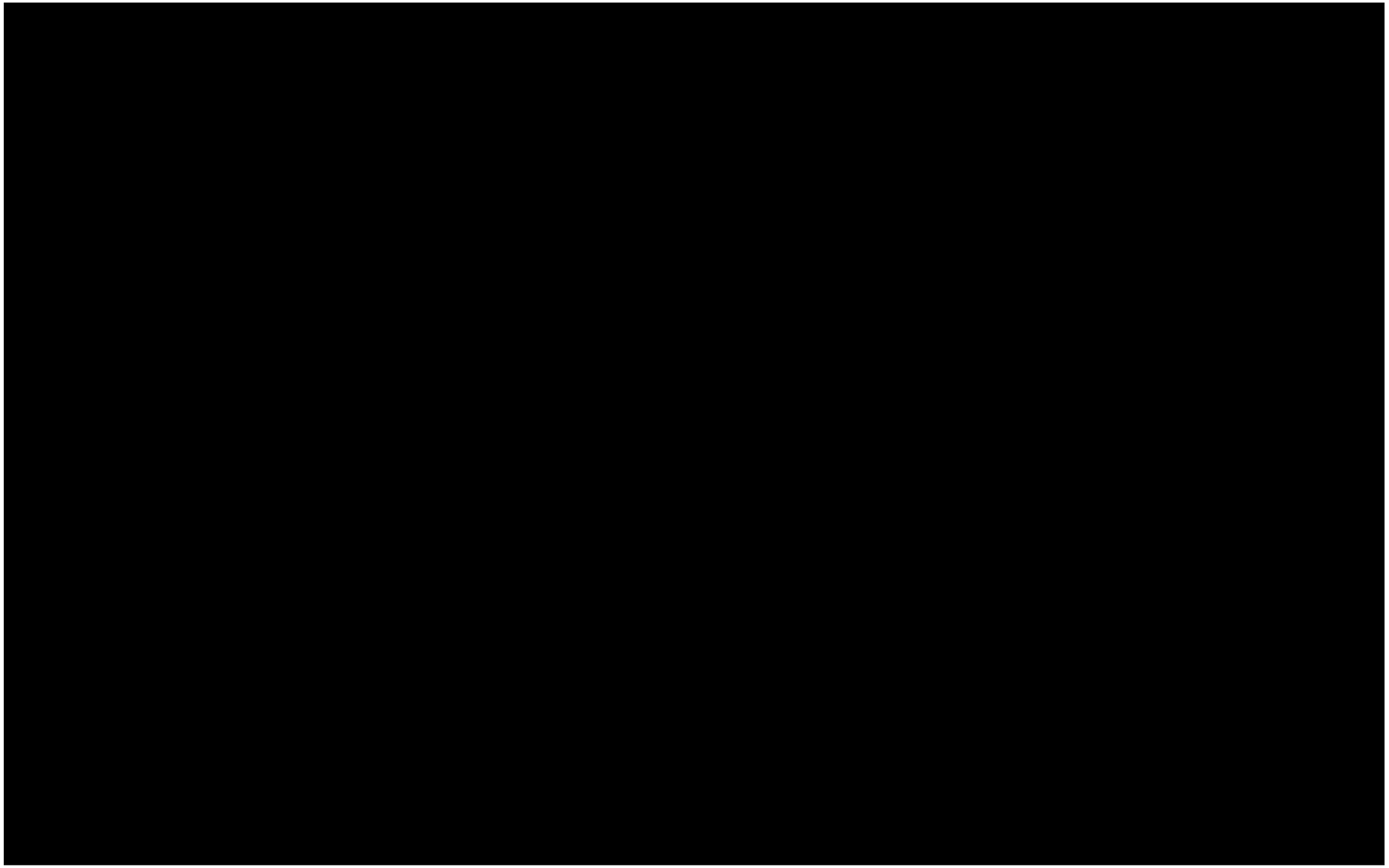
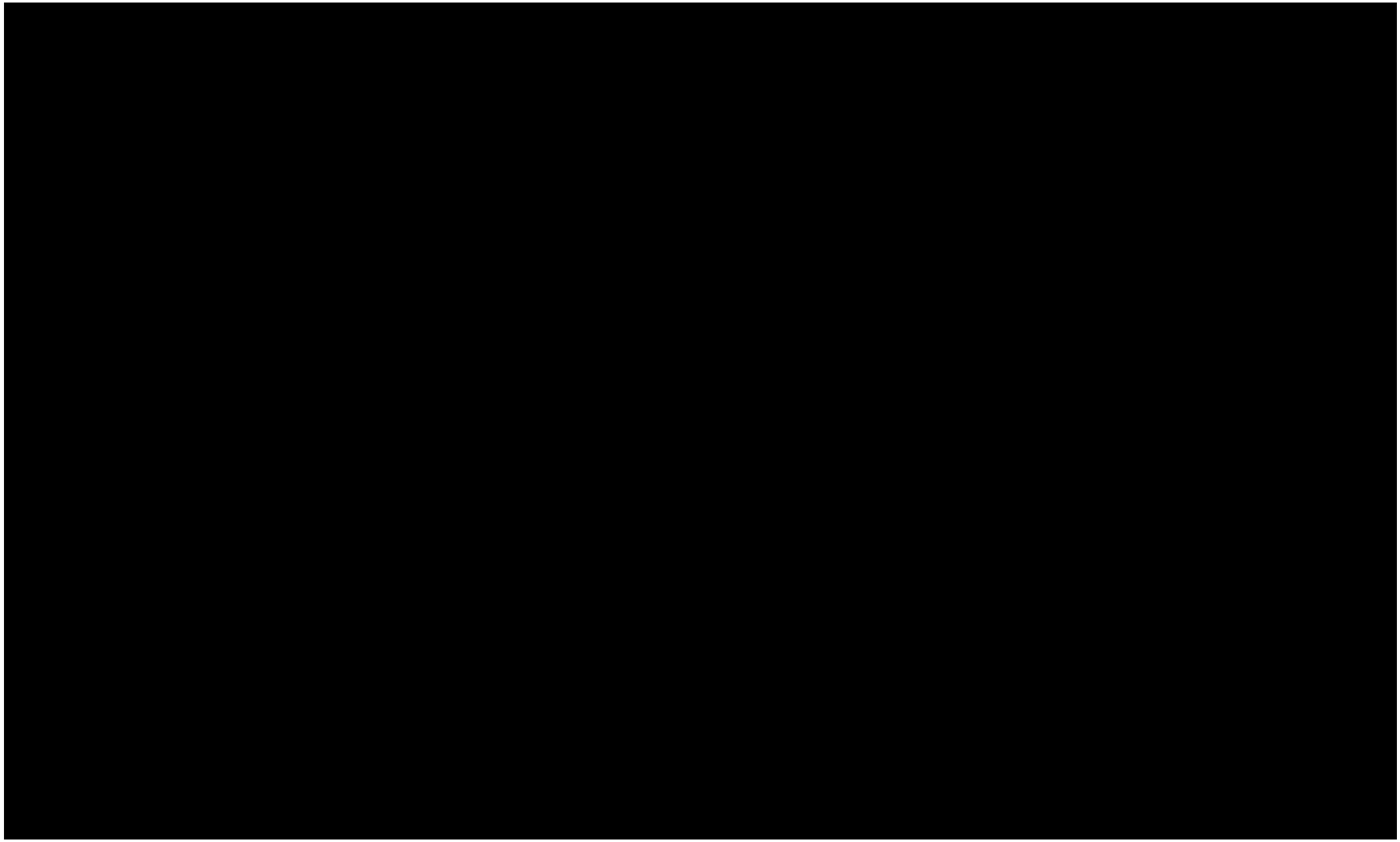


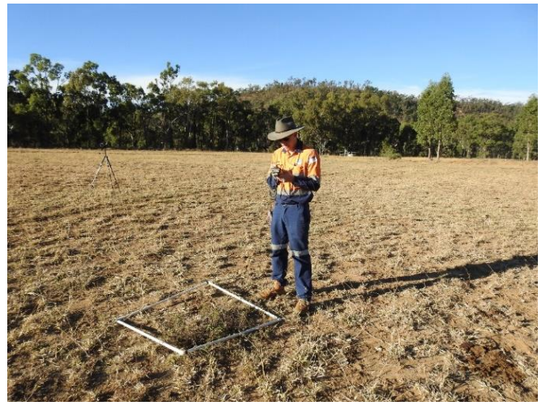
2025 Work Program Update and Clearance Request

Activity description	Disturbance area	Typical personnel numbers	Timing	Duration	Activity example pictures
Site monitoring and inspections consisting of the following: • **Groundwater monitoring:** Groundwater monitoring bores are required to be installed on the well pad before the commencement of hydraulic fracture stimulation activities. Groundwater monitoring is undertaken at the site commencing 6 months before stimulation and then quarterly for 3 years after. Groundwater monitoring involves purging a monitoring bore of water, measuring field parameters (level, electrical conductivity) and collecting laboratory samples and • **Site and exploration well monitoring-** an operator or contractor will access the site to perform checks on the exploration well and stability of the site. Checks include pressure readings and visual checks of valve integrity. In some cases, a helicopter may be utilised to complete the inspections. Surveys are completed fortnightly. • **Weed inspections-** Access to the site by several contractors/ Tamboran personnel in light vehicles to identify weeds. In some cases, a helicopter may be utilised. Contractors may perform spot sprays with a NTG recommended weed treatment. Surveys are completed pre and post wet season. • **Erosion and sediment control inspections-** Access to the site by several contractors/ Tamboran personnel in light vehicles to identify erosion or stability issues. Inspection will be used to schedule maintenance to repair any defects identified. In some cases, a helicopter may be utilised to complete the inspections. Surveys are completed pre and post wet season. • **Gas leak detection surveys-** Access to the site by 2- 3 contractors or Tamboran personnel in light vehicles to perform mandatory gas testing using handheld gas meters. Surveys are completed every 6 months. • **Build up pressure monitoring-** Post stimulation and well testing, the exploration well may be shut in with pressure monitoring equipment installed to monitor build up pressure. This requires the installation of a solar panel and telemetry equipment, with monthly equipment inspections (typically)	N/A	<2-6 people	Fortnightly/ 6 monthly (depending on activity)	1 day per inspection	



2025 Work Program Update and Clearance Request

Activity description	Disturbance area	Typical personnel numbers	Timing	Duration	Activity example pictures
Groundwater extraction: Groundwater extractions from the purpose built groundwater monitoring onsite or another approved extraction bore (which may include trucking water from adjacent properties) will be completed periodically to support exploration activities. All groundwater take will likely be from the Gum Ridge Formation and will be licenced under Tamboran's existing Water Extraction Licence (WEL) GRF 10285. A new WEL may be submitted to increase the water take and/or covering take an alternative formation where present. It is anticipated that groundwater extraction volumes to support this program will be in the order of 250-750ML per year (conservatively) , primarily used for civil construction, drilling and to stimulate the E&A wells. Once drilling and stimulation has ceased, minimal ongoing water extraction from the site will be required. Where possible, recycled flowback will be utilised within stimulation to reduce raw water usage.	N/A	N/A	Ongoing to support exploration activities.	During exploration activities	
Traffic management Access to the site will be via a combination of existing and new access tracks, located approximately 15-20km South of Dunmarra on the Stuart Highway and/ or from the Carpentaria highway. Minor traffic disruptions may occur during the construction of the access track intersection with the Stuart highway. During this period, a traffic management plan will be implemented, with traffic control utilised in accordance with DIPL requirements. Peak traffic volumes are anticipated to be associated with the drilling rig mobilisation and demobilisation. Traffic volumes may reach up to 44 vehicles per day spread over a 4 week period. Transportation of sand and other material is likely to extend over 3-4 months, with 2-3 trucks per day. During operations (drilling, stimulation (including proppant transport) or well testing), vehicle movements to the site are anticipated to be less than 10-12 movements per day. This period is likely to extend typically 60 days per exploration well, 45 days per stimulation and during the duration of a well test/appraisal gas sale (30-365+ days). Once the well is suspended or decommissioned, vehicle movements will reduce to 1 vehicle per fortnight or 1 vehicle per 6 months respectively.	N/A	N/A	During operations	During operations	

Activity description	Disturbance area	Typical personnel numbers	Timing	Duration	Activity example pictures
Site rehabilitation Within 6 months of the E&A wells being plugged and decommissioned, a site will be rehabilitated. This involves: a) the removal of all surface facilities (well heads, fencing, water bores, tanks etc.) b) deep ripping of compacted surfaces c) recontouring landforms d) respreading of topsoil from the topsoil stockpiles, e) re-seeding (if required;) and f) ongoing monitoring and maintenance of the rehabilitation.	N/A		Within 6 months of the plugging and abandonment of all E&A wells	<14 days, with ongoing monitoring and maintenance	 

Appendix B Summary of Environmental outcomes, impacts, risk and controls

An overview of the potential environmental outcomes, potential impacts and risks associated with the proposed exploration activities within this clearance request are summarised in Table 3. This information will also be provided in the EMP covering the proposed regulated activity, which will be submitted to the Department of Environment, Parks and Water Security (DEPWS) for formal assessment and approval.

An environmental outcome means an outcome that will be achieved if the environmental impacts and environmental risks of a regulated activity are reduced to a level that is as ALARP, and acceptable.

Environmental impacts are defined as any adverse change, or potential adverse change, to the environment resulting wholly or partly from a regulated activity.

Environmental risks are defined as the chance of something happening that will have an environmental impact, measured in terms of environmental consequences and the likelihood of those consequences happening.

Both the consequence and likelihood of a potential impact can be reduced through the adoption of controls, which must be applied to reduce a risk down to an ALARP and acceptable level.

Table 4 Environmental outcomes, impacts, risk and controls

Aspect	Environmental outcomes	Environmental impacts	Potential risk	Controls
Groundwater use and quality	• To manage exploration activities to prevent unsustainable depletion of groundwater resources • Preserve groundwater quality to protect environmental and pastoral use	• No adverse changes to groundwater quantity is anticipated to be associated with exploration activities. • Impacts to aquifers levels anticipated to be negligible, with rapid recharge observed from other Gum Ridge Formation bores utilised within the Basin. • No material changes to groundwater quality anticipated from exploration activities. • No impact to Groundwater Dependent Ecosystem's (GDE) , stygofauna or Sacred sites from exploration activities (extraction and well construction) • No reduction in pastoral productivity through reduced groundwater volumes	• Low risk of groundwater contamination from drilling fluids during construction of the conductor/ surface casing in the Cambrian Limestone Aquifers due to the selection of low toxicity drilling fluids • Low risk of cross flow of deep formations (such as the target shales) to shallow aquifers through inappropriate well barrier design and construction due to the presence of the Code of Practice controls and verification processes. • Low risk of crossflow through fracture growth into aquifer from stimulation activities allowing the migration of fluid and gas due to the controls within the Code of Practice and underlying separation distance between the target formation and Cambrian Limestone aquifers. • Low risk of stimulation activity inducing seismic activity that enables cross formational flow between shallow aquifers due to seismic stability of region and lack major faults or fracture zones. • Low risk of stimulated zones intersecting offset wells (including the adjacent horizontal wells) or intersecting an existing geohazard due to seismic control, pressure monitoring during stimulation and lack of older petroleum wells in close proximity. • Low risk of crossflow/well integrity caused by the deviation of an E&A well into the adjacent well during drilling due to downhole GPS tracking tools and proximity alarms • Low risk of leakage of either flowback, produced water, or hydrocarbons (liquid and gaseous) from suspended or abandoned wells to groundwater due to well design and integrity management. • Low risk of leaks from gathering lines, with gathering lines constructed as per Australian Standard, leak detection in place to identify pipeline failures and routine inspections completed. • Low risk of surface contamination from storage and disposal of drilling fluids, additives, muds and cuttings on-site due to low toxicity of drilling muds and disposal risk assessment process. • Low risk of groundwater contamination from surface spills from storage, handling and transportation of flowback water due to the storage and spill management requirements outlined int eh Code of Practice. • Low risk of groundwater contamination from the storage, handling and transportation of chemicals, fuels and wastes due to the mandatory code of practice controls (such as mandated use of secondary containment) • Low risk of groundwater contamination from overtopping of drilling sumps and flowback tanks (including during wet season) due to level alarms and use of enclosed tanks. • Low risk of groundwater contamination from a	• All petroleum wells are to be designed, constructed, operated and decommissioned in accordance with the mandatory controls within the Code of Practice. The Code of Practice outlines specific controls measures designed to protect underlying groundwater resources including: ○ Exploration wells designed with multiple cement and steel casing barriers to protect aquifers ○ Well cement and casing is designed to address the underlying formation characteristics in terms of corrosion risk, heat, temperature and pressure risks from each formation. ○ Drilling fluids and muds must have a low residual toxicity ○ Groundwater monitoring must be completed before and after stimulation to detect contamination ○ Well integrity confirmation to prove barrier performance aquifer isolation (casing pressure tests, formation leak off tests, cement bond logs etc.). ○ Separation between stimulated shale resources and aquifers must be sufficient to ensure the risk of fracture growth is ALARP ○ Pressure monitoring completed to ensure maximum allowable operating pressure is not exceeded during stimulation. ○ Ongoing well integrity monitoring and maintenance throughout the life of each well to ensure aquifers are protected ○ Maintenance completed on wells to ensure well barriers are working appropriately. ○ All wells are to be decommissioned in accordance with the Code of Practice, with cement plugs utilised to separate aquifer units. • All surface storages of wastewater and chemicals to have secondary containment to prevent spills to the ground • An emergency response plan must be implemented outlining how spills and emergencies will be responded to. • Drilling fluids and wastes to be stored within a lined sump • Gathering lines and pipelines constructed as per Australian standard, leak detection in place to identify pipeline failures and routine inspections completed. • Flowback wastewater must be stored in double lined tanks with leak detection and level monitoring • Double lined enclosed wastewater tanks with leak detection and level monitoring utilised to store all wastewater, with open treatment tanks used to reduce wastewater volumes • All open treatment tanks are to be operated with a 1:1000 Annual re-occurrence interval (ARI) wet season or dry season (whichever is applicable) freeboard • All flowback wastewater to be transferred to enclosed tanks within 8 hours of a significant rainfall event occurring (such as a cyclone) • Groundwater monitoring from monitoring bores installed at the site must be completed prior to and after stimulation to detect any contamination. • All water take covered by an existing Water Extraction Licence (WEL) GRF 10285 • New extraction bores must model potential impact on adjacent pastoral bores prior to being added to WEL. • All water take to be metered and reported quarterly to the regulator

Aspect	Environmental outcomes	Environmental impacts	Potential risk	Controls
			failure of flowback storage tank due to the design standards of the tank (cyclone rated steel tank structures) and routine integrity inspections • Low risk from over extraction of groundwater for civils, drilling and stimulation activities due to limited nature of take (one off), yield of the Cambrian Limestone Aquifers and available allocation volumes (as assessed in the WEL).	• No pastoralists groundwater bores within 1 km of each proposed site • No water related sacred sites within 10kms of the site- noting the CLA and surface water bodies are not connected. • Flowback to be preferentially used in stimulation fluid to reduce raw water usage.
Soils	• Avoid, minimise and control soil erosion and discharge of sediment or soil into waterways or established drainage systems • Minimise disturbance of soil, vegetation and drainage during site activities • Prevent the contamination of soil to maintain the viability of soil resources • Minimise residual impacts to pastoralist usage of exploration areas	• Clearing of vegetation to support exploration activities. • Soil compaction from access tracks, leases, appraisal gas infrastructure and seismic lines. • Increased sedimentation transportation from disturbed areas • Loss of productivity of disturbed areas until final rehabilitation has been achieved • Contamination of soils from disposal of dill cuttings.	• Medium risk of soil erosion from cleared areas (access tracks, well pads, camp pads, gravel pits and laydown areas) occurring on disturbed sites due to high intensity wet seasons. Risk is a low consequence (minor impact), possible (<50% chance of occurring) event. • Low risk reduction in land production (including pastoral and NTH use) through poor erosion and sediment control practices • Low risk of spills/leaks from the on-site storing and handling of fuels. Condensate, hydrocarbons, drilling additives, stimulation additives, flowback fluid, solid wastes, storage and transportation of wastes causing soil contamination. • Low risk of drill sump and flowback tank overtopping due to mandatory freeboard and monitoring controls • Low risk of chemical and waste transportation accident causing soil contamination due to licenced chemical/ waste provider use, spill response and emergency response requirements. • Low risk of contamination from on-site disposal of drill muds and cuttings with site specific assessment completed to ensure disposal is environmentally acceptable • SBM fluids are biodegradable and low toxicity. Cuttings drying will reduce oil on cuttings to as low as possible. • Low risk of contamination from a flowback wastewater tank failure due to the structural design of the tanks, site bunding, emergency response requirements and spill management requirements. • Low risk of wastewater evaporation mist transported offsite during wastewater treatment due to wind speed/direction cut offs and routine site inspections during operations. • Low risk of greywater and sewerage disposal from camp wastewater treatment plants due to the irrigation area being appropriately sized, fenced and quality aligning with the NT Department of Health requirements. • Low risk of reduction in land production through poor infrastructure placement as infrastructure is preferentially located in existing disturbed area, with no sensitive soil types present in the immediate vicinity. • Low risk of reduction in land productivity from poor rehabilitation due to mandatory rehabilitation requirements and security bond requirements	• Site selected to avoid sensitive soil units and slopes which may increase erosion hazard. • All land clearing (including during the establishment of seismic lines) to align with the requirements of the code of Practice and NT Land Clearing Guidelines (2019) • Erosion and sediment control practices to be utilised at all disturbed sites to minimise erosion. • Sites (including gravel pits) maintained to minimise sediment releases, with erosion and sediment control plan in place • Pre and post wet season monitoring completed on all disturbed areas (including seismic lines) to identify and repair erosion • Construction within the wet season to be avoided to reduce the erosion risk. • Vegetation clearing watercourses to be avoided as far as reasonably practicable (i.e. only when a new access is required to be constructed) • During seismic surveys, vegetation clearing within open woodlands to be minimal • All chemicals and fuels to be stored with secondary containment as per code of Practice. • All chemicals to be risk assessed to ensure they do not represent an unacceptable risk to people, the environment and community, with all spills cleaned up as soon as practicable. • During flowback wastewater storage, the site is to be fully bunded to contain the volume of an entire wastewater tank if a structural failure occurred • Flowback wastewater must be stored in double lined tanks with leak detection and level monitoring • Double lined enclosed flowback wastewater tanks with leak detection and level monitoring utilised to store all wastewater, with open treatment tanks used to reduce wastewater volumes • All open treatment tanks and sumps are to be operated with a 1:1000Annual re-occurrence interval (ARI) wet season or dry season (whichever is applicable) freeboard • All flowback wastewater to be transferred to enclosed tanks within 8 hours of a significant rainfall event occurring (such as a cyclone) • Stormwater to be retained onsite during wastewater storage and tested prior to release • Stormwater falling within the SPGCF compressor area shall be treated to remove oil, prior to release to soaker trenches. • All spills of chemicals and wastewater to be cleaned up upon detection. • Irrigation of greywater and treated effluent to be undertaken in accordance with DoH requirements • Disposal of drilling muds, cuttings and mineral waste to be undertaken in accordance with Code of Practice, with onsite disposal only permitted where the potential harm to the environment can be demonstrated as ALARP and

Aspect	Environmental outcomes	Environmental impacts	Potential risk	Controls
			• Low risk of pipeline subsidence creating erosion	acceptable. • SBM to be recycled with cuttings dryers used to minimise oil on cuttings. • Site to be rehabilitated back to pre-existing/ agreed state with pastoralist input. • Pipeline monitoring and repair work to minimise/ respond to pipeline subsidence
Emissions (dust, greenhouse and combustion emissions)	• Avoid environmental nuisance at sensitive receptors • Minimise impacts to pastoralists and surrounding ecological communities from dust • Minimise greenhouse gas emissions	• Dust on vegetation in the immediate vicinity of activities reduces plant palatability • Impacts of dust nuisance to birds and fauna in the immediate vicinity of activities, specifically access tracks and seismic lines • Emissions from the combustion of diesel. • Emissions from gas fired power/ compressor generation. • Fugitive emissions and VOC's • Generation of Greenhouse gasses	• Low risk of dust impacts generated during Civil activities, drilling operations, well testing due to use of dust suppression and routine maintenance of access tracks and infrastructure • Low risk of reduction in regional air quality resulting from emissions from the combustion of diesel due to the limit nature of the activities, selection of low pollution equipment (such as low NOx engines) and lack of regional pollutant sources. • Low risk of reduction in regional air quality from gas and condensate flaring due to the combustion efficiency of the flare and operating procedures. Emissions from these facilities will be modelled to ensure compliance with NEPM guidelines. • Low risk of air emissions from chemical releases during drilling and stimulation activities impacting livestock, fauna and people due to chemical handling procedures limiting emissions during mixing. • Medium risk of bushfire from accidental ignition by site activities (civil works, drilling, flaring, grinding) or personnel. The consequence of a fire is considered serious, with the likelihood Highly unlikely. • Low risk of uncontrolled release of gas impacting a receptor during drilling, stimulation, barrier failure, operator error or vehicle collision due to the well design, blow out prevention, well integrity and lack of sensitive receptors preventing impacts. • Low risk of leak of gas from wells due to the well design, routine leak detection and repair and separation distance from receptors, • Low risk of greenhouse gas emission impacts from appraisal gas sale/ well testing through avoidance of venting and prioritisation of appraisal gas sale over flaring.	• Site located away from sensitive receptors, such as homesteads • Dust suppression to be used on access tracks, well pads and gravel pits to minimise dust emissions where practicable • Outside of high intensity activities (such a s civil construction, drilling and stimulation) Dust levels consistent with standard pastoral activities (such as mustering/truck load outs) on the property • Venting of raw gas is tightly controlled under the Code of Practice, with no material volume of gas to be vented • A reduced emission completion (flare) to be utilised to combust all hydrocarbons • Flares to be compliant with USEPA design standards, including 98% flare efficiency • Stimulation chemical mixing procedures deployed (such as enclosed hoppers) that minimises dust emissions • Firebreaks to be maintained around well and camp pads to minimise bushfire risk • Flaring exclusion zones to be maintained around flare • No flaring during total fire bans • Slashing, grinding and other higher risk fire activities to be undertaken with appropriate controls to mitigate he risk of bushfire (such as buffer zones, use of fir trailers, fire breaks etc.) • During seismic surveys, no vegetation is to be mulched and bushfire management protocols implemented. • Vehicles to be equipped with fire extinguishers • 6 monthly gas leak detection on all exploration wells, equipment and compressors, with annual inspections on pipelines • Gas is lean, with very low levels of higher order hydrocarbons, BTEX, Radon or other harmful contaminants- noting gas will not be vented.
Surface Water	• Avoid and minimise the potential contamination caused by the discharge of sediment or contaminated storm water to waterways or established drainage systems. • Contain any potential contaminants for treatment or disposal.	• Increased sedimentation transportation from disturbed areas (access tracks, well pads, seismic lines etc.) • Release of contaminated stormwater • Accidental release of wastewater (flowback or drilling fluids)	• Low risk of contamination from a flowback wastewater tank failure due to the structural design of the tanks, site bunding, emergency response requirements and spill management requirements. • Low risk of gathering pipeline failure and release of flowback • Low risk of drill sump and flowback tank overtopping due to mandatory freeboard and monitoring controls • Low risk of a transportation accident releasing chemical or wastewater (drilling fluid and flowback) due to the use of licenced wastewater/ chemical transportation providers, spill	• No take of surface water permitted or proposed • Well pad located away from watercourses- typically 1km or greater • Seismic activities to: o avoid vegetation clearing as much as practicable o In open woodlands, limit clearing to grasses and shrubs o Maintain viable root stock to promote rapid rehabilitation o Avoid seismic lines in water courses (unless co-located with an access track) • Site maintained to minimise sediment releases, with erosion and sediment control plan in place • Double lined enclosed wastewater tanks with leak detection and level

Aspect	Environmental outcomes	Environmental impacts	Potential risk	Controls
			management and emergency response requirements. • Low risk of spills to surface water from chemicals and fuel storage and handling activities due to use of secondary containment and separation distance to watercourses. • Low risk of stormwater releases from activities contaminating surface water due to stormwater segregation and testing procedures. • Low risk of infrastructure (including pipeline) changing surface hydrology and flow due to infrastructure design and avoidance of overland flow locations. • Low risk of changes to terrestrial ground surface levels associated with seismic activity due to the stability of the basin and geomechanical properties of the target and overlying formations. • Low risk of gathering line failure releasing flowback fluid to the environment	monitoring utilised to store all wastewater, with open treatment tanks used to reduce wastewater volumes • All wastewater tanks engineered to withstand failure, cyclone rated construction • All open treatment tanks and sumps are to be operated with a 1:1000Annual re-occurrence interval (ARI) wet season or dry season (whichever is applicable) freeboard • All wastewater to be transferred to enclosed tanks within 8 hours of a significant rainfall event occurring (such as a cyclone) • During wastewater storage, the site is to be fully bunded to contain the volume of an entire wastewater tank if a structural failure occurred • All gathering lines to be welded as per Australian Standards, hydrotested during construction to verify integrity prior to being brought into service • Gathering lines to utilise flowmeters/ pressure monitoring to identify leaks (such as flow/ pressure drops) • Gathering lines to be inspected 6 monthly to identify subsidence/ potential integrity issues. All spills of chemicals and wastewater to be cleaned up upon detection. • Irrigation of greywater and treated effluent to be undertaken in accordance with DoH requirements • No offsite releases of drilling or stimulation wastewater proposed or permitted • Stormwater retained onsite during wastewater storage, with testing completed prior to offsite release • Site selected to avoid major structural features, such as faults • Basin is seismically stable, with low seismic activity reported.
Flora and Fauna	• Minimise disturbance to flora and fauna • No disturbance to high conservation areas • Avoid the introduction of weeds • Avoid the spread of existing weeds • Minimise the loss of pastoral/ NTH traditional productivity	• Clearing of vegetation communities (such as Open Corymbia/eucalypt woodland, Bullwaddy and/ or Lancewood) to support exploration activities (well pad extension and seismic lines). • Loss of fauna and flora habitat • Loss of livestock grazing area • Loss of productivity of disturbed areas until final rehabilitation has been achieved • Impact on livestock and fauna from transport accidents • Disturbance of fauna from activity noise/ dust	• Low risk of impacts to sensitive vegetation communities from seismic activities, with high ecological areas avoided • Low risk of threatened fauna mortality during clearing, with all sites to be inspected prior to clearing to avoid fauna. • Low risk of vehicle , machinery noise, plant noise, and lighting on well pads, access tracks and gas plant causing material impacts to threatened fauna or livestock. • Low risk of contamination from a flowback wastewater tank failure due to the structural design of the tanks, site bunding, emergency response requirements and spill management requirements. • Medium risk of introduction and spread of weeds in the area due to equipment washdowns, inspection and certification requirements. Monitoring and routine treatment completed on identified outbreaks. Impact from weed introductions/spread is considered moderate, with likelihood Unlikely. • Medium risk of bushfire from accidental ignition by site activities (civil works, seismic activities, drilling, flaring, grinding) or personnel on fauna, flora and land productivity. The consequence of a fire is considered serious, with the likelihood	• Seismic activities to: ○ avoid clearing of mature trees and protected flora ○ In open woodlands, limit clearing to grasses and shrubs ○ Maintain viable root stock to promote rapid rehabilitation ○ Drainage depressions ○ No seismic lined in riparian ○ Implement fire management controls, include rapid response • No mulching of vegetation to occur which reduces risk to fire • Vegetation to be walked down and inspected for fauna prior to clearing. Where fauna are identified, work shall stop in the immediate vicinity until they leave the area. • E&A sites to be fully fenced during operations • Wastewater and spill management plans in place to prevent offsite release of wastewater • Stormwater released from wastewater areas tested to ensure no contamination • Open pits to be fully fenced to prevent livestock access • Sumps to have fauna ladders or liner material (such as coletanche) with sufficient friction to allow fauna to escape. • Gravel pits to be left open to act as watering point for livestock when not in use. High risk pits to be fenced to prevent livestock where

Aspect	Environmental outcomes	Environmental impacts	Potential risk	Controls
			Highly unlikely. • Low risk of flora, fauna and livestock being trapped and drowning in storage tanks, sumps and pits due to the design of storages and fencing. • Low risk of contaminants in water and soil pass through the food chain and bioaccumulate in fauna causing detrimental impacts to local species and communities due to chemical storage and handling practices and lack of contaminants within gas stream. Fences are utilised to restrict livestock access. • Low risk of vehicle collisions with fauna – fauna mortality results in a localised impact to listed threatened species, due to speed limit restrictions and number of vehicle movements. • Low risk of reduction in land productivity from poor rehabilitation due to mandatory rehabilitation requirements and security bond requirements Reduction in land production through bushfire. • Low risk of impacts to flora and fauna through the encouragement of feral animals and other pest species leading to competition with native species. This includes the introduction of cane toads.	appropriate (i.e. when cattle death is expected or observed) • Vehicle speed limit restricted to 60km/hr • Dust suppression used to limit dust impacts to vegetation • Site to be rehabilitated back to pre-existing/ agreed state with pastoralist • All equipment and loads to be inspected and certified weed free prior to entry • 6 monthly weed inspections to be completed with all identified weeds treated. • Weeds sprayed periodically to restrict weed numbers.
Environmental Nuisance and Amenity- including dust, noise, light, odour and vibration	• Minimise impacts to pastoralist operations • Minimise impacts to NTH traditional use of the surrounding area	• Construction of exploration infrastructure onsite changes land use from pastoral/ natural to industrial. • Light and noise nuisance to fauna and livestock in immediate vicinity of activity • Increased traffic to proposed exploration area • Noise, light, odour and dust emissions in the immediate vicinity of the well pad. • A visible hue visible from operations at night during flaring or from activity lighting. • Noise impacts from helicopter movements • Noise and vibration impacts during seismic activities.	• Low of changes in property amenity through the construction and operation of exploration infrastructure due to location of activities and separation distance from receptors • Low risk of increased vehicle accident or traffic impacts through associated with low traffic volumes anticipated and limited peak traffic periods. • Low risk of adverse impacts to fauna from traffic are not anticipated, with impact levels consistent with standard road traffic levels. • Low risk of helicopter movements causing impacts to receptors based on location of site away from homesteads • Low risk of noise, dust, light and vibration impacts associated with temporary appraisal gas facility • Low risks of pollutants extending beyond the boundary of the activity (water, air and soil) impacting on NTH foraging/use due to environmental controls utilised.	• On country meeting completed with NTH's to communicate project location and scope • Sites located away from homesteads and local communities • Flaring to be minimised to avoid light generation • Site is located away from pastoralist main access points • Maximum peak traffic during mobilisation and demobilisation is likely to be typically less than<44 vehicle movements per day for 2 weeks. • Speed limit restricted on the access tracks to <60km/hr • Dust suppression to be utilised to minimise dust emissions • Where helicopter movements are planned, the pastoralist to be engaged prior to ensure helicopter do not interfere with pastoral activities. • Seismic surveys to avoid sensitive receptors, such as homesteads, local communities, sacred sites etc. • Lighting of infrastructure designed to minimise aesthetic impacts during the evening

[redacted]

Appendix J.1.2 02 250319 Work Program Site Visit Queries

Outlook

RE: 2025 Work Program Site Visit queries

From Matt Kernke [redacted]
Date Wed 3/19/2025 11:21 AM
To [redacted]
Cc Armando de la Flor Olavide [redacted] Tamboran Contact <tamboran.contact@tamboran.com>; [redacted] Emily Beresford-Cane [redacted]; Brad O'Reilly [redacted]

Hi Jeremy,

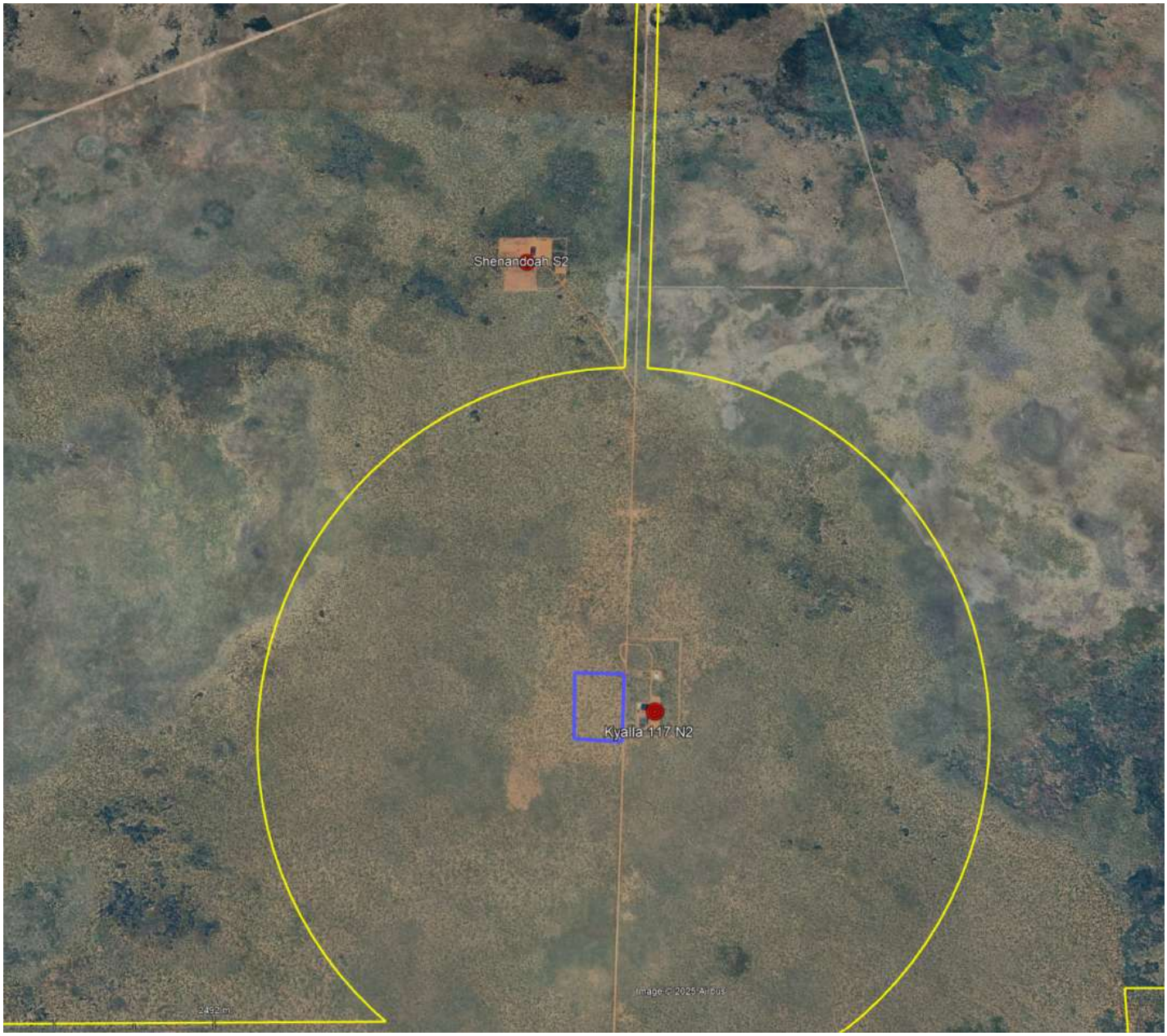
We are happy to provide additional information on the sand plant for the field trip, which will be consistent with our EMP's. We have also provided this information as a part of our work program submission and there is a slide in the on country meeting. We are happy to answer any questions you have or provide additional information which you believe the native title holders would be interested in.

Brad will be onsite until midday Friday, so if you can organise the field visit to start at site at say 9am, then he should be available to talk about the activity in greater detail. I propose we print out a large A0 schematic of the proposed wash plant and then Brad can talk through in detail the activity and how we manage the environmental aspects. Robbie can then take the crew to see SS 2 and the location of the SPCF and then return back to the camp at Kyalla 117 N2 for lunch.

The location of the wash plant is adjacent to Kyalla 117 N2 and there is nothing on the location. I have provided a map below, with the sand wash plant area located adjacent to Kyalla 117 N2 (note my map is approximate). The yellow circle is the original 2018 clearance area for Kyalla 117 N2- with this all being incorporated into subject land 2.

I don't believe it is as dense as the previous location, but will have good grass coverage given it is still the wet season.

Talk soon
Matt



From: [redacted]
Sent: Wednesday, 19 March 2025 10:41 AM
To: Matt Kernke [redacted]
Cc: Armando de la Flor Olavide [redacted] Tamboran Contact <tamboran.contact@tamboran.com>; [redacted]
Subject: RE: 2025 Work Program Site Visit queries

Thanks Matt,

I will start coordinating the site visit today and provide you with an update ASAP.

Visiting the sand wash location seems reasonable to me, just noting that the NLC will not know whether it will satisfy the site inspection requirement for the EMP and AAPA application for variation, until we receive and review the documentation.

In terms of what we will be able to inspect at this location, what is there? I remember for the Shenandoah S2 well pad site visit last year we could only go as far of the road intersection where the access track was to be built because it was dense bush.

Kind regards,

[redacted]
Senior Project Officer
Resources & Energy Branch
Northern Land Council

[redacted]

From: Matt Kernke [redacted]
Sent: Friday, 14 March 2025 11:33 AM
To: [redacted]
Cc: Armando de la Flor Olavide [redacted] Tamboran Contact <tamboran.contact@tamboran.com>; [redacted]
Subject: RE: 2025 Work Program Site Visit queries

Hi [redacted]

We have no problem with the field trip on the 28th of March. It would also be great to get the TO's out on the proposed sand wash plant location which is located adjacent to Kyalla 117 N2 (on the way to SS2). The sand trial is a project we see as being something for which we can get a TO business involved in.. Robbie (cc'd) will facilitate the site tour.

In regards to CM expenses, we are happy to cover these consistent with previous years.

Attached is a copy of our unexpected finds protocol.

Talk soon
Matt

From: Jeremy Beckett [redacted]
Sent: Thursday, 13 March 2025 5:12 PM
To: Matt Kernke [redacted]
Cc: Armando de la Flor Olavide [redacted] Tamboran Contact <tamboran.contact@tamboran.com>
Subject: 2025 Work Program Site Visit queries

Hi Matt & Armando,

My apologies I forgot to raise this in the meeting.

As the Work Program Meeting is scheduled for Thursday the 27th, we will ask if a select number of NTH's would like to inspect the well pad after. This is what we did last year and considered it a success. Does Tamboran have appetite to undertake this on Friday the 28th Of March? Day after the meeting? And last time the group was paid for their cultural management work. Is this still Tamboran's sentiments.

Also, wondering if you have a Unexpected finds policy, or something that fits a similar description? A policy which outlines the processes once an artefact is found.

Kind regards,

[redacted]
Senior Project Officer
Resources & Energy Branch
Northern Land Council

[redacted]

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Appendix J.1.2 03 250319 RE: Tamboran 2025 Work Program Presentation for March Meeting

Outlook

RE: Tamboran 2025 Work Program Presentation for March Meeting

From Matt Kernke [redacted]
Date Wed 3/19/2025 2:26 PM
To [redacted] Armando de la Flor Olavide [redacted]
Cc Tamboran Contact <tamboran.contact@tamboran.com>; Faron Thibodeaux [redacted] Emily Beresford-Cane [redacted] Russell Jeffrey [redacted]

Hi [redacted]

WE will prepare the slides as requested. I will base the majority of the slides on the previous years material and will update with any SS2 related images where possible.

For the gathering lines, these are not proposed to be constructed for the 2025 work program. We will discuss this as a part of the May EMP consultations.

Talk soon
matt

From: [redacted]
Sent: Wednesday, 19 March 2025 1:35 PM
To: Armando de la Flor Olavide [redacted]; Matt Kernke [redacted]
Cc: Tamboran Contact <tamboran.contact@tamboran.com>; Faron Thibodeaux [redacted] Emily Beresford-Cane [redacted] Russell Jeffrey [redacted] Rory Ross [redacted]
Subject: RE: Tamboran 2025 Work Program Presentation for March Meeting

Hi Armando & Matt,

Thanks for providing NLC the opportunity to review your slides for the 2025 Work program Meeting scheduled for 27TH March.

I think we should put your slides up on the screen, and use the boards and print outs to compliment the presentation. If the sun reflection is too much, then the boards will have to be the focus. In any scenario, having a screen presentation, big boards and hand-outs ready to go would be ideal.

We **attach** our comments on the slides and additional comments below. Could you please make the requested changes and issue an update slide deck as soon as possible. We are travelling to Elliott on Sunday.

Additional topics
The NLC would like Tamboran to:

1. Include additional slides in respect of the higher risk activities included in the 2025 work program, even if this has already been presented on before. In particular, please include the previous slides on:
    a. Storage & management:

[redacted]

iv. Diesel/ fuel storage

[redacted]

e. Camps; construction, operation & waste management

[redacted]

g. Laydown yards

h. Gravel Pits

i. Wet season operations

[redacted]

3. As part of the presentation, explain to the native title holders:

[redacted]

d. At slide 18 –That soil extracted from activities may be stockpiled and used to rehabilitate the land but also used in the sand wash plant (and what Tamboran proposes to do if there is not enough sand left for rehabilitation)

Kind regards,

[redacted]
Senior Project Officer
Resources & Energy Branch
Northern Land Council

[redacted]

[redacted]

From: Armando de la Flor Olavide [redacted]
Sent: Thursday, 13 March 2025 11:39 AM
To: [redacted]
Cc: Tamboran Contact <tamboran.contact@tamboran.com>; Faron Thibodeaux [redacted] Emily Beresford-Cane [redacted] Matt Kernke [redacted] Russell Jeffrey [redacted]
Subject: Tamboran 2025 Work Program Presentation for March Meeting
Importance: High

Greetings [redacted]

Please find attached our Proposed 2025 Work Program Presentation for the March on country meeting for your comments.

If you could provide us with your comments by **Wednesday COB** next week it will be really appreciated, so we can address them and get them ready for the meeting the week after.

We are aiming to bring big storyboard printouts of the Presentation like we did in May last year, as well as booklets to share among the attendees. We can off course use the Screens too if needed, but due to the sun reflection we think the big storyboard printouts might work better.

Happy to discuss today in the meeting if you have other suggestions though.

Kind regards,

Armando de la Flor Olavide

Community & Social Performance Lead

tamboran
RESOURCES

[redacted]

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Appendix J.1.2 04 250423 RE_2025 Work Program document

Outlook

RE: 2025 Work Program document

From Matt Kernke [redacted]
Date Wed 4/23/2025 2:23 PM
To [redacted] Emily Beresford-Cane [redacted] Armando de la Flor Olavide [redacted]
Cc [redacted] Tamboran Contact <tamboran.contact@tamboran.com>; Linda Pugh [redacted]

1 attachment (176 KB)
2025 work program - TBN-NLC responses.pdf;

Hi Rory,

Please find attached Tamboran's response.

A link to the requested information is provided in the following sharepoint site: NLC requested information

We have attempted to provide as much information as practicable. There are good summative reports, such as recordable incident reports and annual environmental performance reports, which provide a good summary of our performance against each EMP. We have also linked any submissions made to the NTG which are publicly available.

If you require any further information, please let me know.

Kind Regards
Matt

From: [redacted]
Sent: Monday, 24 March 2025 1:13 PM
To: Emily Beresford-Cane [redacted] Armando de la Flor Olavide [redacted] Matt Kernke [redacted]
Cc: [redacted] Tamboran Contact <tamboran.contact@tamboran.com>
Subject: 2025 Work Program document

Hi Emily, Armando and Matt

Thank you for the 2025 Work Program document.

(We will respond to Matt's emails of 21 and 23 March 2025 by separate email.)

Set out below is a request for information arising from our review of the Work Program document. Could you please respond to this RFI by **21 April 2025** so that NLC has time to consider ahead of the May or June meeting with common law holders (we are currently assessing your request to meet in the week of 2 June).

Legal statements in the Work Program

The Work Program makes a number of legal statements that are not necessarily supported by the NLC. The NLC is not minded to go through those statements and request edits of Tamboan. However, a failure by the NLC to object to particular statements in the Work Program should not be taken by Tamboran as NLC's acceptance of the accuracy of those statements.

Request for Information

Could Tamboran please provide the NLC with:

2. the estimated costs of implementing each activity in the Work Program (in accordance with clause 5.1(3)(b)(vi) of the Exploration Agreement);

4. a summary of the environmental management and monitoring activities conducted in the previous 12 months including any results from that monitoring and changes that have been made as a result of those results;

5. information that demonstrate Tamboran's compliance with its commitments in previously approved EMPs by producing a table setting out commitment/requirements under the previously approved EMPs along with activities undertaken, any exceedances of trigger values, reportable or recordable incidents or results contrary to predictions or conceptual understanding, analysis of trends, learnings and any adaptions that have been made or planned for monitoring or management. This should include, at a minimum:

    a. Inductions

    b. Surface water and wastewater monitoring

    c. Groundwater monitoring

    d. Site and exploration well monitoring (including a more detailed explanation and implications of the down hole mechanical issues reported at Shenandoah South 2H (SS-2H) well

    e. Weed inspections and control

    f. Erosion and sediment control inspections

    g. Gas leak detection surveys

    h. Build up pressure monitoring.

5. the results of the human health risk assessment undertaken for the Beetaloo Basin Shenandoah South E&A Program EP98 and EP117 that is referenced in the EMP; and

6. a summary of the ‘checkerboard’ approach that Tamboran has referenced (ie dividing up the EPs with Daly Waters Energy with a view to farming in US majors over time)

Regards

[redacted]

Senior Lawyer (Resources & Energy)
Northern Land Council

NORTHERN LAND COUNCIL
Our Land, Our Sea, Our Life

[redacted]

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2025 work program: Tamboran responses to NLC email, dated 24 March 2025

NLC comment	Tamboran response
Legal statements in the Work Program The Work Program makes a number of legal statements that are not necessarily supported by the NLC. The NLC is not minded to go through those statements and request edits of Tamboan. However, a failure by the NLC to object to particular statements in the Work Program should not be taken by Tamboran as NLC's acceptance of the accuracy of those statements.	Noted. Tamboran is more than happy to respond to any specific queries/ statements/ concerns should the NLC wish to engage further on this matter.
[redacted]	
[redacted]	

NLC comment	Tamboran response
[redacted]	
[redacted]	

NLC comment	Tamboran response
[redacted]	[redacted]
[redacted]	[redacted]

NLC comment	Tamboran response
[redacted]	
[redacted]	
[redacted]	

Appendix J.1.2 05 Shenandoah South Wash Plant EMP

Outlook

Shenandoah South Wash Plant EMP

From Matt Kernke [redacted]
Date Thu 5/1/2025 4:31 PM
To [redacted]
Cc Rory Ross [redacted] Emily Beresford-Cane [redacted] Armando de la Flor Olavide [redacted] Russell Jeffrey [redacted] Brad O'Reilly [redacted] Tamboran Contact <tamboran.contact@tamboran.com>; Faron Thibodeaux [redacted] Lisa Baruch [redacted]

Dear [redacted]

As foreshadowed, please find a link below to the Shenandoah South Wash Plant EMP covering the proposed wash plant to be located adjacent to Kyalla 117 N2 on EP 117 for your review. This is directly in support of Tamboran's Exploration and Appraisal program, with any sand generated used in future stimulations to reduce imported sand.

The wash plant is an important step in proving up the concept of washing sand locally, which will materially reduce well completion costs and trucking movements into the basin.

I would also like to confirm we have also submitted a variation to the existing AAPA certificate C2024/031 to include the following scope a) the wash plant b) increasing well count from 6 to 10 and c) increasing water take from 450Ml to 710Ml. This is consistent to the work program report submitted to the NLC earlier in the year.

We look forward to your comments and would be happy to meet up with the NLC or their nominated consultants to work though any questions that they may have on the proposed activity.

If you require any further information, please do not hesitate to call me to discuss

EMP Compiled - NLC

Kind Regards
Matt

Matt Kernke
Vice President, Environment and Approvals
tamboran
RESOURCES

[redacted]

Appendix J.1.2 06 250523 June Approval meeting presentation

Outlook

June Approvals meeting presentation

From Matt Kernke [redacted]
Date Fri 5/23/2025 4:25 PM
To [redacted]
Cc Faron Thibodeaux [redacted] Rory Ross [redacted] Emily Beresford-Cane [redacted] Armando de la Flor Olavide [redacted] Tamboran Contact <tamboran.contact@tamboran.com>

Hi [redacted]

Please find below a link to a copy of the draft June approvals meeting in Elliott. We had held this back a couple of days to accommodate some new photographs from the proposed wash plant (it is in Broken Hill right now) given the impact to the timing of the meeting due to sorry business.

Of note, we have made a number of slight tweaks to the pack which include the following:

- We have removed any discussion on the new Shenandoah East EMP- we are not in a position to finalise these pad locations and we will send the draft EMP through in July/August. The well sites have been altered slightly based on NSAI advice- and we require some additional time to finalise.. We are aware a separate engagement will be required for which we are supportive of. If we could tentatively lock another meeting in mid August that would be appreciated.
- We have consolidated the AAPA requests into 3 new requests. These are:
    - Request 1. Subject land 2 variation (provided)
    - Request 2. Variation to C2024/030 to extend subject land 1 and include the new subject land 6. (This was previously to be split into 2 separate requests- we have consolidated to save on submission costs)
    - Request 3. A new AAPA request covering area to the East and South of subject land 2 – including an extension around the existing cleared Beetaloo w-1 pad.

Separately, we are likely to submit an additional EMP this year for E&A scope within the New AAPA certificate area (request 3). We are seeking to submit an EMP to allow activity to occur in 2026/2027. We will walk through this in detail at our next fortnightly meeting, including whether you recommend to modify the work program report to include the new AAP clearance area and approvals scope.

As always, feel free to reach out to discuss any of the content of the pack.

Talk soon,
Matt

Tamboran 2025 NTH Approvals Presentation June.pptx

Matt Kernke
Vice President, Environment and Approvals

tamboran
RESOURCES

[redacted]

Tamboran Beetaloo Joint Venture Project

Approvals meeting

Elliott –June2025

Confidential

Kyalla 117 N2- NORTHERN TERRITORY AUSTRALIA

Agenda

1. Purpose of the meeting
2. Recap of the proposed 2025 work program
3. New Sand Wash Plant EMP
4. New Anthony Lagoon Water extraction license
5. New sacred site clearances

Purpose of the Work Program Meeting

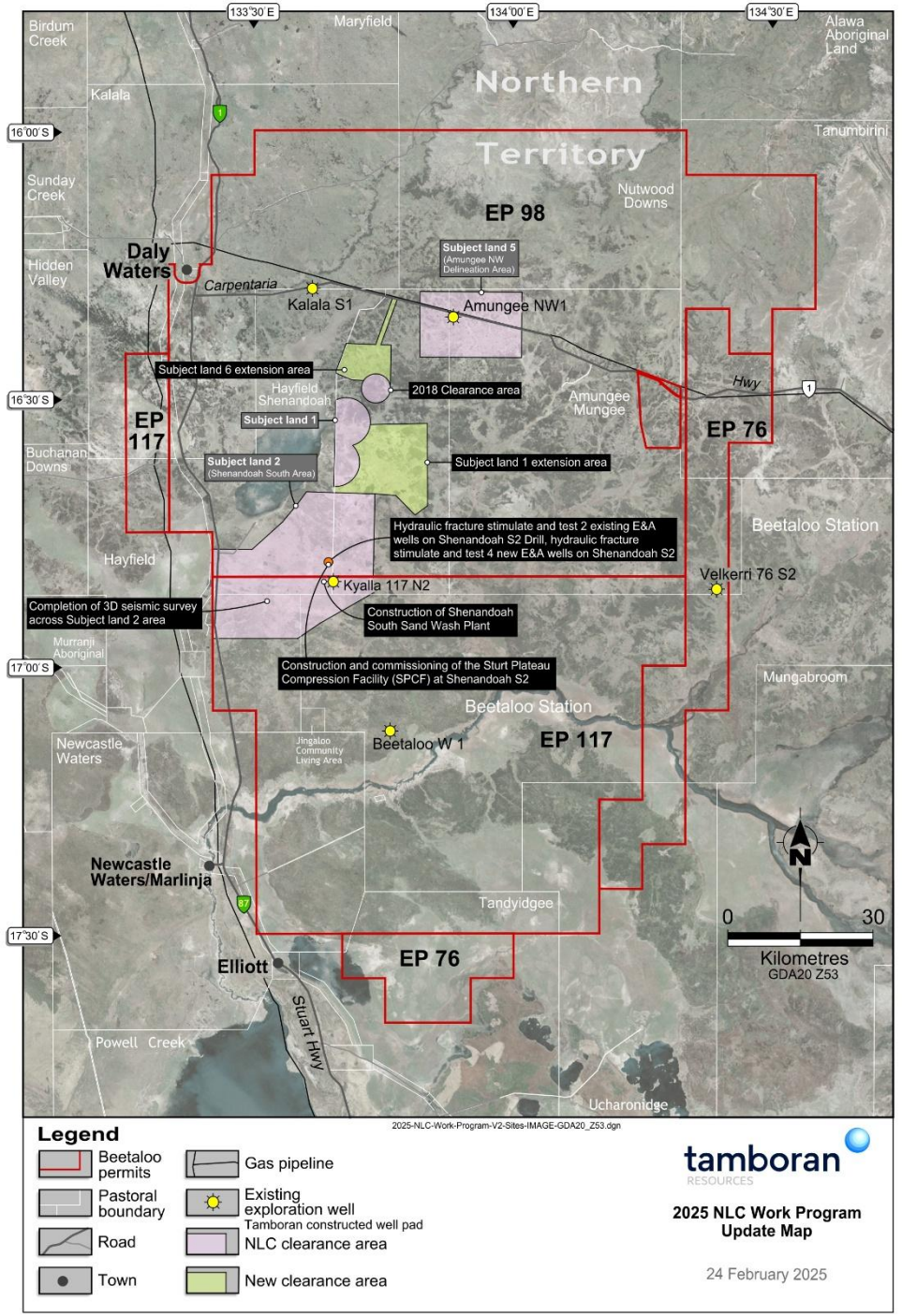
Purpose of Work Program Meeting

- Talk about **sand wash plant,**

[redacted]

Recap of work program - 2025

- Continue well testing the Shenandoah S2-2H well
- Drill, stimulate and well testing of up to 4 new wells on Shenandoah S2
- Construct the Sturt Plateau Compression Facility and camp
- 315 km^2 3D seismic program
- Sand wash plant trial



Sand Wash Plant EMP

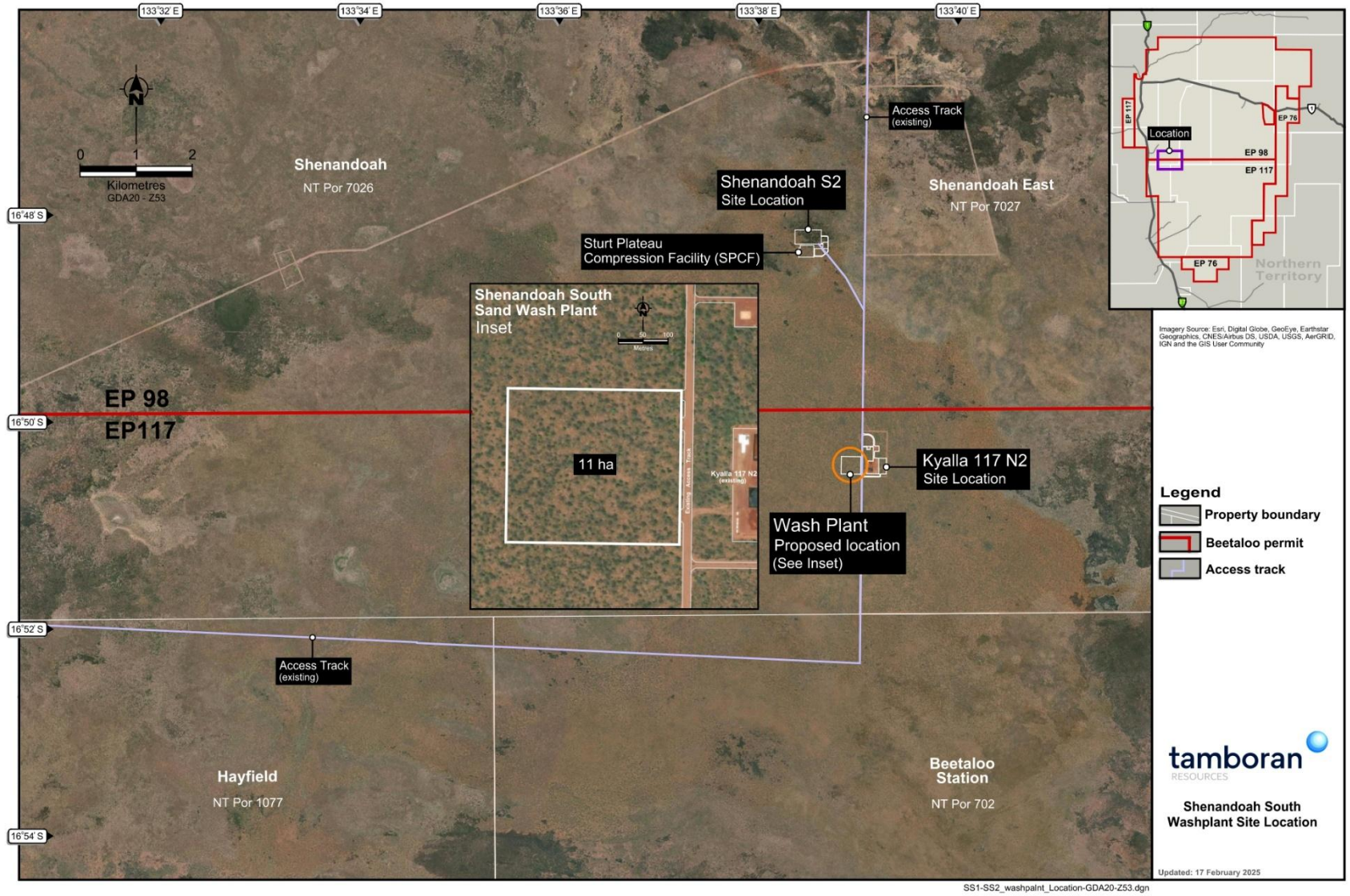
Shenandoah South Wash Plant trial

- Sand is used for proppant during hydraulic fracturing to allow gas to flow
- 11,000 tonnes of washed sand (~10,000 bags) per well
- Sand requirements will double in 2026 to 44,000 tonnes (>40,000 bags)
- Importing sand is very expensive and puts lots of trucks on the road
- **Tamboran is proposing to build a trial wash plant in the Beetaloo to enable local sand to be utilised in our operations**

Sandbags stored on Shenandoah S2 pad (October 2024)

Shenandoah Wash Plant trial

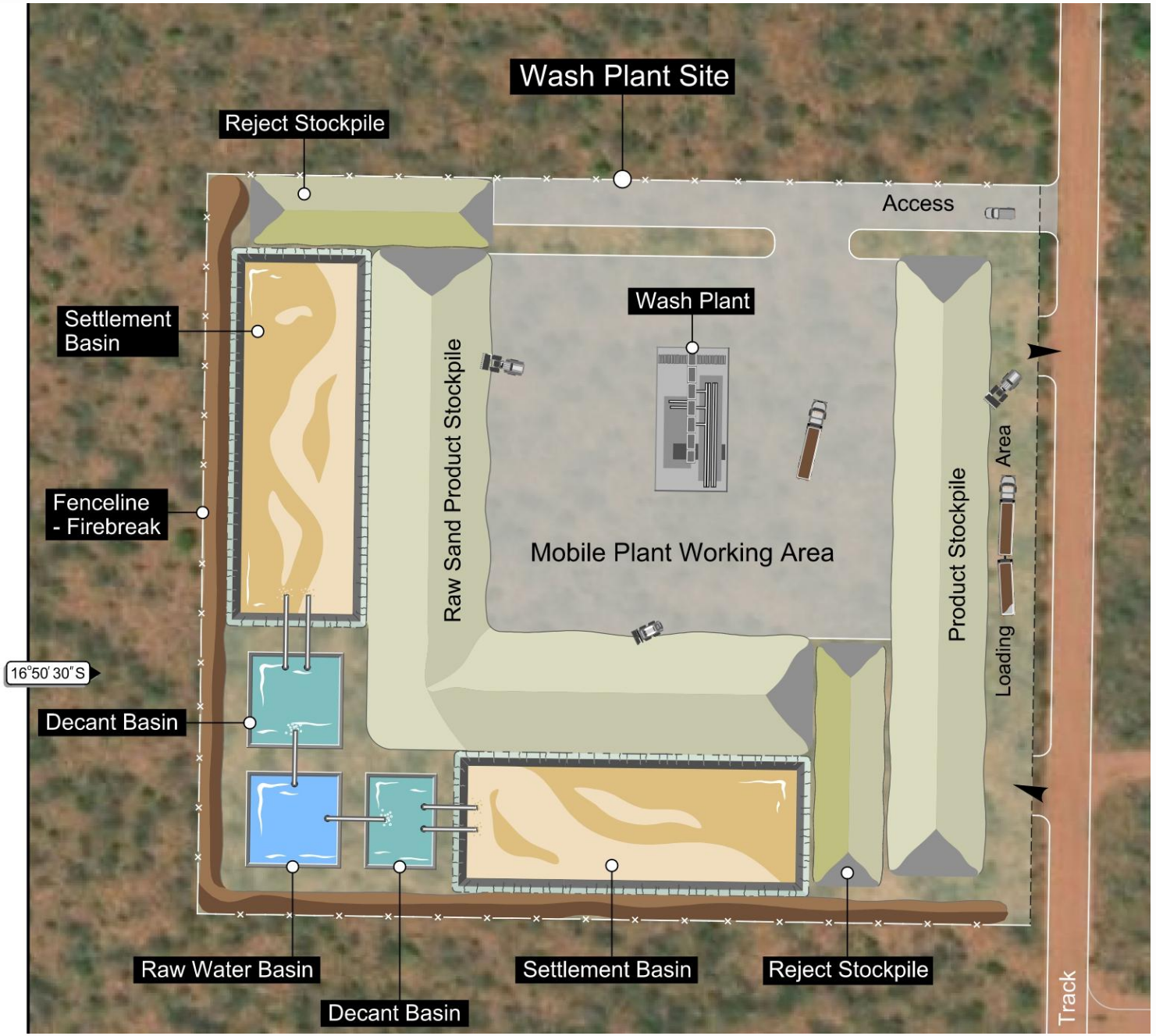
- New ~11 ha site to be constructed near Kyalla 117 N2
- Mobile wash plant installed onsite
- Wash plant will initially wash sand produced from construction activities - Tamboran is not proposing to operate a sand mine
- If successful, washing sand may be used to support ongoing E&A campaign



Indicative sand wash plant layout

Wash plant construction

- ~11 ha site to be cleared, levelled and fenced (similar to SS2)
- Settlement basins excavated to manage water
- Water recycled in process
- Designated raw and product sand stockpile areas
- Mobile wash plant installed and operated
- Other minor temporary infrastructure installed (bores, water pipelines, crib huts) etc



Indicative sand wash plant layout

Shenandoah Sand Wash Plant Site

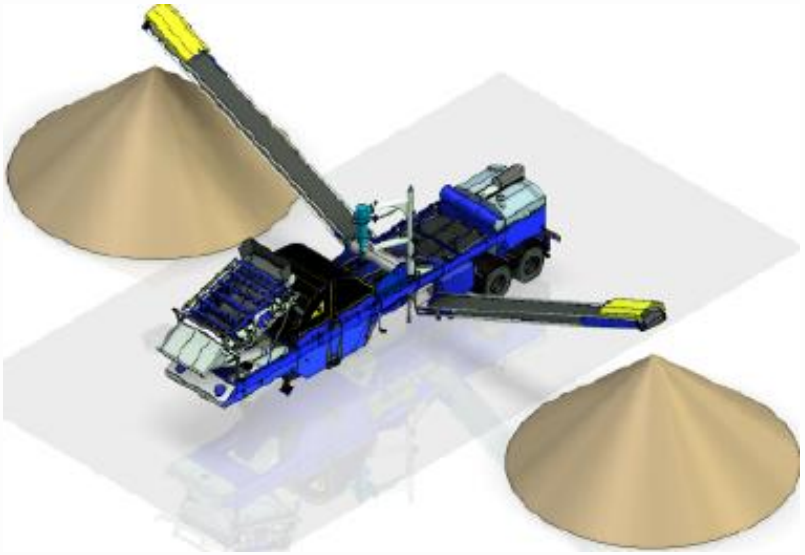
- Pad cleared of vegetation
- Settling basins constructed to remove solids from process water
- Process water will be recycled into process
- Sand generated from digging of settling basins to be used in wash plant trail

Similar construction of an earthen pit on a cleared pad

tamboran RESOURCES

Shenandoah Wash Plant

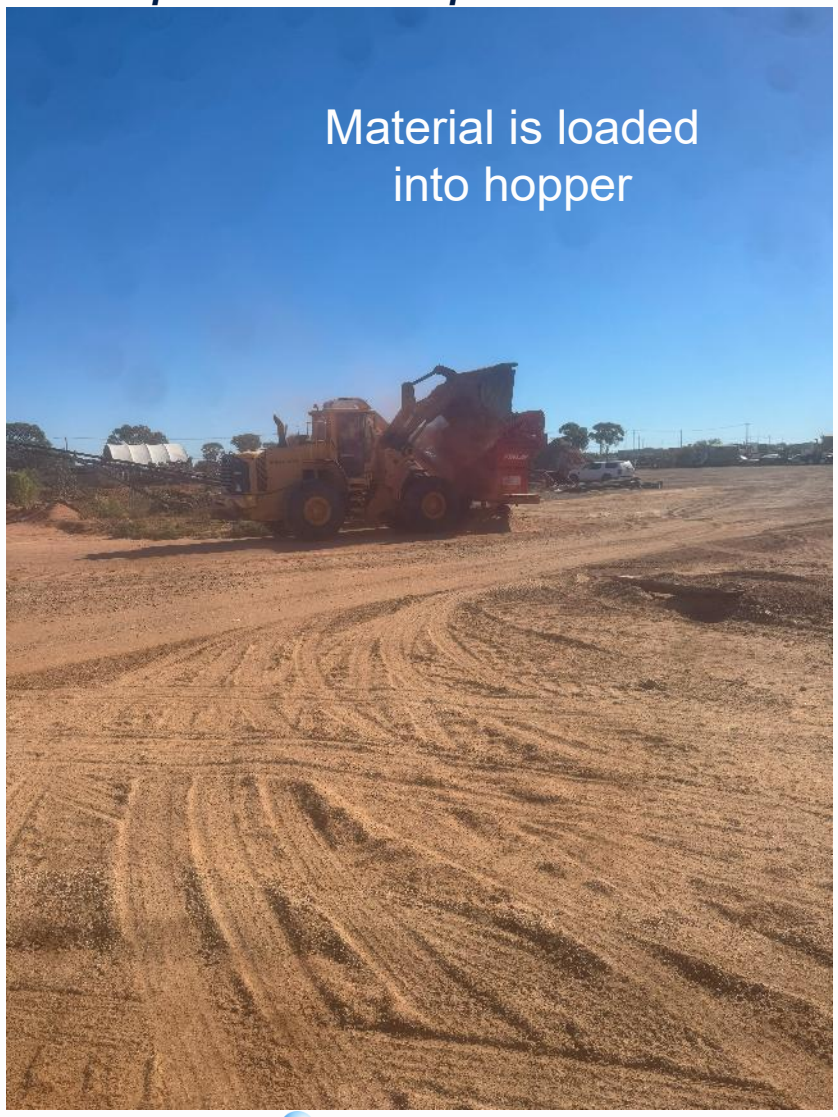
Example mobile wash plant



tamboran
RESOURCES

Shenandoah Wash Plant

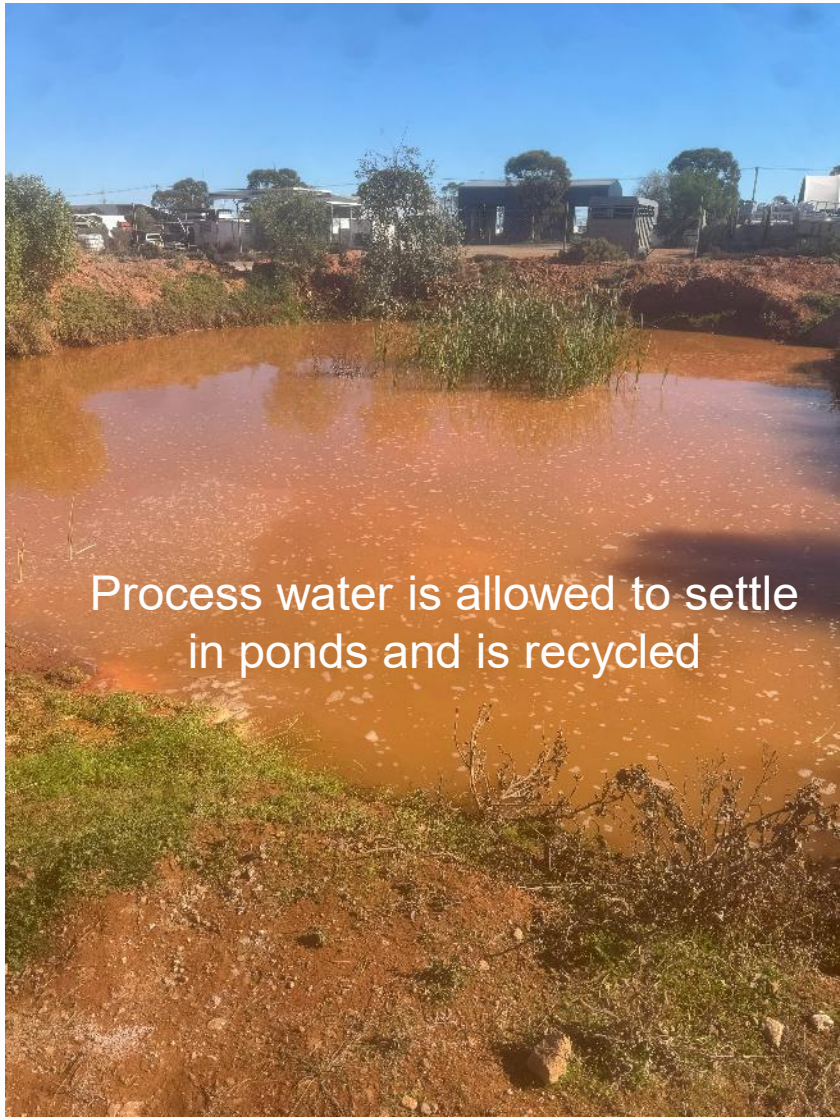
Example mobile wash plant



tamboran RESOURCES

Shenandoah Wash Plant

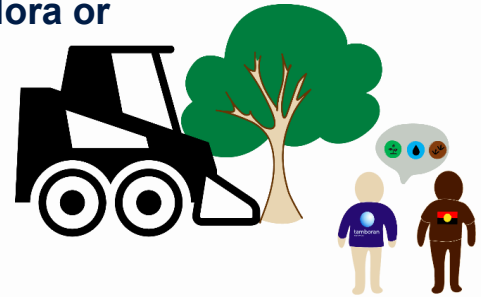
Example mobile wash plant



Sand Wash Plant - Key Environmental Aspects

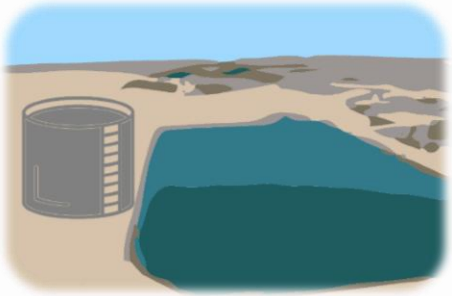
Land clearing and sediment control

- **11 ha of clearing** required approx.
- **Area scouted** with **no sensitive vegetation, flora or fauna**
- **Erosion and sediment controls installed** to manage offsite sediment release
- **Area** to be **cleared of sacred sites by NTH**



Water

- **No hazardous wastewater** generated
- ~40 – 80 ML of **water** per year **sourced from existing bores on Kyalla** 117 N2 **under Water Extraction License** and piped to site
- **Process water** to pass **through settlement** basins **to remove sediment** (possible addition of floc to assist) **to** allow **reuse within wash plant**
- **Freeboard used** on settling ponds to **avoid overtopping** and **releasing sediment**
- **No offsite releases of water**



Solid waste

- **No hazardous solid waste** created
- **Reject fine and coarse material** (e.g. sand, silt, clay and soil) to be **stockpiled and used for rehabilitation**

Dust

- **Dust suppression to minimise airborne dust** from stockpiles and bare surfaces

Rehabilitation

- Site to be **rehabilitated to pre-existing condition** post construction
- ‘Reject’ **sand material** is of **high quality** and suitable for **supporting rapid revegetation**

Water Extraction Licence

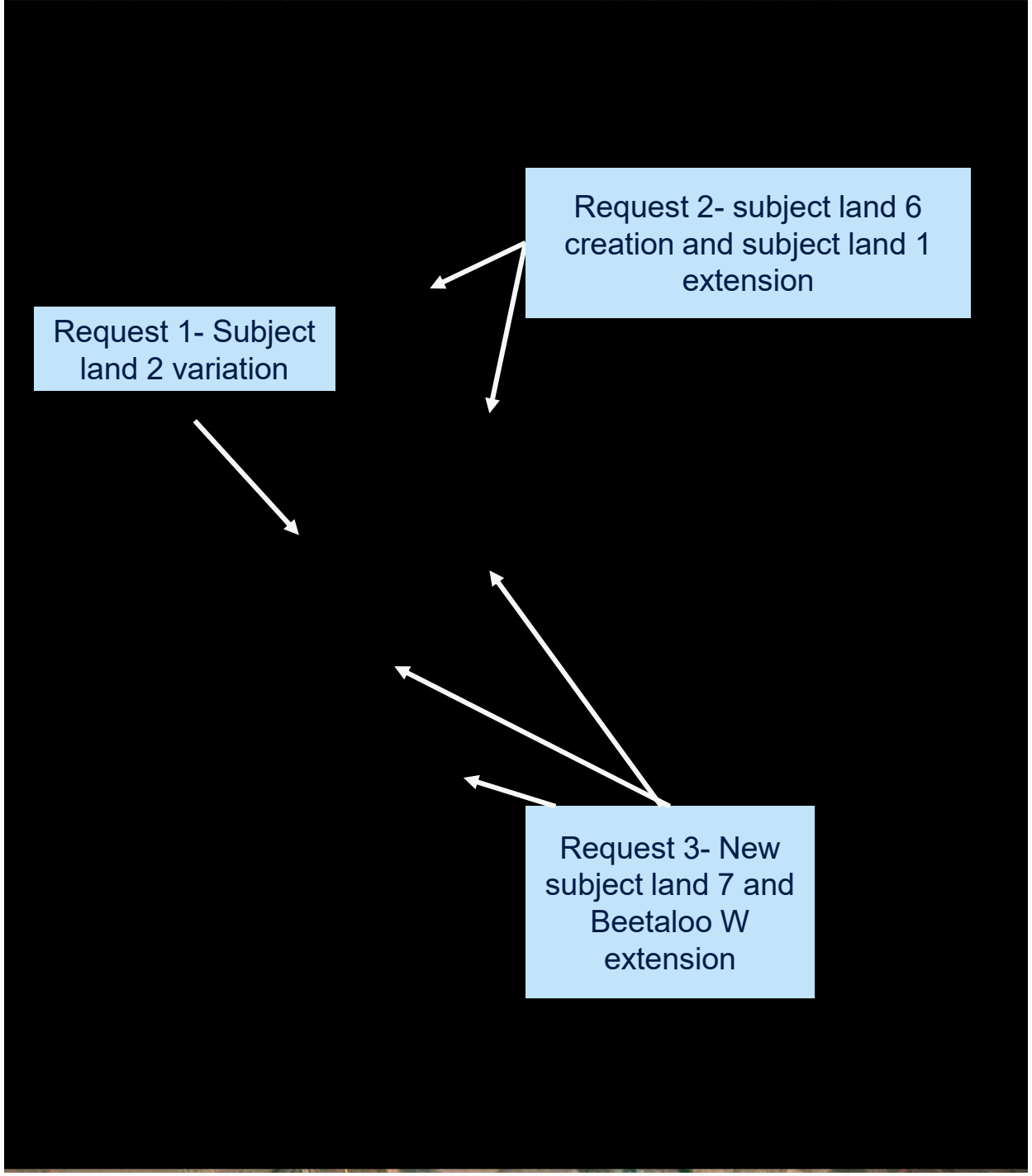
New Sacred Site Clearances

3 New Clearances requests:

- Subject land 2 variation
- [redacted]
- [redacted]

- New requests will cover same scope of activities across clearance areas (i.e. same as subject land 2)

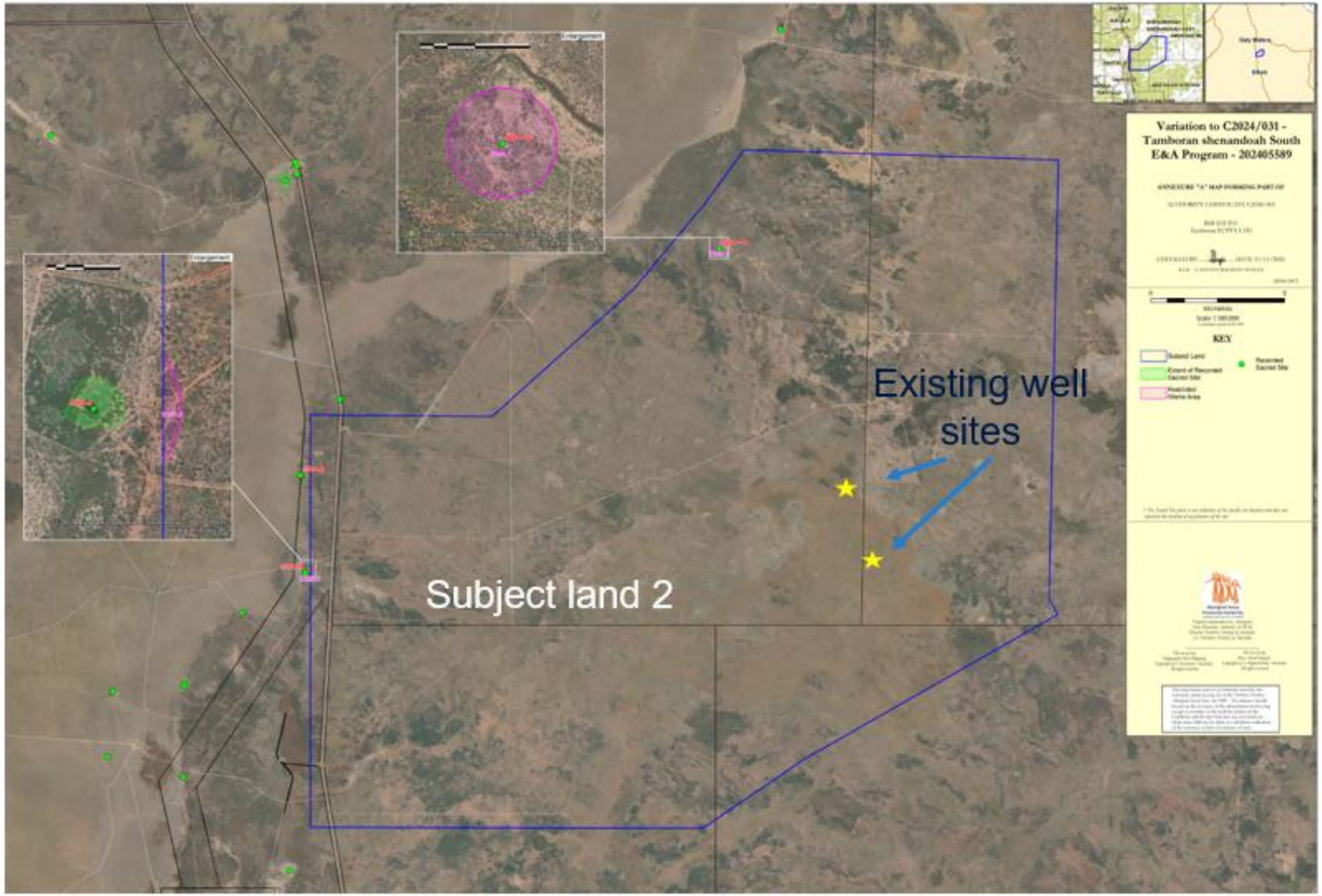
- Areas will be used to support 2025 and 2026 activities



AAPA Certificate Variation - Subject land 2

Variation to the existing **AAPA** certificate **C2024/065 to include** the following **additional scope** within **Subject Land 2**:

- **Construction** and **operation** of a **sand wash plant**
- [redacted]
- [redacted]



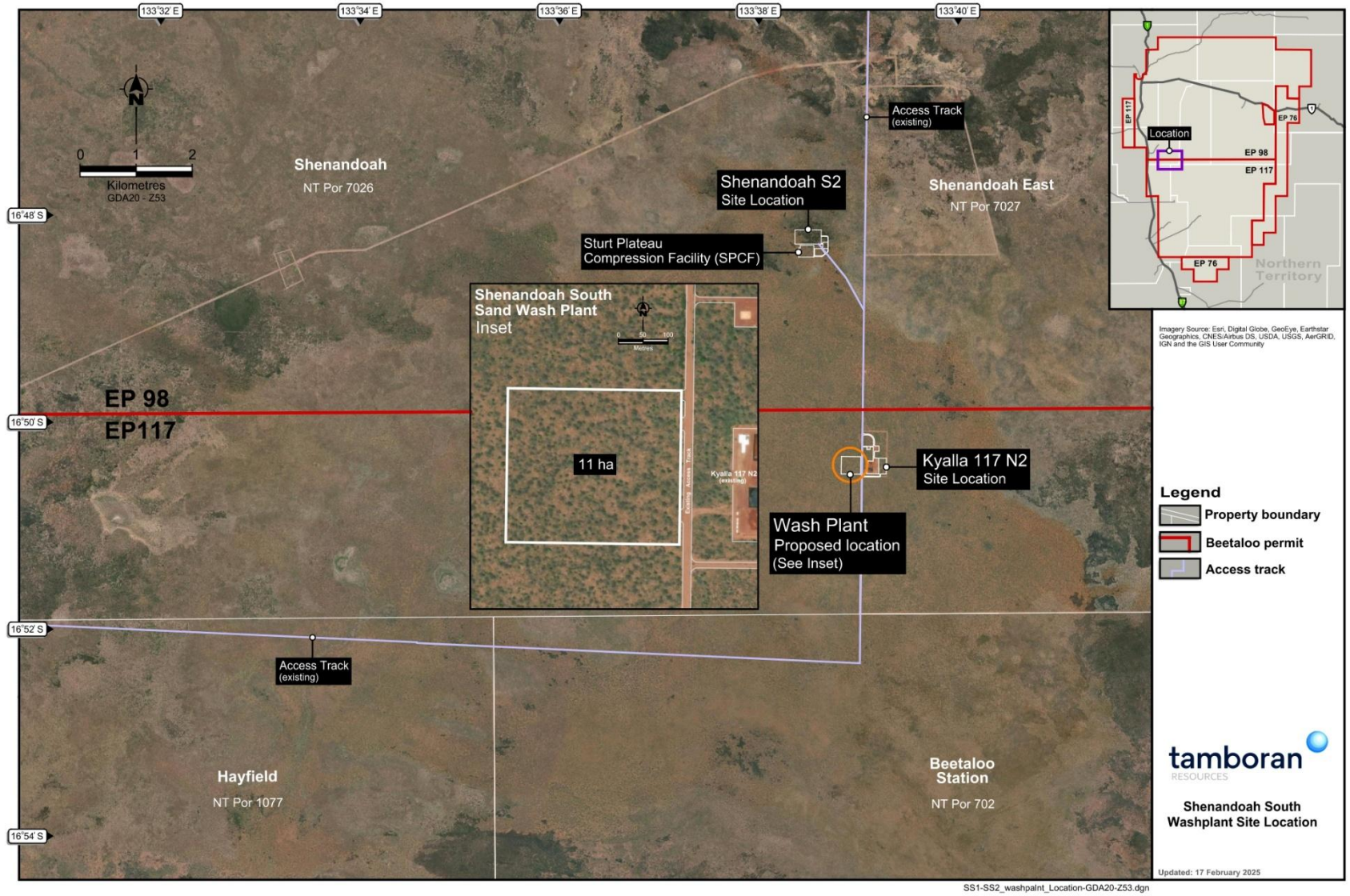
Shenandoah South Wash Plant trial

- Sand is used for proppant during hydraulic fracturing to allow gas to flow
- 11,000 tonnes of washed sand (~10,000 bags) per well
- Sand requirements will double in 2026 to 44,000 tonnes (>40,000 bags)
- Importing sand is very expensive and puts lots of trucks on the road
- **Tamboran is proposing to build a trial wash plant in the Beetaloo to enable local sand to be utilised in our operations**

Sandbags stored on Shenandoah S2 pad (October 2024)

Shenandoah Wash Plant trial

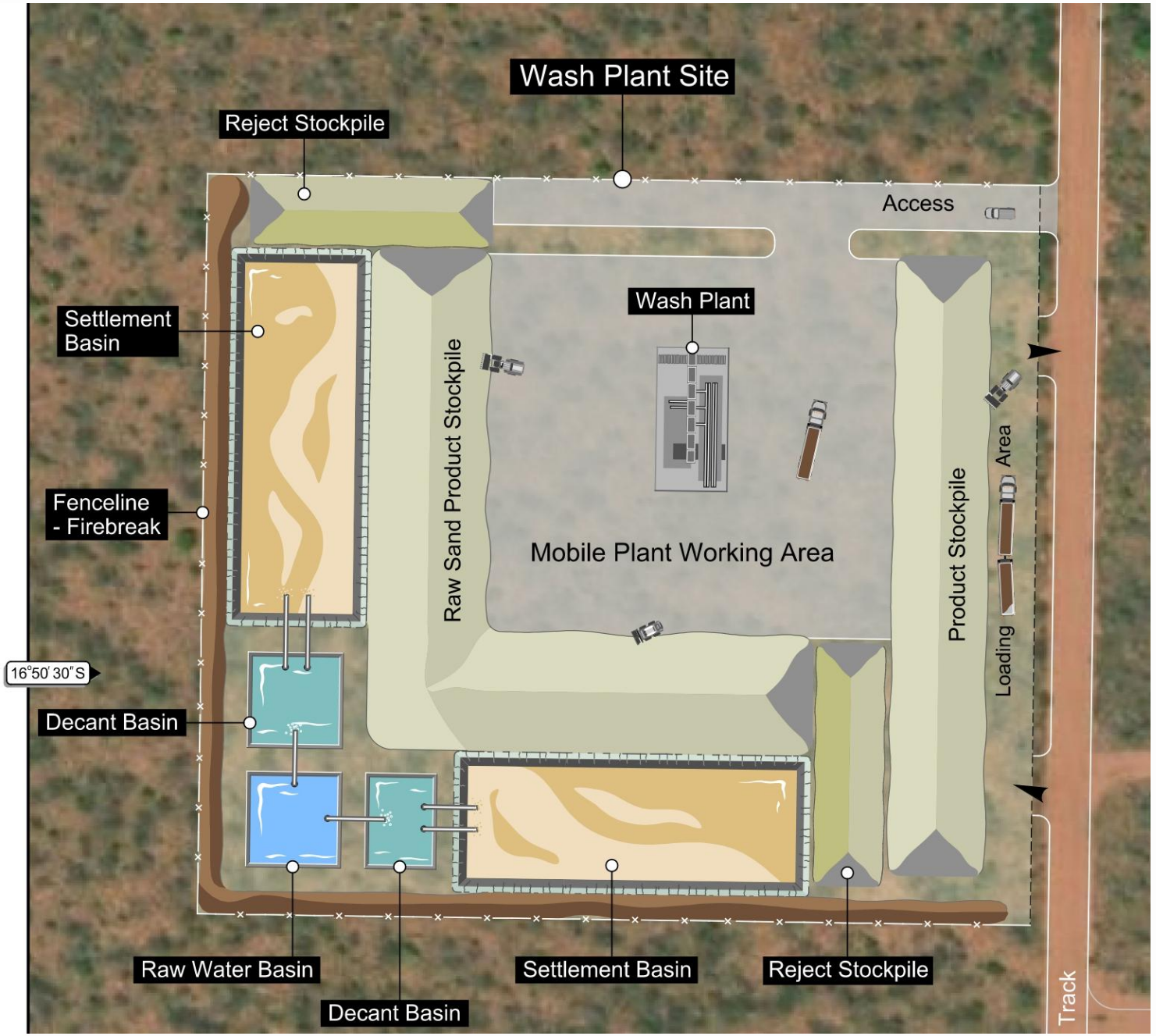
- New ~11 ha site to be constructed near Kyalla 117 N2
- Mobile wash plant installed onsite
- Wash plant will initially wash sand produced from construction activities - Tamboran is not proposing to operate a sand mine
- If successful, washing sand may be used to support ongoing E&A campaign



Indicative sand wash plant layout

Wash plant construction

- ~11 ha site to be cleared, levelled and fenced (similar to SS2)
- Settlement basins excavated to manage water
- Water recycled in process
- Designated raw and product sand stockpile areas
- Mobile wash plant installed and operated
- Other minor temporary infrastructure installed (bores, water pipelines, crib huts) etc



Indicative sand wash plant layout

Shenandoah Sand Wash Plant Site

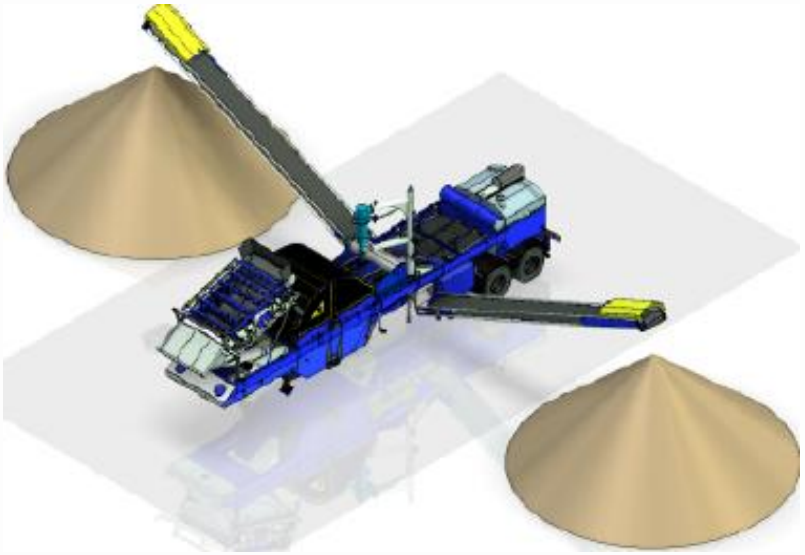
- Pad cleared of vegetation
- Settling basins constructed to remove solids from process water
- Process water will be recycled into process
- Sand generated from digging of settling basins to be used in wash plant trail

Similar construction of an earthen pit on a cleared pad

tamboran RESOURCES

Shenandoah Wash Plant

Example mobile wash plant



tamboran
RESOURCES

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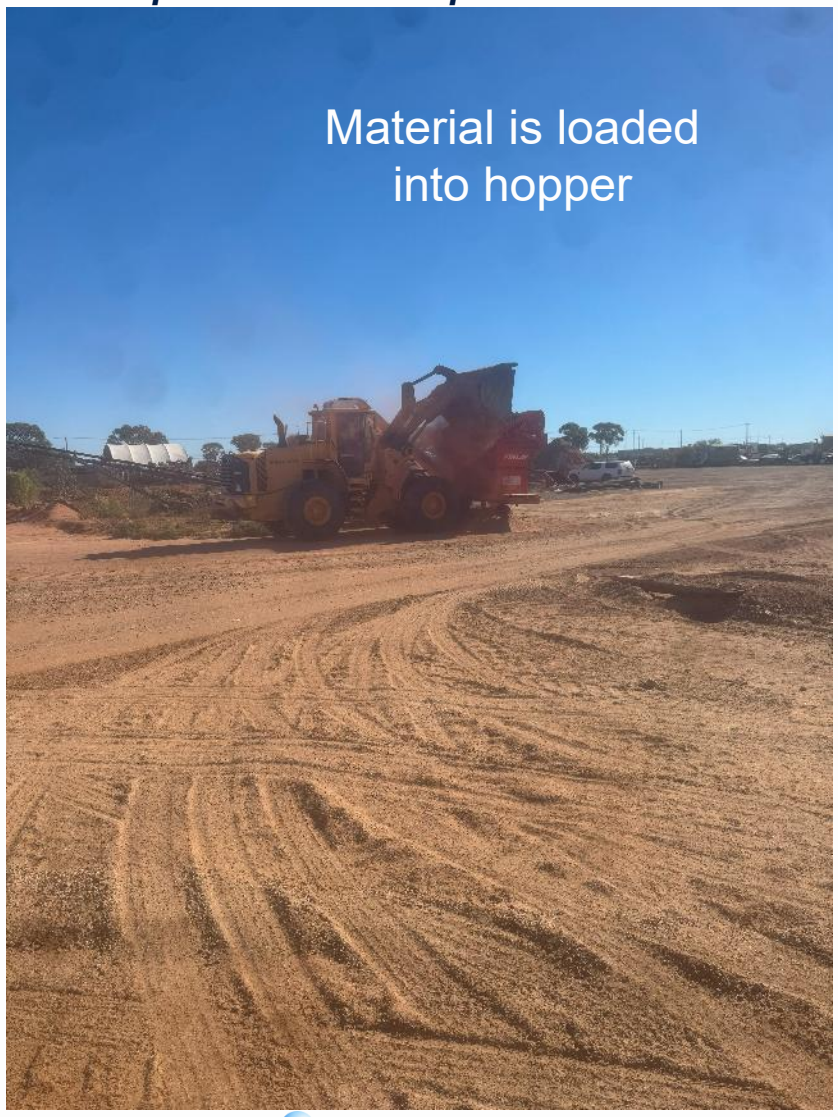
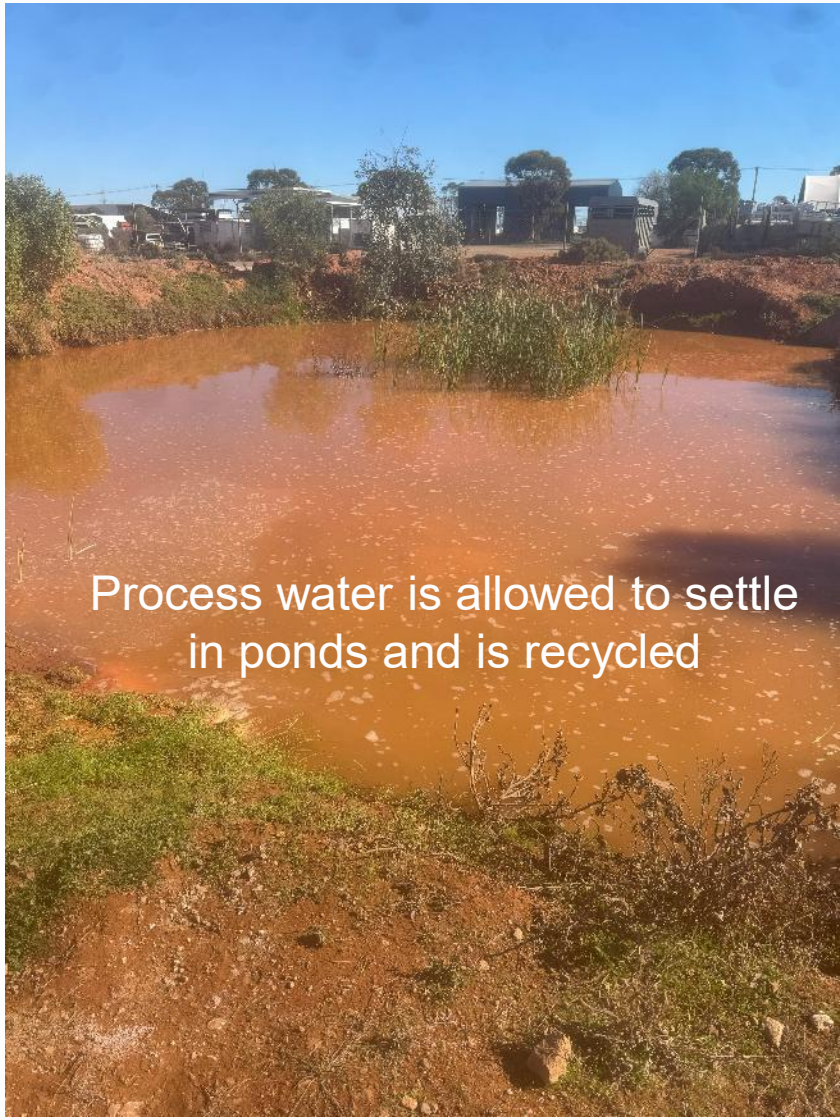


Shenandoah Wash Plant

Example mobile wash plant

Product sand is stockpiled



Process water is allowed to settle in ponds and is recycled

tamboran RESOURCES

Sand Wash Plant - Key Environmental Aspects

Land clearing and sediment control

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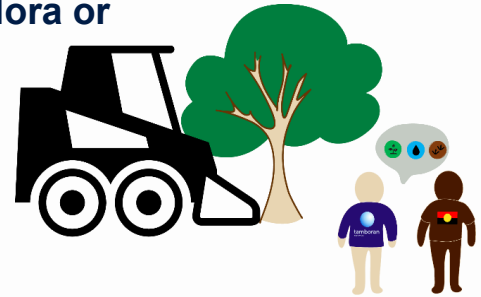

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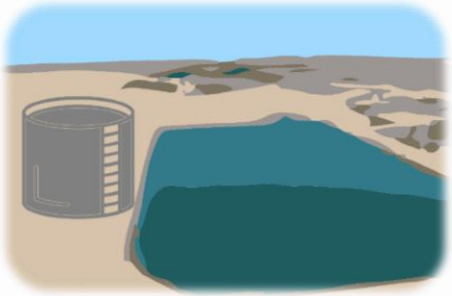

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Rehabilitation

- Site to be **rehabilitated to pre-existing condition** post construction
- ‘Reject’ **sand material** is of **high quality** and suitable for **supporting rapid revegetation**

Water Extraction Licence

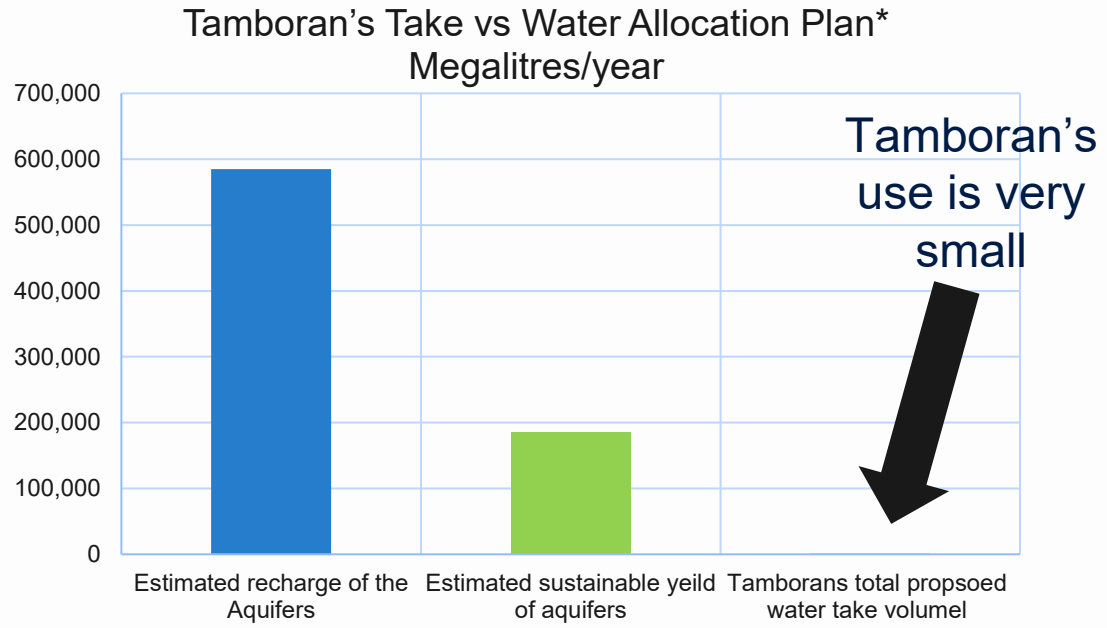
Water Extraction Licences

- **Water** to support activities is **sourced from** the **Gum Ridge Aquifer**
- [redacted]
- [redacted]
- Water extraction will be **licenced** under the **Georgina Wiso Water Allocation Plan**

[redacted]

Tamboran's Water Take Vs Water Allocation Plan

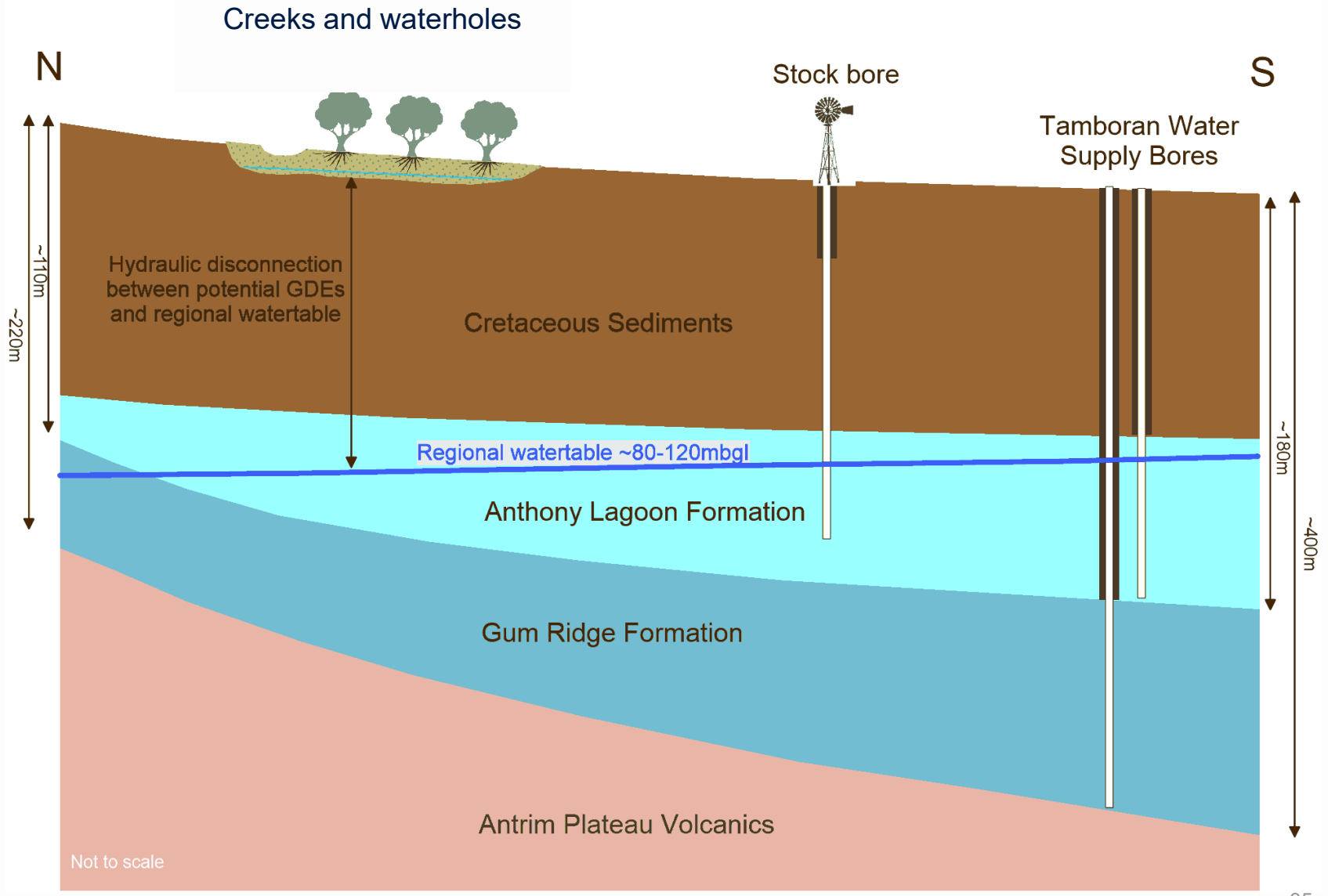
- The Limestone aquifers are anticipated to hold 660,000,000 ML's of water
- Research shows limited (~5%) contribution of the aquifers in the Beetaloo (Georgina Basin) to the Mataranka Spring
- Aquifer water levels are increasing ~581,000 Ml/yr (1 Sydney harbour per year)
- The Water Allocation Plan estimated sustainable yield of the unit is 186,154 ML
- Modelling results confirm this take has no material impact on spring flows or Groundwater dependent ecosystems
- The proposed total take of 710 ML/yr is very small compared to aquifer recharge and sustainable yield



* Northern Territory Government (2023) *Georgina Wiso Background Report 2023-2031*. Report 13/2023.Department of Environment, Parks and Water Security: Northern Territory, Australia.

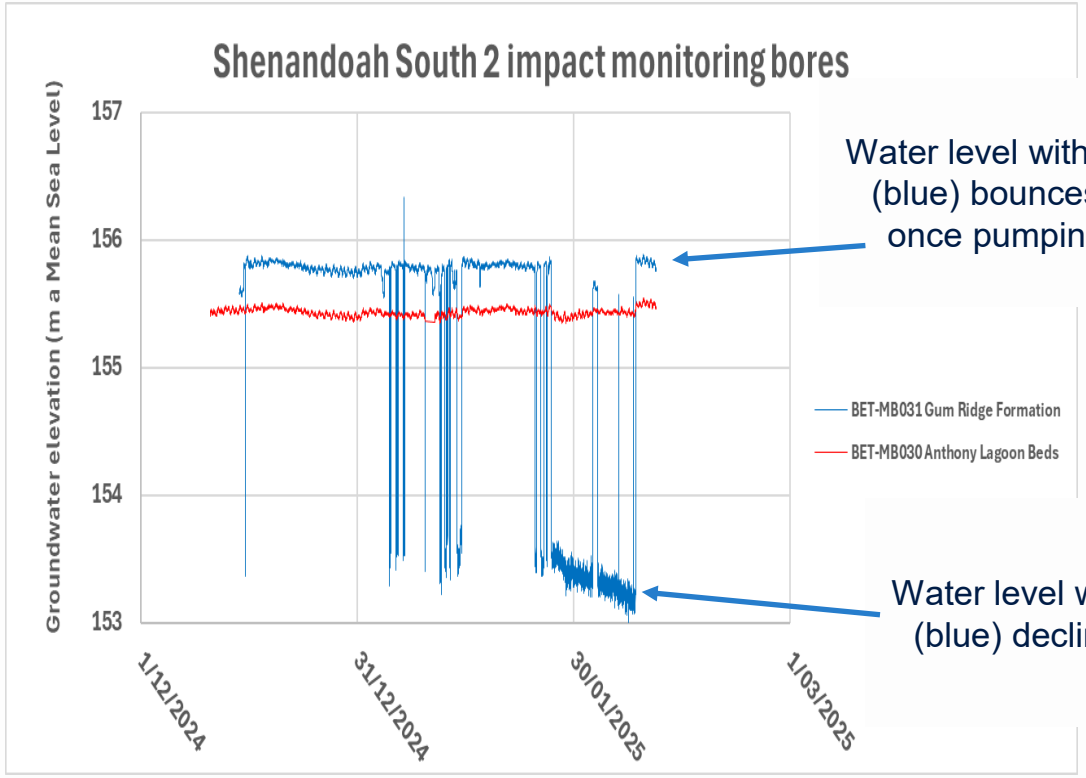
Aquifers and surface water

- The water we use is from ~80 to 120 m below the surface
- These aquifer do not flow into creeks or waterholes within the Beetaloo sub-basin
- Waterholes and creeks most likely recharge the aquifers in some locations
- There are no springs within 80 kms of Tamboran's activities



Groundwater monitoring

- Tamboran monitors groundwater level to ensure our extraction doesn't reduce available water
- Monitoring completed by local contractor with support of hydrogeologist
- Monitoring shows water extraction has not reduced groundwater volumes materially



Water level within the Gum ridge (blue) bounces back instantly once pumping has stopped

Water level within the Gum ridge (blue) decline during pumping

New Sacred Site Clearances

3 New Clearances requests:

- [redacted]
- Subject land 1 area extension [redacted]
- [redacted]

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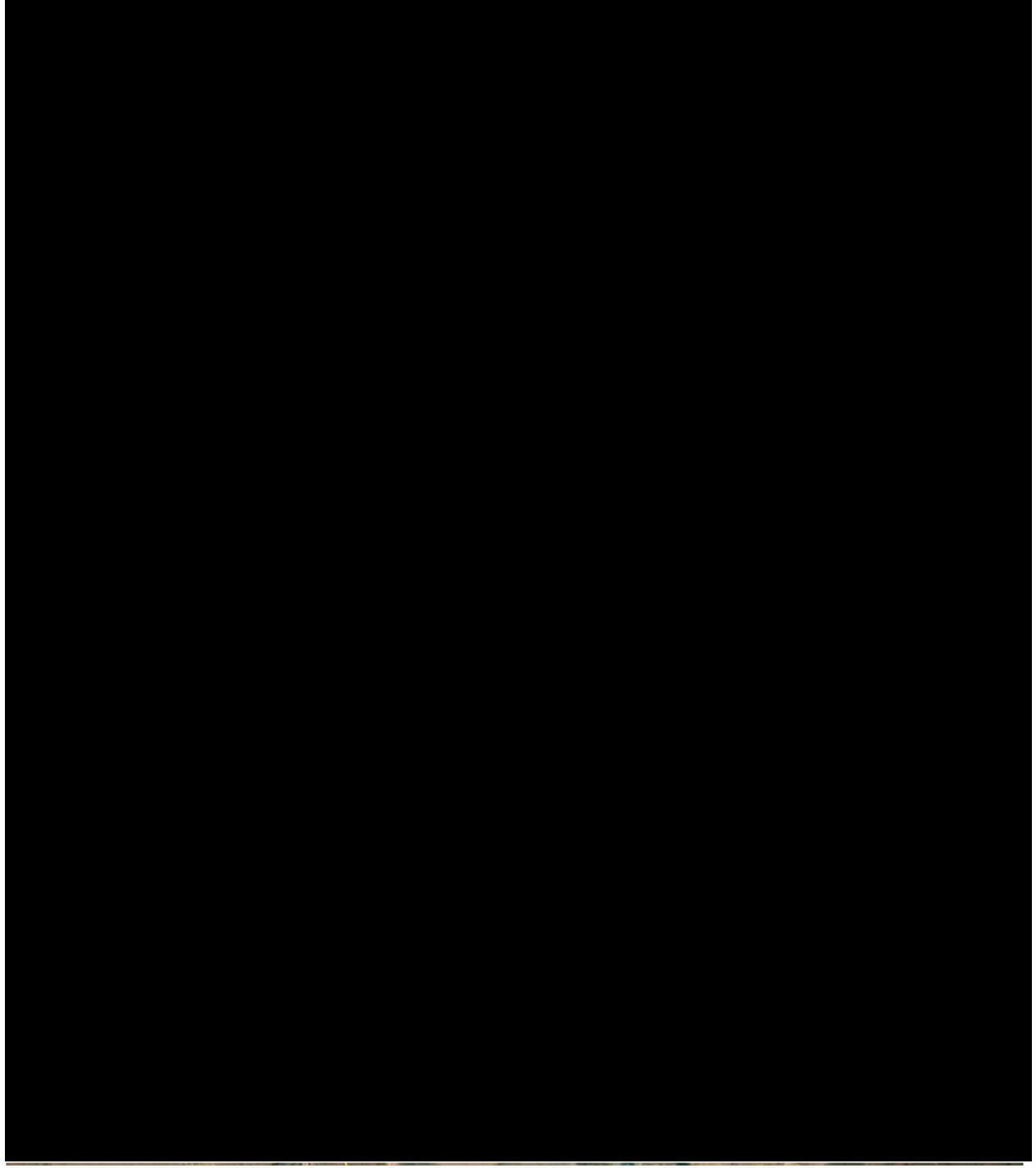
- Areas will be used to support 2025 and 2026 activities



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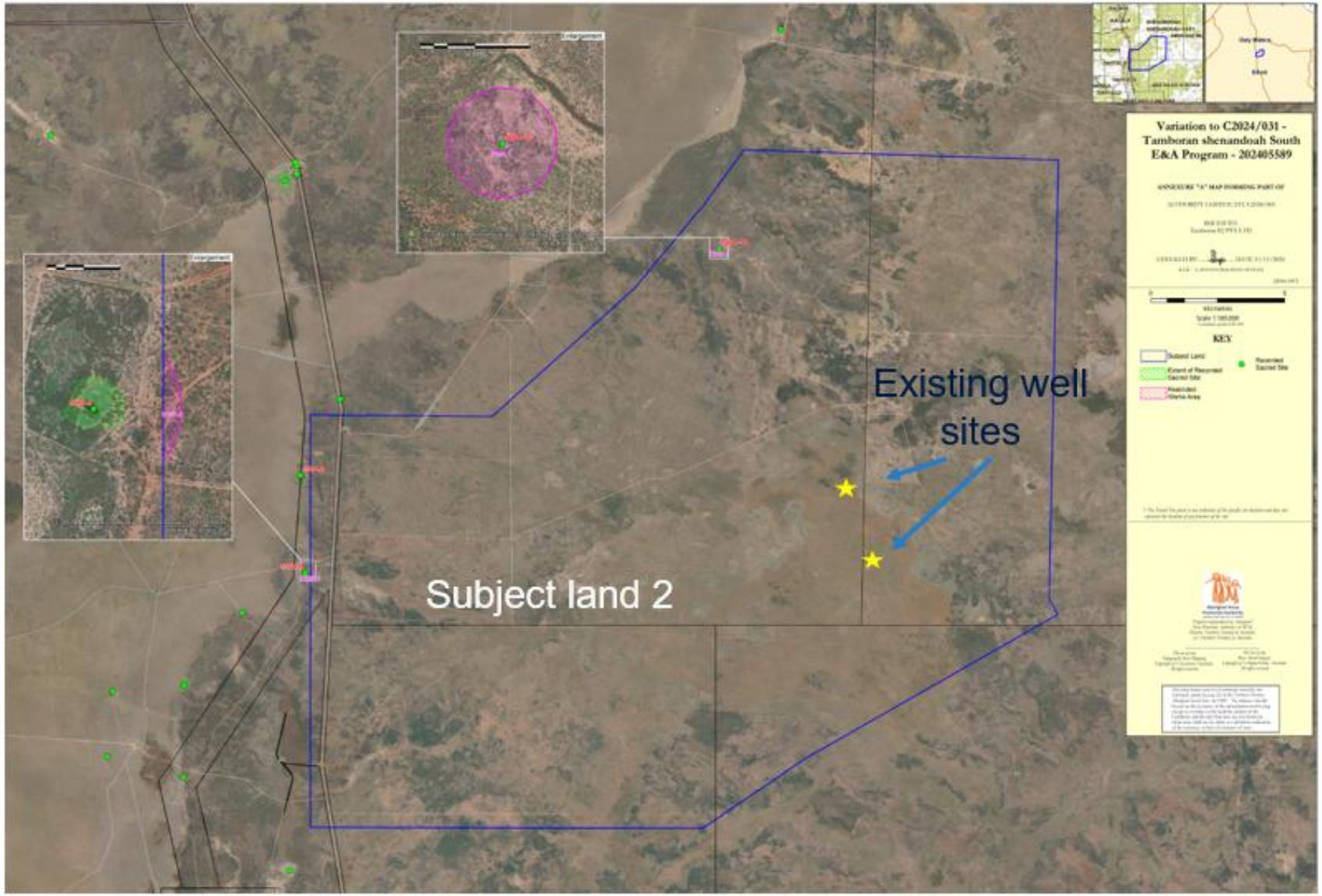
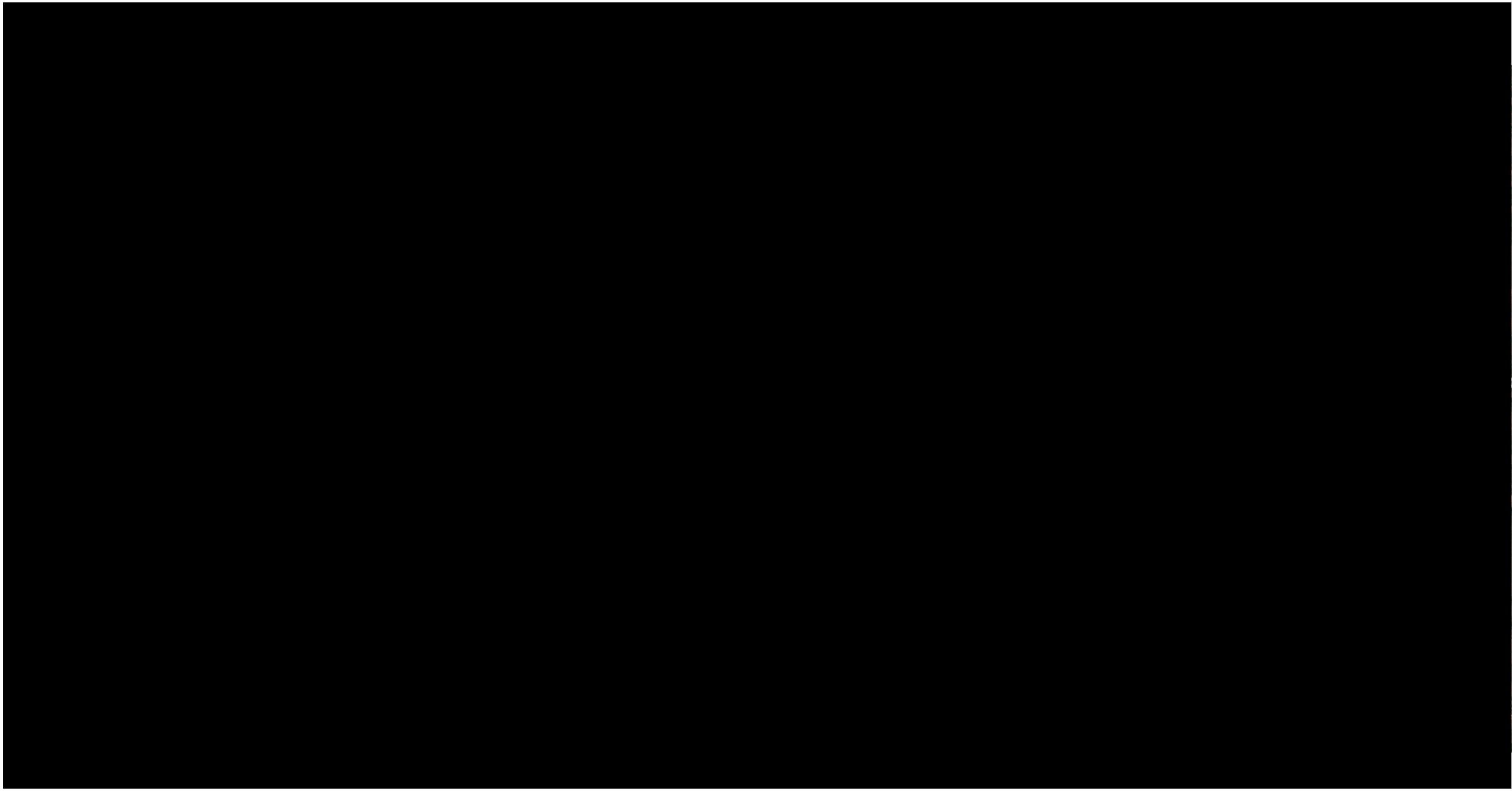
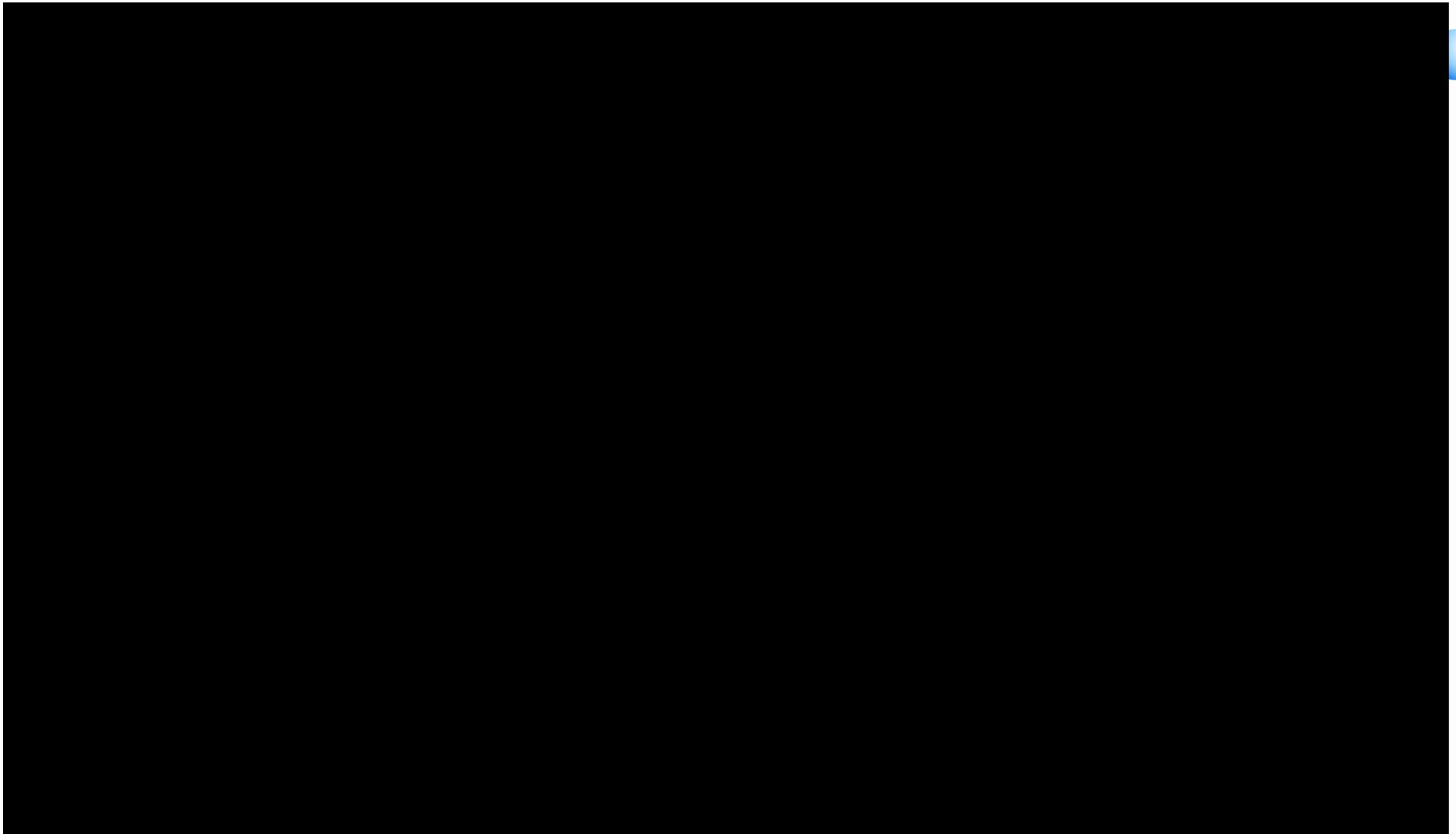


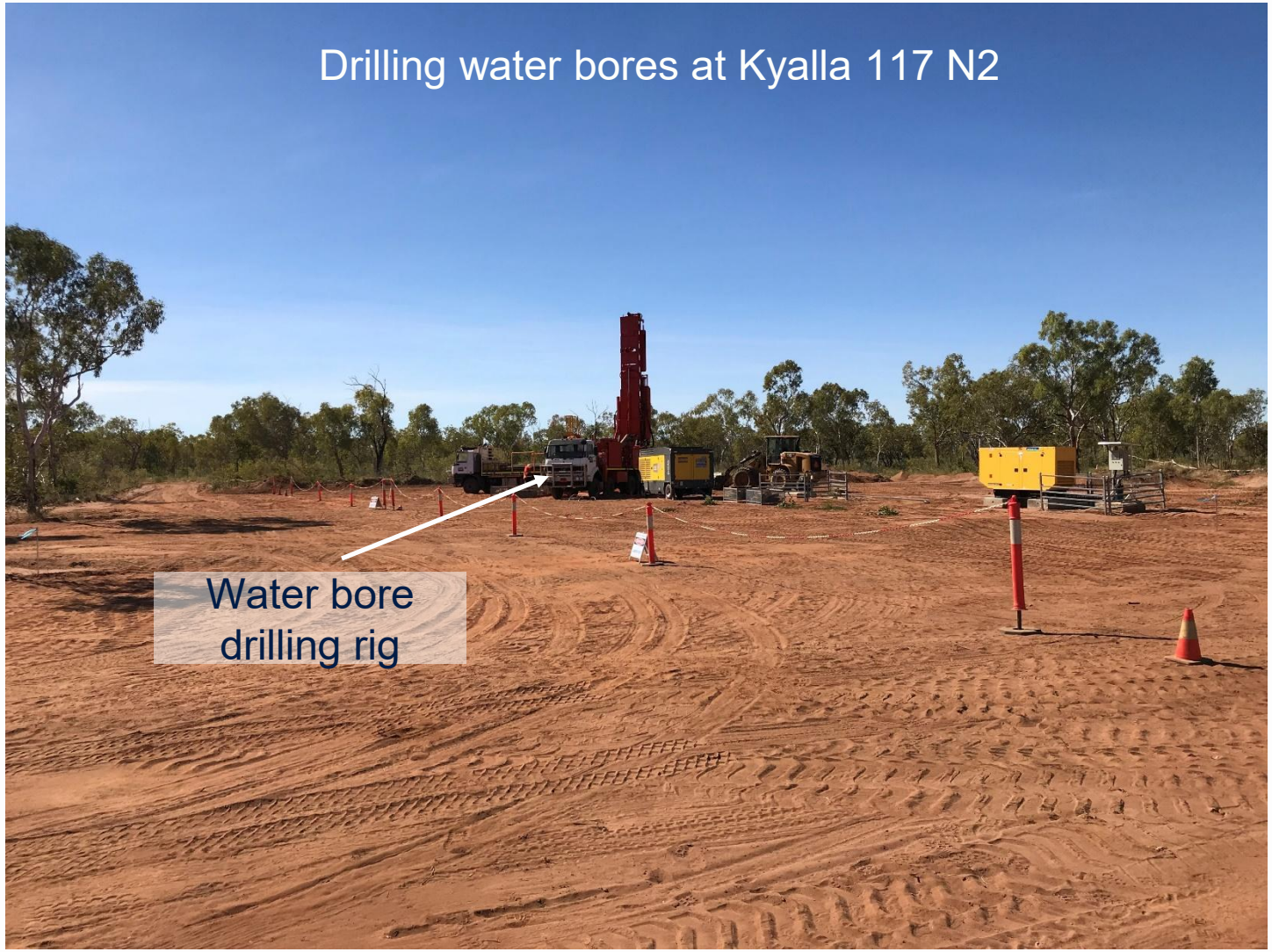


Overview of key activities proposed within clearance areas



Water and monitoring bore drilling

- Up to 10 water bores at each site to monitor and extract water groundwater
- Bores are typically one of the first activities to occur on a site.
- Bores constructed in accordance with the Minimum construction requirements for water bores in Australia standard
- Monitoring of the water quality and level will be completed before and after stimulation to demonstrate contamination has not occurred



Access track construction

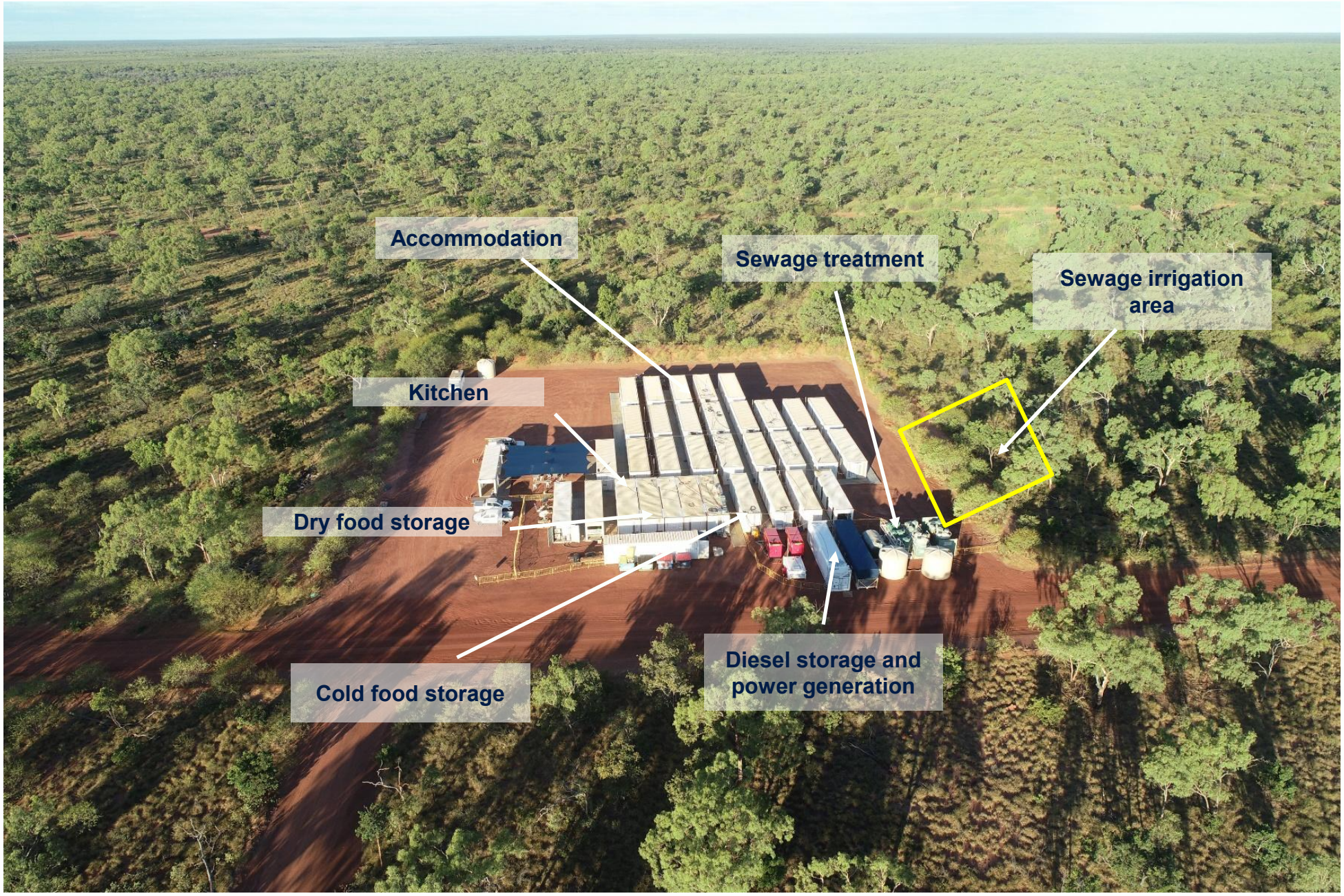
- Maximise use of existing tracks to reduce clearing
- Upgrade and maintenance of pastoral tracks
- Construction of new access tracks to each new location as required
- Designed in accordance with the NTG Road Construction Standards for Rural roads
- Typically 14m wide containing the formed track, shoulder and cut out drains
- Bed level crossings to be utilised in watercourses with culverts used to minimise impacts to water flow

Grading and forming of existing pastoral track to Kyalla 117 N2

Upgraded track with rock check drains

Camps

- Workers house in temporary camps during activities
- Typically used to house 100 people including staff
- Located on 1 hectare area
- Buses transport most workers from Daly Waters Airstrip to camp
- Sewage is treated and irrigated onsite in accordance with the Department of Health guidelines



Gravel Pits

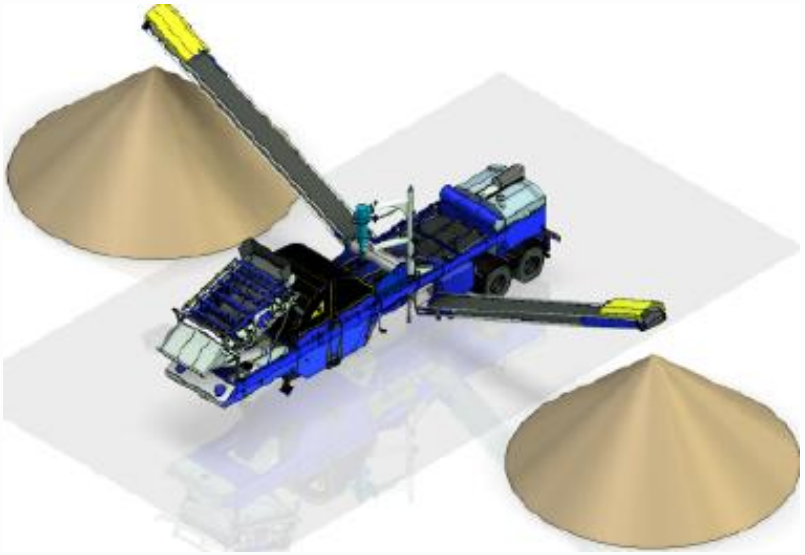
- Gravel is required for access track, lease pads and other infrastructure
- Gravel pits are typically 5 hectares each with multiple pits required per area
- ~50,000$m^{3/}$ year of gravel used per year- mostly roads
- Gravel pits are cleared and stripped of topsoil
- Felled vegetation and soil pushed to edge of pit for use in rehabilitation
- When no more gavel needed, pit will be recontoured, topsoil replaced and felled vegetation return

Existing Gravel pit 3 near Kyalla 117 N2- ~3.5 hectares

Loading gravel from the existing Gravel pit 3 near Kyalla 117 N2-

Sand Wash Plant – as previously discussed

Example mobile wash plant



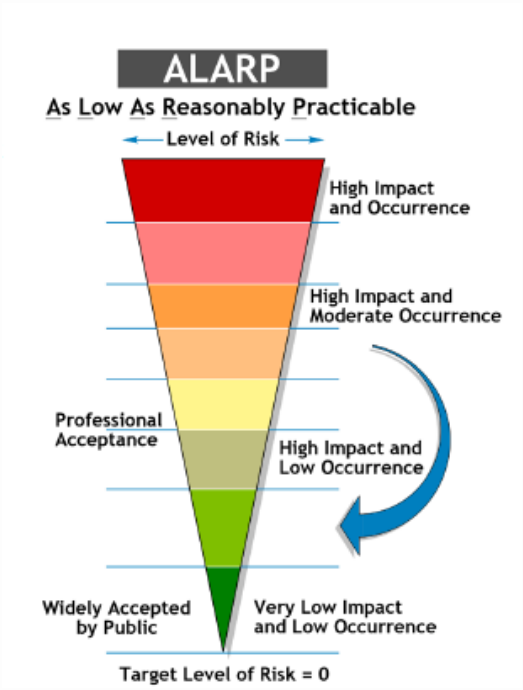
Key controls

Tamboran's Risk Management processes

All activities are risk assessed

Multiple different levels of risk assessment completed

Risks are reduced to ALARP and acceptable



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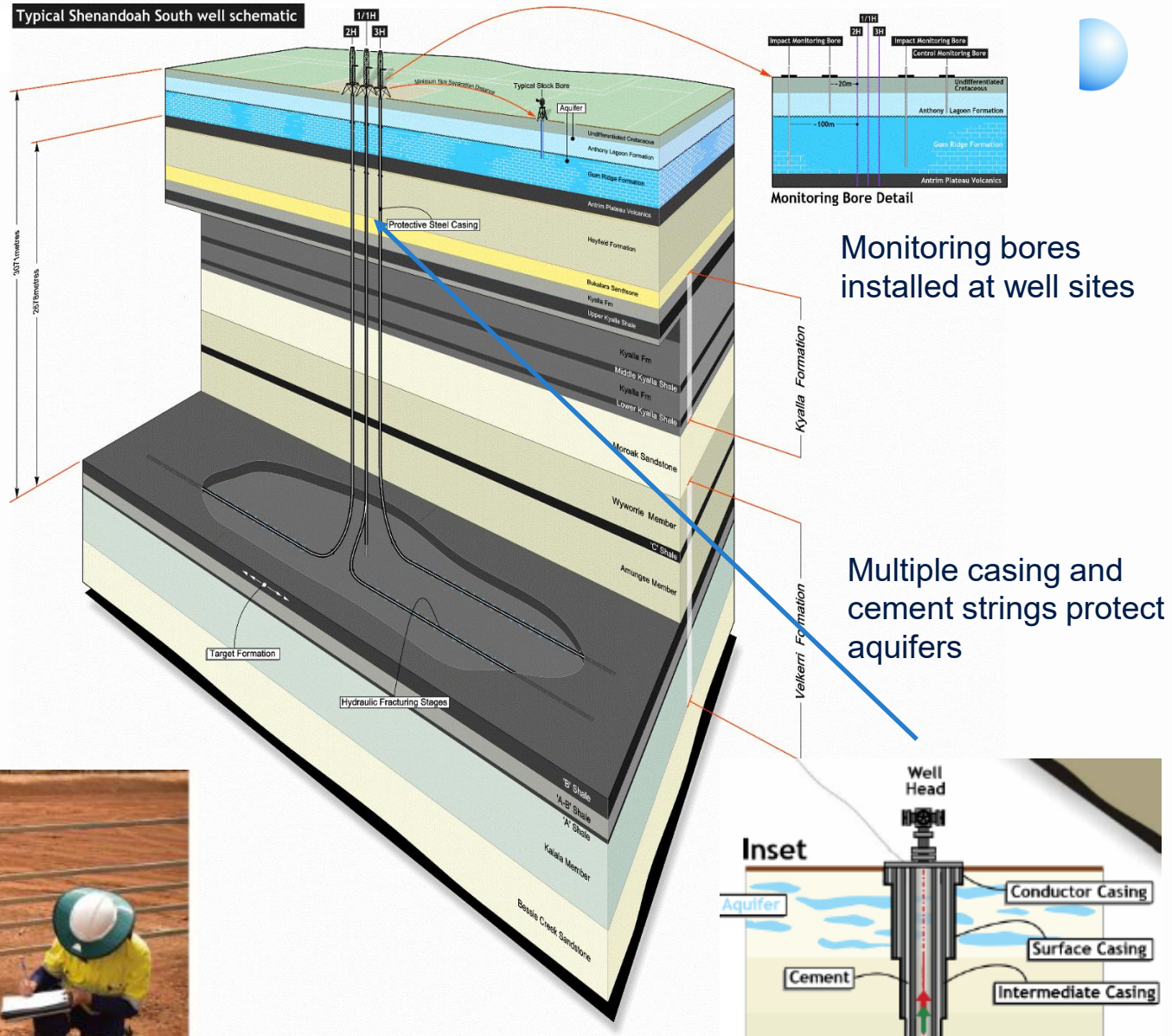
RISK MATRIX

CONSEQUENCES	IMPACT ON TAMBORAN: PEOPLE	IMPACT ON TAMBORAN: ENVIRONMENT, HERITAGE & COMMUNITY	IMPACT ON TAMBORAN: FINANCIAL ($A)	EXTERNAL RESPONSE: STAKEHOLDER	EXTERNAL RESPONSE: LAWS, REGULATION AND CIVIL ACTIONS	LIKELIHOOD: 1 REMOTE (<1% chance of occurring within the next year. Occurs as a '100-year event' or less frequent.)	2 HIGHLY UNLIKELY (<10% chance of occurring within the next year. Could occur within decades.)	3 UNLIKELY (<30% chance of occurring within the next year. Could occur within the next few years.)	4 POSSIBLE (<60% chance of occurring within the next year. Could occur within months to years.)	5 LIKELY (<90% chance of occurring within the next year. Could occur within weeks to months.)	6 HIGHLY LIKELY (Likely to happen multiple times a year)
6 CATASTROPHIC	Multiple fatalities >4 or life-threatening illness or total permanent disability to a large, exposed group (≥10 people).	Extensive, permanent damage to the environment, including species, habitats, ecosystems or area/s of cultural significance. Long- term social unrest and outrage within community.	>$100m	Multiple stakeholder groups taking coordinated action, as reflected in media channels with significant reach and influence (e.g. blockade/boycott negatively impacts substantial aspects of operations and are covered in media for more than 1 week).	Criminal charges against any director or senior executive involving jail or loss of right to manage the company. Public inquiry – requiring considerable resources and Executive Leadership time. Loss of licence to operate.	6 CATASTROPHIC	HIGH	HIGH	VERY HIGH	VERY HIGH	VERY HIGH	VERY HIGH
5 CRITICAL	1 – 3 fatalities or life-threatening illness or total permanent disability to a small, exposed group (<10 people).	Extensive, long-term, partially reversible damage to the environment, including species, habitats, ecosystems or area/s of cultural significance. Prolonged community outrage.	>$25-100m	Multiple stakeholder groups mobilising and encouraging others to act, as reflected in media channels with significant reach and influence with substantial negative influence (e.g. social media campaign calling for protest, escalating over several days).	Criminal charges against any director, senior executive or senior manager not involving jail or loss of right to manage the company. Prolonged major litigation – exposure to significant damages / fines / costs. Suspension / restriction to operate an asset.	5 CRITICAL	MEDIUM	MEDIUM	HIGH	VERY HIGH	VERY HIGH	VERY HIGH
4 MAJOR	Injury or illness to one or more persons, resulting in permanent partial disability.	Long-term, reversible damage to the environment, including species, habitats, ecosystems or area/s of cultural significance. High levels of tension within the community.	>$10-25m	More than one stakeholder group's opinion or view influencing other stakeholders, reported through media channels with some reach and influence (e.g. government comments in national media or in Parliament).	Criminal charges against any employee (not described above) Major litigation – exposure to damages / fines / costs.	4 MAJOR	MEDIUM	MEDIUM	MEDIUM	HIGH	VERY HIGH	VERY HIGH
3 SERIOUS*	Injury or illness that requires treatment as an in-patient in a hospital OR immediate treatment for a serious injury OR medical treatment within 48 hours of exposure to a substance.	Serious, medium –term, reversible impacts to the environment, including species, habitats, ecosystems or area/s of cultural significance. Moderate levels of community tension.	>$1-10m	More than one group offering an opinion or view, reported through media channels with reach and influence (commentary lasting one 24-hour media cycle across internet, print, television, radio).	Non-compliance with conditions of licence to operate an asset or to conduct an activity. Litigation and exposure to damages / fines / costs.	3SERIOUS	LOW	MEDIUM	MEDIUM	MEDIUM	HIGH	HIGH
2 MODERATE	Injury or illness to 1 or more persons resulting in medical treatment, up to 5 days lost time or alternative / restricted duties for up to 1 month.	Moderate short-term impacts to the environment, including species, habitat, ecosystems or area of cultural significance. Isolated examples of community tension.	>$250k-$1m	A single stakeholder group drawing attention to an incident, issue or approach, conveyed though media channels with potential reach and influence (e.g. some social media complaints or local media reports).	Moderate non-compliance with external mandatory obligations or breach of contractual or other legal obligations (not described above).	2 MODERATE	LOW	LOW	MEDIUM	MEDIUM	MEDIUM	MEDIUM
1 MINOR	Injury or illness requiring first aid to 1 or more persons, or a no treatment case.	Limited environmental or cultural heritage impact- readily dealt with and contained on site. Individual community member voicing concern.	<$100k	A person or organisation signalling interest in an incident or event using channels with limited reach or influence (e.g. letter of complaint).	Minor non-compliance with external mandatory obligations or breach of contractual or other legal obligations.	1 LOW	LOW	LOW	LOW	MEDIUM	MEDIUM	MEDIUM

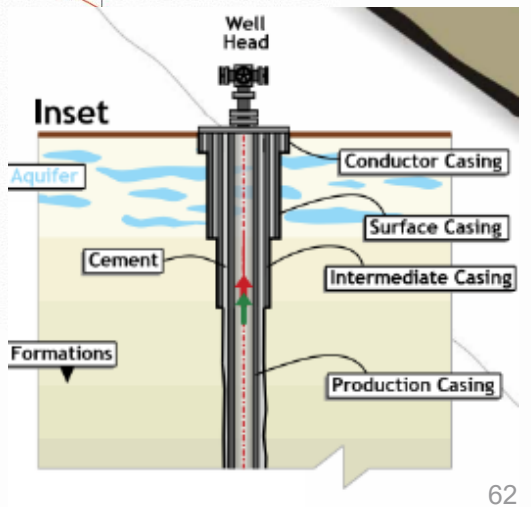
Groundwater protection

- The target shales are ~2.6 km below the closest regional aquifer (Gum Ridge)
- Wells are designed and constructed with multiple layers of steel and cement to protect aquifers
- We test and monitor the integrity of wells
- We monitor groundwater at each well site before and after hydraulic fracturing
- Wells are plugged with cement at the end of life



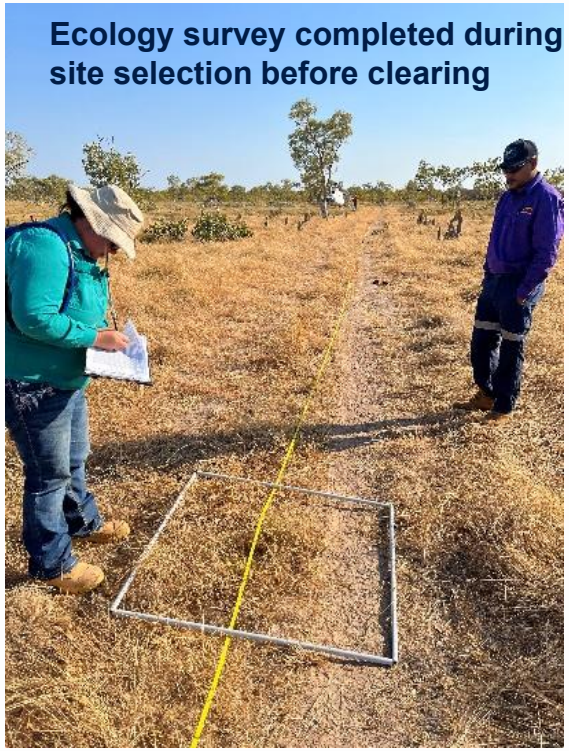
Monitoring bores installed at well sites

Multiple casing and cement strings protect aquifers



Management of Impacts - Land Clearing

- Clearing of vegetation is required to construct sites and access tracks
- Sites are scouted by ecologists and cultural managers during site selection
- Sensitive sites are avoided
- Clearing in creeks and watercourses avoided
- Waterway crossing constructed to prevent flow impediments
- Cultural managers employed to inspect areas prior to clearing to identify any fauna
- Clearing to avoid large trees and nests where possible
- Weed prevention and detection implemented



Decommissioning and rehabilitation works

- Decommissioning wells and rehabilitating disturbed areas back to pre-existing levels
- Plugging wells with concrete to protect aquifers
- Removing all infrastructure, re-spreading topsoil and reseeding vegetation

Example of a site being progressively rehabilitated in QLD

Questions ?

Appendix J.1.2 07 250605 FW Variation to certificate C2024_030-extension of subject land 1 and new subject land 6

Outlook

FW: Variation to certificate C2024/030- extension of subject land 1 and new subject land 6

From Matt Kernke [redacted]
Date Thu 6/5/2025 1:47 PM
To [redacted]
Cc [redacted] Emily Beresford-Cane [redacted] Armando de la Flor Olavide [redacted] Tamboran Contact <tamboran.contact@tamboran.com>; Faron Thibodeaux [redacted]

3 attachments (12 MB)
Water related documents.zip; AAPA request- subject land 1 and 6.pdf; AAPA Application.kmz;

Dear [redacted]

Confirmation that we have submitted the Variation to AAPA certificate C2024/030 to AAPA. This was foreshadowed in our annual work program and clearance request report and work program meetings.

[redacted]

Kind Regards
matt

Matt Kernke
Vice President, Environment and Approvals
tamboran
RESOURCES

[redacted]

AAPA Authority Certificate Request- Variation to C2024/030

EP98, 117, 76 – Beetaloo Joint Venture (Tamboran / Falcon)

Version:	**1.0**
Submitted:	June 12 2023
Presented by:	Tamboran

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1 Introduction

Tamboran B2 Pty Ltd (ABN 42 105 431 525) (*Tamboran*) holds a 77.5% ownership interest in Exploration Permits (EP) 76, 98 and 117 (the Permits) under the Beetaloo Joint Venture (JV) with Falcon Oil and Gas (the Beetaloo JV). Tamboran B2's *Northern Territory Government work program commitments* require the completion of ongoing exploration and appraisal (E&A) activities as a condition of approval.

As a part of Tamboran's forward work program (***work program)***, Tamboran B2 is proposing to undertake a range of additional exploration and appraisal activities across its tenure to test the technical and commercial viability of the underlying shale formation. This includes the civil construction of a series of new exploration locations and the drilling, completion, stimulation and testing of exploration wells on EP 98 over the next 5 years.

Tamboran B2 Pty Ltd has submitted a work program and clearance request for the variation of the existing clearance areas covered in certificate C2024/030. This request proposes to seek an Aboriginal Area Protection Authority (AAPA) clearance certificate for an expansion of the previously defined subject land 1 and historic (2018) clearance areas(referred to herein as subject land 6).

Tamboran requests that an Authority Certificate is obtained via agreement in accordance with s22(1)(b) of the Northern Territory Sacred Sites Act. The agreement forming the basis of this Authority Certificate application are:

- Exploration Agreement: Exploration Permit Application 117 - Borroloola Barkly Region, Northern Territory between Sweetpea Corporation Pty. Ltd. and the Local Aboriginal Groups and the Northern Land Council, as executed by tripartite deed on 23 November 2005;
- Exploration Agreement: Exploration Permit Applications 98 & 99 and Exploration Permit 76 - Borroloola Barkly Region, Northern Territory between Sweetpea Corporation Pty. Ltd. and the Local Aboriginal Groups and the Northern Land Council; as executed by tripartite deed on 24 November 2003.

2 AAPA Certificate Request Scope

The variation of the existing C2024/030 is split into 2 major items; expansion of size and activities within subject land 1 and expansion of size and activities within previous cleared areas of subject land 6.

2.1 Subject land 1 expansion

The list of activities that could be undertaken **within** **the nominated clearance** areas are provided below.

1. [redacted]
3. [redacted]
4. [redacted]

v. [redacted]

- [redacted]

[redacted]

[redacted]

[redacted]

5. [redacted]

[redacted]

7. [redacted]

[redacted]

[redacted]

[

[redacted]

[redacted]

3 Request Area

The spatial files for the requested areas are provided with this application.

4 Supporting information

The Beetaloo JV has submitted the Annual work program and clearance request report and supporting information to the Northern Land council covering the proposed scope within the clearance areas.

A copy of this submission is included within Appendix A.

Appendix A- NLC work program and clearance report

2025 Work Program Update and Clearance Request

EP 98, 117, 76 – Beetaloo Joint Venture (Tamboran /Daly Waters Energy/ Falcon)

Version:	**1**
Submitted:	Matt Kernke
Presented by:	Tamboran
Review Date:	19/02/2025

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1 OVERVIEW

Tamboran B2 Pty Ltd (ABN 42 105 431 525) (Tamboran) holds a 77.5% interest in Exploration Permits (EP) 76, 98 and 117 ("the Permits") under the Beetaloo Joint Venture ("the Beetaloo JV") with Falcon Oil & Gas Australia Pty Ltd ("Falcon"). Tamboran is the operator of the Beetaloo JV, with all representations by Tamboran being on the behalf of the Beetaloo JV.

Since 2015, the Beetaloo JV has drilled eleven (11) wells in the Beetaloo Sub-basin ("Beetaloo") across EP 76, 98 and 117. With the successful appraisal of the Shenandoah S 1H well on EP 117, Tamboran is proposing to undertake an extended appraisal program on the newly constructed Shenandoah South 2 well site, with the intent to commence the sale of appraisal gas in 2026. Extended appraisal of multiple exploration & appraisal (E&A) wells is the next step in evaluating whether full scale production is feasible and how it should be designed.

This document is designed to provide the Native Title holders with the following information, in accordance with the Exploration Agreements (EA) and our stakeholder engaging requirements:

- A summary of activities exploration and appraisal activities completed in the previous year (Section 2)
- Information on proposed activities that could be completed in 2025 (Section 3)
- Approvals anticipated to be submitted to covered forward programs (Section 4)
- Sacred site clearance requests to assist in activity planning and the submission of approvals (Section 5)
- Detailed information on the proposed regulated activity (Appendix A)
- Summary of the environmental outcomes, risks and controls (Appendix B)

Tamboran's proposed 2025 E&A scope will also include a range of additional activities designed to further define and evaluate the underlying shale resources of the area, including the drilling, stimulation and testing of new wells, the acquisition of a 3D seismic, construction and operation of a sand wash plant at Kyalla 117 N2 (Figure 1).

A summary of the proposed 2025 work program includes:

- [redacted]
- [redacted]
- [redacted]
- [redacted]
- Construction and operation of a sand wash plant including a sand washing trial
- [redacted]

In accordance with the Exploration Agreements (EA) between and the Native Title Holders (NTH), Tamboran is required to undertake on country meetings for all proposed activities to be completed each year. Tamboran B2 requests the Northern Land Council's ("NLC") assistance to:

- Complete the required stakeholder engagement with Native Title Holders as their legal representative.
- Undertake annual on country meetings to discuss the proposed 2025 work program scope.
- Facilitate a *Sacred Site Clearance Survey* to comply with the obligations of the Exploration Agreement(s) and to support an application for an Aboriginal Areas Protection Authority ("AAPA") Certificate for the activity as described below.

This application is also designed to provide information to satisfy stakeholder engagement requirements defined in section 7 of the Petroleum (Environment) Regulations 2016. This includes information on the proposed activity description, risks and proposed controls within the sacred site clearance areas to minimise environmental harm. This information will form part of future environmental management plans, which are a statutory document that provides additional details of how environmental risks and impacts will be managed to as low as reasonably practicable (ALARP) and an acceptable level.

Tamboran respectively request the NLC to convey all information to the NTH in an acceptable form and are happy to answer any questions and provide additional information to facilitate this task. Tamboran will present information about our proposed 2025 activities during the on country meetings, with advice sought from the NLC regarding the content and format.

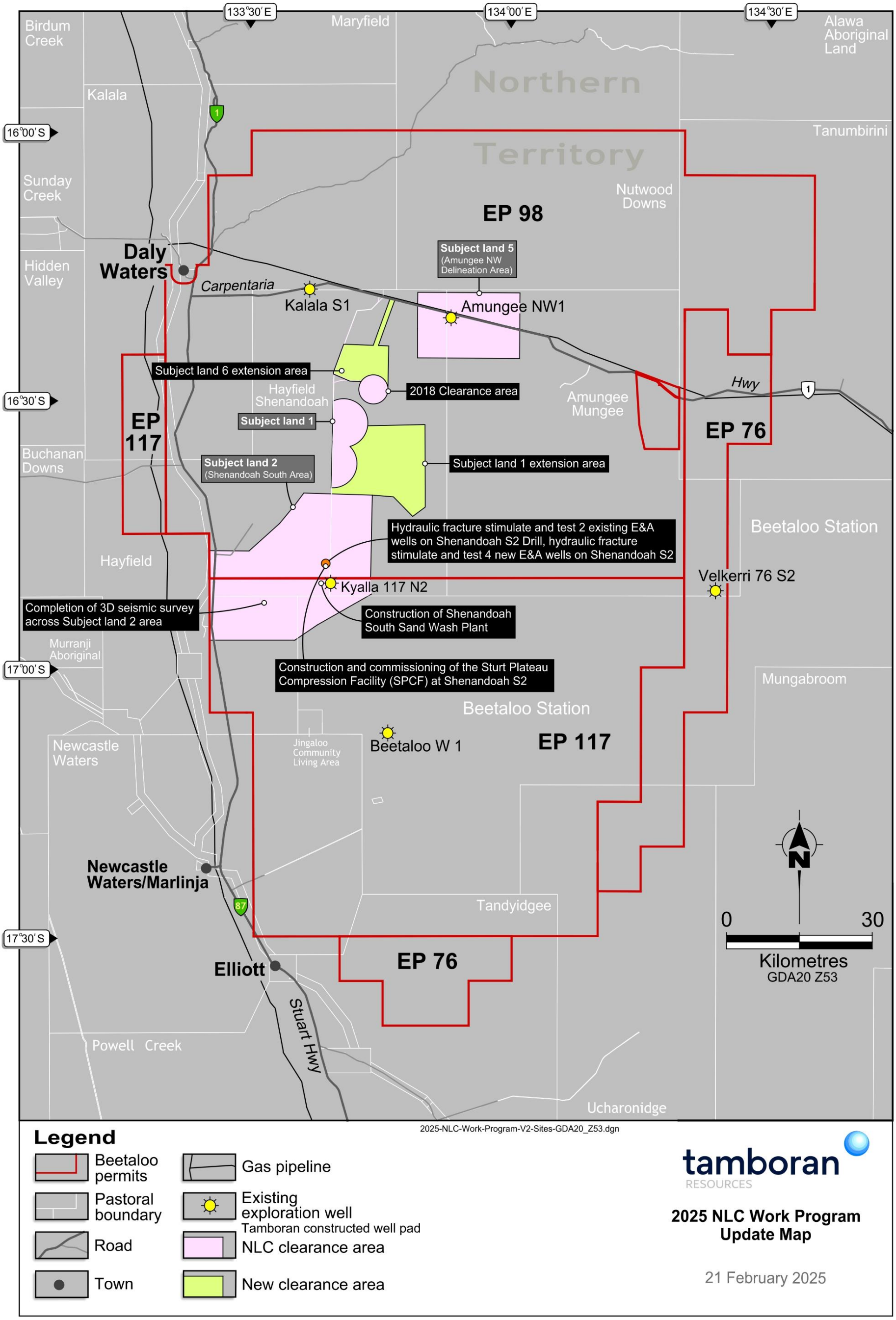


Figure 1 Overview of Tamboran's proposed focused areas and 2025 work program

2 Activity update

Tamboran is seeking to undertake E&A activities that if successful, will result in the future large-scale development of the shale resources within EP 76, 98 and 117. The size and nature of a production development is still in the conceptual phase, with information collected during appraisal required to assist in advancing the final engineering design All activities are undertaken with the intent of commencing production as soon as possible.

During Calendar Year (CY) 2024, the Beetaloo JV completed a number of important project milestones on achieving its project objectives. These milestones include:

- [redacted]
  - [redacted]
  - [redacted]
    - [redacted]
      - [redacted]
      - [redacted]
      - [redacted]
      - [redacted]
      - [redacted]
      - [redacted]
      - [redacted]
      - [redacted]
        - [redacted]
        - [redacted]
        - [redacted]
    - [redacted]

[redacted]

- [redacted]
- [redacted]
  - Three on country meetings were held to present the 2024 Work Program with relevant Native Title Holders (NTHs) were conducted in:
    - Mataranka on the 22nd of April;
    - Katherine on the 23rd of April including a number NTHs joining via Teams from NLC Darwin office;
    - Elliott on the 9th of May.
  - A site visit to the Origin Energy Spring Gully and Reedy Creek Operations in the Maranoa region QLD was undertaken for 13 Native Title Holders and 4 NLC staff – 26th to 30th May.
  - Two Scouting field trips were completed in 2024:
    - Land condition assessment scouting - 27 May to 1st of June.
    - Cultural heritage assessment scouting – 3rd to 7th June

The key near term (2025/2026) priority of the project is to commence an extended E&A appraisal program of the Velkerri B shale within the Shenandoah South Area, including the sale of appraisal gas and the construction and operation of a proposed sand wash plant. These activities are considered important steps on the pathway towards full-scale development to:

1. Demonstrate the deliverability of the underlying shales over an extended period.
2. Collect production information to underpin the design of future shale gas development, including well spacing and total well/pad numbers.
3. Reduce well construction costs through the acquisition of locally produced sand.

The Beetaloo JV will also commence planning to progress towards retention licences / production licences, including other approvals to support transitioning to production. This includes (amongst various other approvals) recommencement of negotiations of the production Indigenous Land Use Agreement ("ILUA"), environmental impact assessment, social impact assessment and front-end engineering design ("FEED") covering a development scenario.

A larger development will focus on both domestic and export markets. The design of a larger development and subsequent approvals will be underpinned by information collected from the CY 2025 to CY 2026 E&A programs.

3 Proposed 2025 work program update

The CY 2025 work program will focus on activities in EP 98 and 117 within the Hayfield Shenandoah Pastoral station. The following scope is proposed in 2025:

- [redacted]
- [redacted]
- [redacted]
- [redacted]
- Construction and operation of a sand wash plant, adjacent to the Kyalla 117 N2 well site.
- [redacted]

The detailed summary of the work program is proposed in Table 1, with the location provided in Figure 1 and Figure 2. Further information on the nature of the activities proposed to be completed are provided in

Appendix A. Appendix A provides information on proposed regulated activities to inform stakeholder engagement and sacred site clearances.

Photographs and schematics of typical activity phases and site layouts is provided in section 5.3.

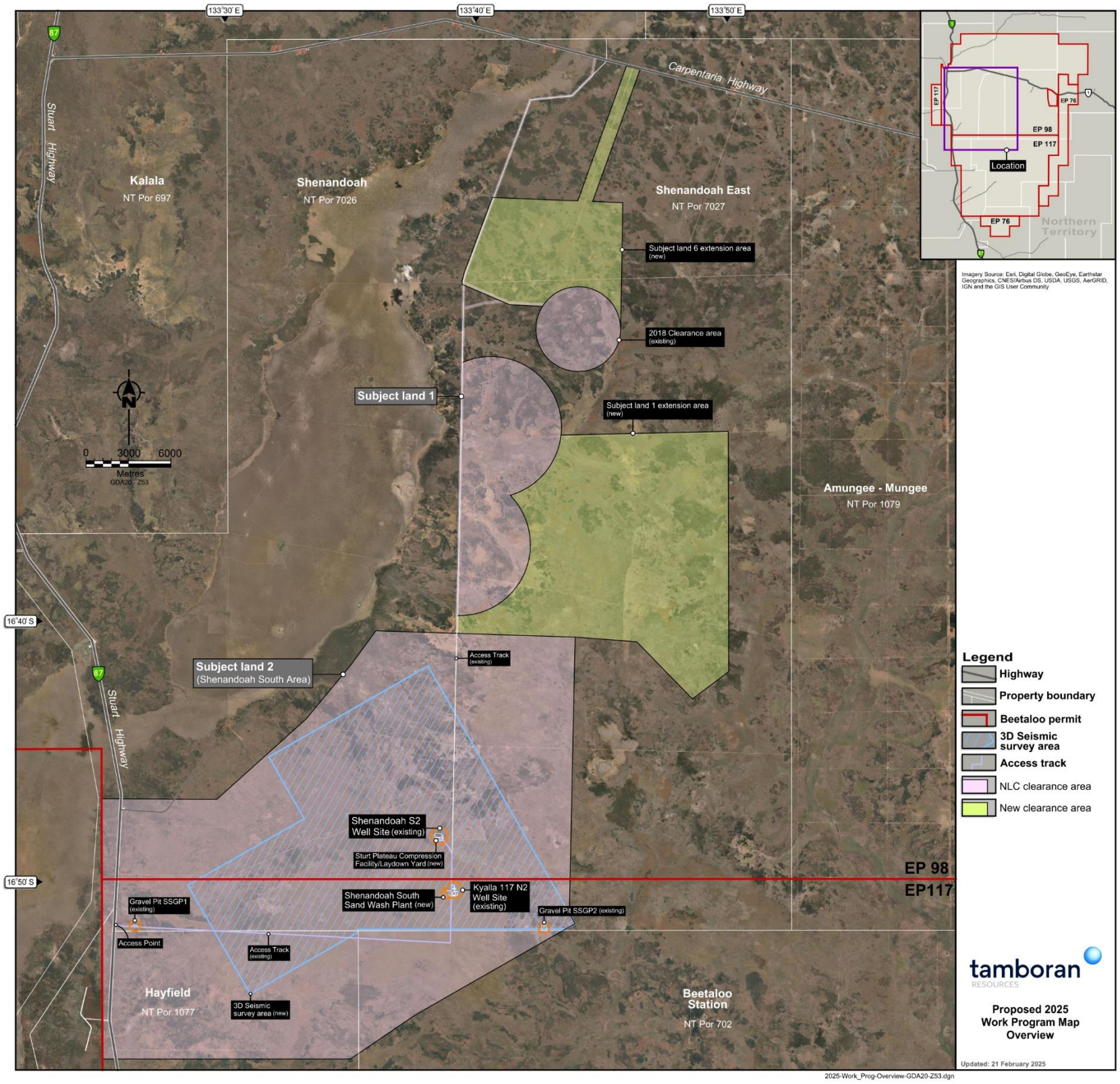


Figure 2 Detailed map of 2025 proposed activities

Table 1 EP 76, 98 and 117 CY 2025 Work Program Summary (including contingent scope)

Exploration Permit	Location	Location type	Pastoral Stations/ NT Portions	2025 work program overview
New Works				
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]

Exploration Permit	Location	Location type	Pastoral Stations/ NT Portions	2025 work program overview
				○ [redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]

Exploration Permit	Location	Location type	Pastoral Stations/ NT Portions	2025 work program overview
				▪ [redacted] ▪ [redacted] ▪ [redacted]
EP 117	Kyalla 117 N2	Sand wash plant	Shenandoah (NT Por 7026)	The Shenandoah South sand wash plant (SSWP) is intended to provide sand for exploration and appraisal activities only. Sand is screened and washed to remove both fine and coarse sand, as well as rocks, sticks, dirt and other impurities. The proposed SSWP site is adjacent to the Kyalla 117 N2 well site and is anticipated to be operated as a trial proof of concept over the 2025/2026 period. Depending on the success of the trial, the life of the SSWP may be extended over the next 5 year period. Refer Figure 5 and Figure 13. Sand for the wash plant will be sourced from sand generated by the Beetaloo JV during construction, primarily from the excavation of pits, sumps and sediment/retention basins. It is anticipated that the trial will be run in partnership with a local indigenous business to wash up to 60,000 tonnes of sand. The activities will involve: ○ Site establishment for the SS sand wash plant site including clearing, topsoil stripping, fencing, etc. ○ Civil construction for the SS sand wash plant site including earthworks to contour and grade the wash plant and stockpile pads and access tracks, excavation of water storages to store raw water, recycled wash water and to settle out solids; ○ Mobilisation and installation of mobile/modular sand wash plant including mobilisation to site and installation on prepared pad. ▪ Operation and maintenance of the sand wash plant. ▪ Stockpiling and load-out of washed sand to well pads as required. ▪ Management and recycling of ‘reject’ sand and water. Ancillary activities comprising:

Exploration Permit	Location	Location type	Pastoral Stations/ NT Portions	2025 work program overview
				○ Use of existing approved camp facilities. ○ Use of existing property access tracks. ○ Extraction of groundwater under existing WELs estimated at around 30-50ML/year Refer Figure 5 or an indicative site layout of the proposed sand wash plant.
[redacted]				
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]

Exploration Permit	Location	Location type	Pastoral Stations/ NT Portions	2025 work program overview
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]

Exploration Permit	Location	Location type	Pastoral Stations/ NT Portions	2025 work program overview
				■ [redacted]

4 E&A Approvals

Tamboran proposes to submit a range of approvals to enable the completion of E&A activities within the 2025/2026 period. Each approval typically take 12 months+ to obtain from scoping to final approval, necessitating the early submission and allowance of activity optionality to support future E&A programs (i.e. contingent well locations or additional water volumes to allow future activity options).

Approvals in 2025 will be broken into the following headings:

- Environmental Management Plans
- [redacted]
- [redacted]
- AAPA certificate applications

The proposed E&A approvals are summarised in Table 2.

Table 2 Summary of CY proposed approval submissions

Approval type	Approval name	Scope	Expected submission date
[redacted]	[redacted]	[redacted]	[redacted]
AAPA certificate	**Aboriginal Area Protection Authority (AAPA) Certificate Variation**	Variation of existing certificate **C 2024/065** covering subject land 2 to include: • Inclusion of sand extraction and a sand wash plant within subject land 2 • [redacted] [redacted] [redacted]	AAPA application Late February 2025 prior to on country meetings to enable AAPA to engage directly with NLC.

Approval type	Approval name	Scope	Expected submission date
[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	
New EMP	**Shenandoah South Sand Washing EMP**	New EMP covering the construction and operation of temporary sand washing plant on EP 117 to support E&A activities.	NLC submission March 2025- ideally submitted before the on country meeting

Approval type	Approval name	Scope	Expected submission date
[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]

4.1 Environmental Management Plans

Prior to undertaking any activity, an EMP must be submitted to the Environment Minister and approved. EMP's are a technical document that provides additional details of how environmental risks and impacts will be managed to as low as reasonably practicable (ALARP) and an acceptable level. This document describes how Tamboran will comply with the various requirements outlined in the Exploration Agreements , the Code of Practice for Onshore Petroleum Activities in the Northern Territory (**the Code**), the Petroleum (Environment) Regulations 2016 and any other applicable laws. The scope of EMPs is often designed to cover multiple years of activities within areas directly covered by sacred site clearance or a subset of activities. There is often confusion about why Tamboran seeks a range of activities to be included in an EMP beyond the proposed work program. This is simply due to the time it takes to obtain approvals, as it is difficult to obtain approvals and try to undertake activities within the early dry season of a given year. This is why on country meetings are so important, where Tamboran outlines the proposed scope to the NTH which is often already covered under various EMP's. A schematic of how the Sacred site clearances, EMP's and on country meetings interrelate is provided in Figure 3 Activity planning, engagement and approval process

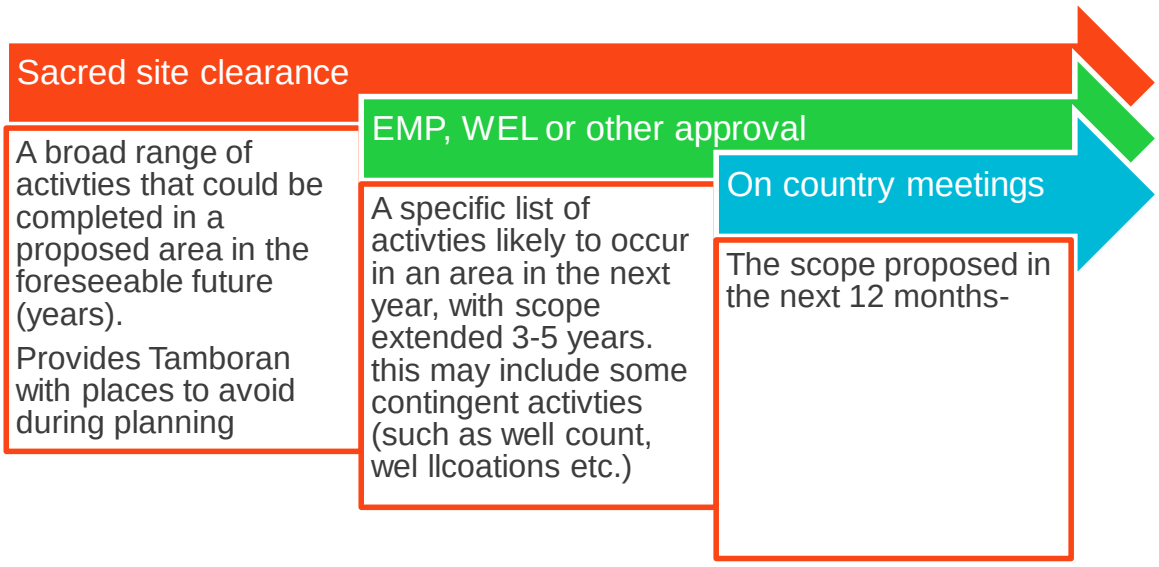


Figure 3 Activity planning, engagement and approval process

During the development of an EMP, stakeholder engagement is completed with Native Title Holders and the NLC as a part of our annual on country meetings and sacred site clearance. Information is provided in the annual work program and clearance request report (this report) which provides a basis for the engagement. This engagement aligns closely with the Petroleum (Environment) Regulation requirements for stakeholder engagement The information provide includes a description of the activity proposed, the locations of the proposed activity and information on environmental risks, controls and outcomes to be achieved. This is the first step in preparing an EMP, with information obtained through the engagement used to develop the content of the EMP.

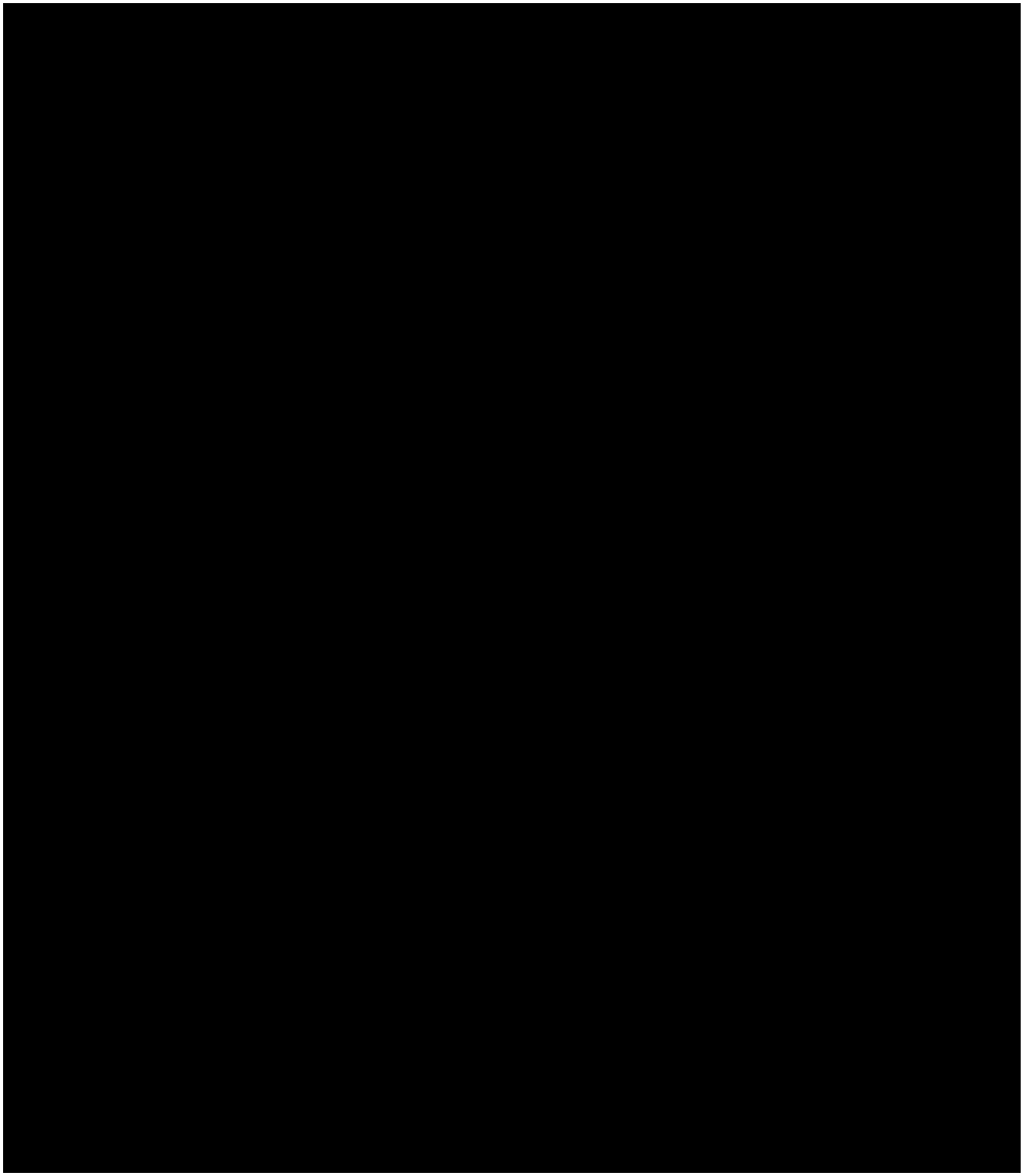
EMP's are provided to the NLC for review prior to approval by the NTG and before commencement of activity (in accordance with the requirements of the Exploration Agreement).Tamboran will respond to each question/ comment raised by the NLC and will incorporate any required changes to the EMP scope where appropriate.

An overview of each of the proposed EMP approval proposed to be submitted during the period is provided in the following sections. Please note additional EMP's may be required to support E&A activities and these will be submitted to the NLC as an out of cycle request raised during routine operator- NLC meetings.

4.1.1 New Shenandoah East Exploration and Appraisal EMP

[redacted]

- [redacted]
- [redacted]
- [redacted]



4.1.2 Sand wash plant

A new EMP will be submitted covering the construction and operation of a sand wash plant within Subject Land 2. Sand is a critical input into hydraulic fracturing as proppant, with all sand to date being imported into the Northern Territory and transported to sites via road haulage.

Sand supplied to hydraulic fracturing operations must be within a specific specification, with out of specification sand potentially impacting on the physical completion of the well, as well as well productivity (gas rates). Suitable raw sand is screened and washed to obtain product sand with a suitable particle size range (particle size distribution) and remove any impurities (such as clays, silts and organic material) such that it can be utilised for hydraulic fracturing. The raw sand must also have suitable physical and chemical properties, such as yield (i.e. the percentage of the raw sand in the required particle size range that can be processed to become product sand by screening and washing), crush strength (so it doesn't break into smaller pieces down hole under the formation pressure), acid solubility (a measure of sand chemical reactivity) and roundness (which impact how it will flow and lodge in the formation during stimulation).

The wash plant site will initially be established on a trial basis, with a mobile or modular wash plant designed to wash up to 100,000 tonnes of material per year utilised to demonstrate the viability of washing local sand resources for use in hydraulic fracturing. Raw sand will be sourced either from Tamboran B2's construction activities (i.e. sand that has been stockpiled as a result of construction activities), or from local granted Extractive Mineral Permits/Leases. Tamboran generates a significant volume of material through the excavation of pits and sumps, much of which is sand which is potentially suitable to be washed and utilised for hydraulic fracturing. Use of sand generated from construction activities is specifically excluded from requiring an extractive mineral title under the NT Mineral Titles Act (unless the intended use is for sale – for clarity, Tamboran B2 does not intend to sell this sand).

Should the trial be successful, the wash plant site will continue to be utilised, whereby a wash plant will be mobilised to the site on a campaign basis (i.e. for several months or more per year) to produce the required volumes of sand for Tamboran's near term (2025/2026) and ongoing E&A activities as this is critical to reducing the unit cost of each well. It is anticipated that in the long term (2027 and beyond), required sand volumes will be larger and require a higher intensity of extraction and processing. At that time, it is envisaged that the extraction and washing of sand would be undertaken within granted Extractive Mineral Permits or Extractive Mineral Leases under the NT Mineral Titles Act. If the trial is unsuccessful, then imported sand from other parts of the NT, other States or internationally will continue to be utilised.

The sand wash plant will be located on a ~12 hectare site adjacent to the existing Kyalla 117 N2 location within subject land 2. This sis located in a centralised location in proximity to future E&A wells. The activity will involve the following:

- Civil construction for the SS sand wash plant site including land clearing, topsoil stripping, earthworks to contour and grade the wash plant and stockpile pads and the excavation of water storages to store raw water and to recycle wash plant water;
- Drilling of up to two water bores and/or pumping of water from existing bores on Kyalla 117 N2 to the wash plant site under the existing water extraction licences. Water extraction is estimated to be around 30-50ML/year during the sand washing trial, with the majority of water recycled;
- Construction and operation of small offices, maintenance sheds, sand storage sheds/covers and ablutions facilities, including irrigation of sewage wastewater as per the Department of Health requirements.
- Mobilisation and installation of a mobile/modular sand wash plant including mobilisation to site and installation on prepared pad.
- Operation and maintenance of the sand wash plant.
- Stockpiling and load-out of washed sand by haul truck to well pads as required.
- Management and recycling of 'reject' sand and water.
- Rehabilitation of the site, including removing all waste and surface equipment, backfilling water storages, re-establishing topsoil and revegetating disturbed areas.

Ancillary activities comprising:

- Use of existing camp facilities at Kyalla 117 N2/ Shenandoah S2.
- Use of existing property access tracks.
- Diesel storage and refuelling facilities

An overview of the location of the wash plant and general schematic is provided in Figure 5 and Figure 13.

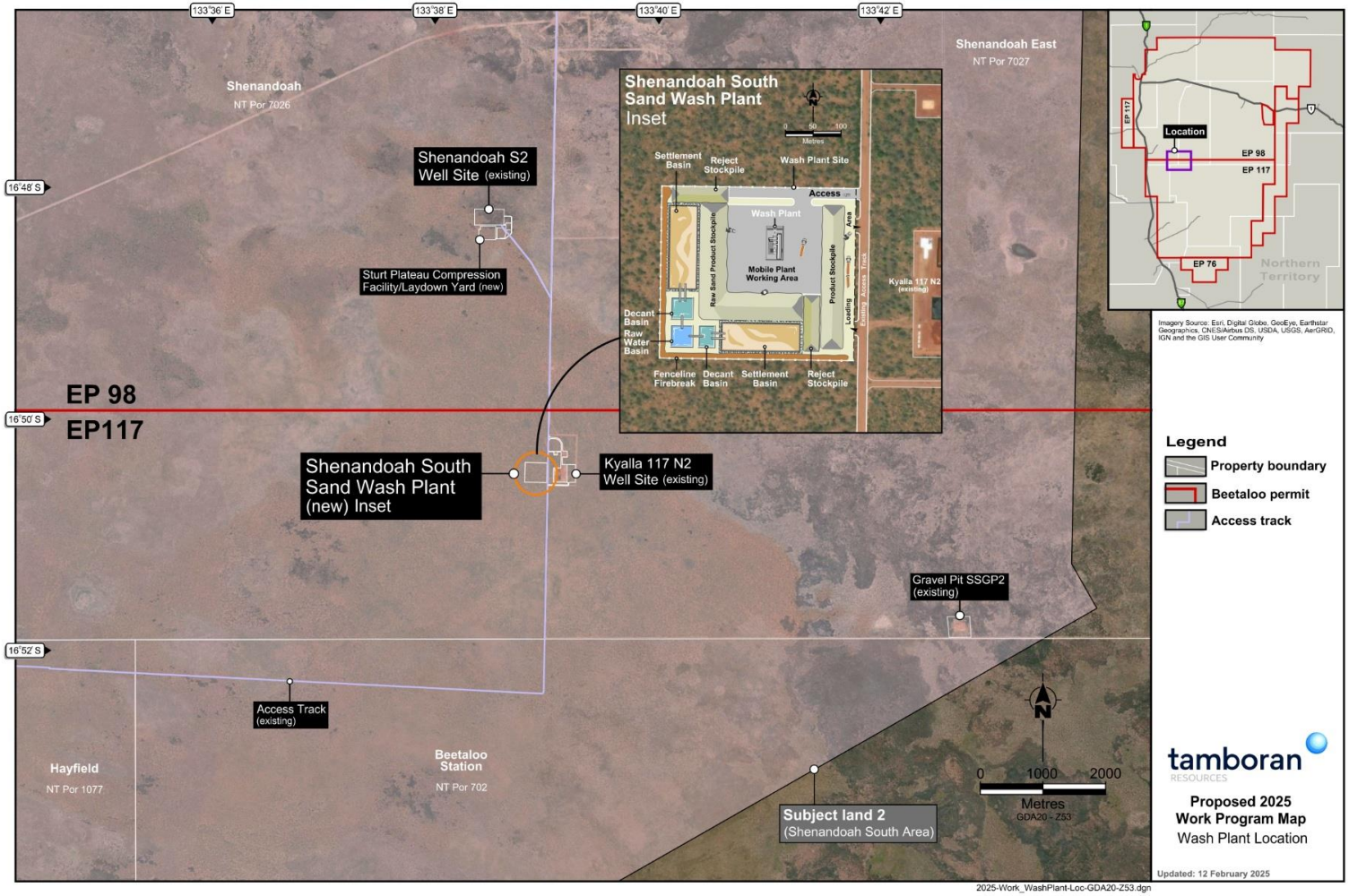


Figure 5 Overview of the Shenandoah South Wash plant

[redacted]

[redacted]

[redacted]

5 Sacred site clearance request

Sacred site clearances are a requirement of the Exploration Agreement between Tamboran and the parties to the Agreement. These clearances are designed to identify areas suitable for future E&A activities, to ensure areas of cultural significance are identified, avoided and protected early during activity planning. AAPA certificates will be generated covering the proposed cleared areas, with EMP's submitted covering specific scope. The broad scope of activities proposed during sacred site clearances ensure the same area isn't cleared multiple times in subsequent years for different E&A activities. Clearing the areas once is more efficient for the NLC, Tamboran, NTH's and AAPA.

5.1 Sacred site clearance request

The 2025 sacred site clearances requests covers 3 new clearance requests:

- Update of subject land 2 to include a sand washing plant [redacted]
- [redacted]
- [redacted]

An overview of each of the clearance requests is provided in the following section. Photographs of the key activities have also been provided in section 5.4 of this document.

To further assist in understanding what the specific aspects of the clearance involve, a detailed description of individual component of regulated activities is provided in Appendix A. A summary of the potential environmental outcomes, risks, impacts and proposed controls of the proposed activities is provided in Appendix B.

An overview of the requested clearance areas are provided in Figure 6 with digital GIS data included in this submission.

5.1.1 Subject land 2

Tamboran proposes to seek a variation to the existing AAPA certificate **C 2024/065** to include the following additional scope within subject land 2:

- construction and operation of a sand wash plant within the subject land, including:
  - Civil construction activities to support the wash plant
  - Construction, operation, maintenance and decommissioning of a sand wash plant
  - Use of construction sand
  - Management of raw water and wash plant water within earthen pits/ pods. Noting the water is not considered contaminated.
- [redacted]

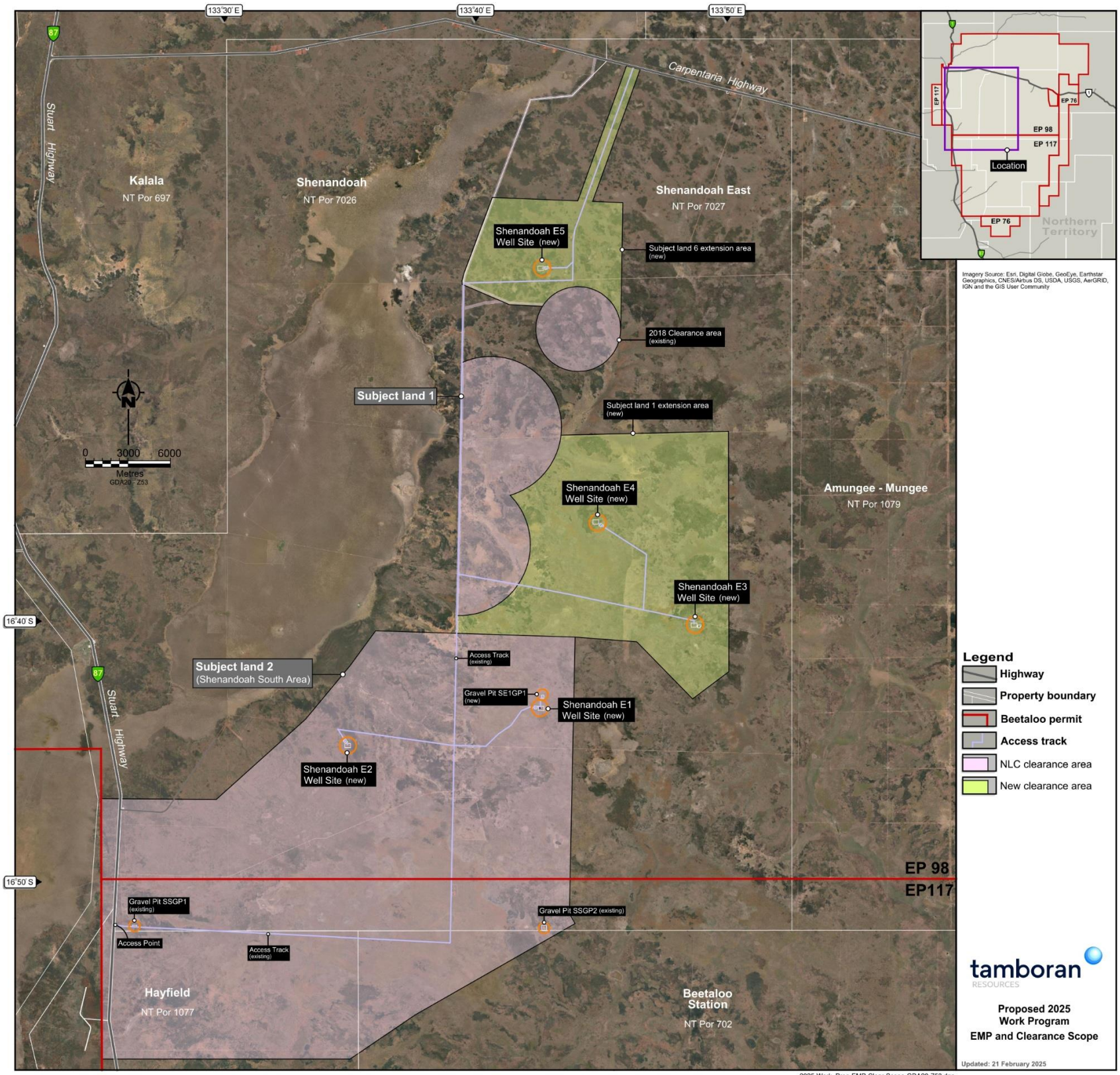


Figure 6 Overview of proposed new and existing sacred site clearances, with proximity to the proposed future activities

[redacted]

tamboran
RESOURCES

2025 Work Program Update and Clearance Request

[redacted]

[redacted]

[redacted]

5.2 Important infrastructure placement considerations

Although the request is to place infrastructure anywhere in the clearance area, there are practicable constraints which will ultimately restrict where infrastructure can and cannot be located. Some of these constraints are enshrined in legislation (such as well spacing and proximity to some sensitive receptors), whilst others are due to environmental/ stakeholder factors. Surface features which are avoided during the placement of surface infrastructure include:

- water courses and drainage depressions - prevents infrastructure being flooded and decreases construction cost
- high valued ecological communities- identified through field scouting and avoided
- sink holes- prevents infrastructure damage (cave-ins) and reduces risk from overland spills in the remote instance they occurred.
- pastoral bores- legislative requirement to maintain 1km distance and generally this is where livestock watering infrastructure is located
- heritage features- identified during scouting. Tamboran avoids disturbance to these features
- Sacred sites- identified through sacred site clearances (these clearances)- Tamboran will not impact any identified sacred site

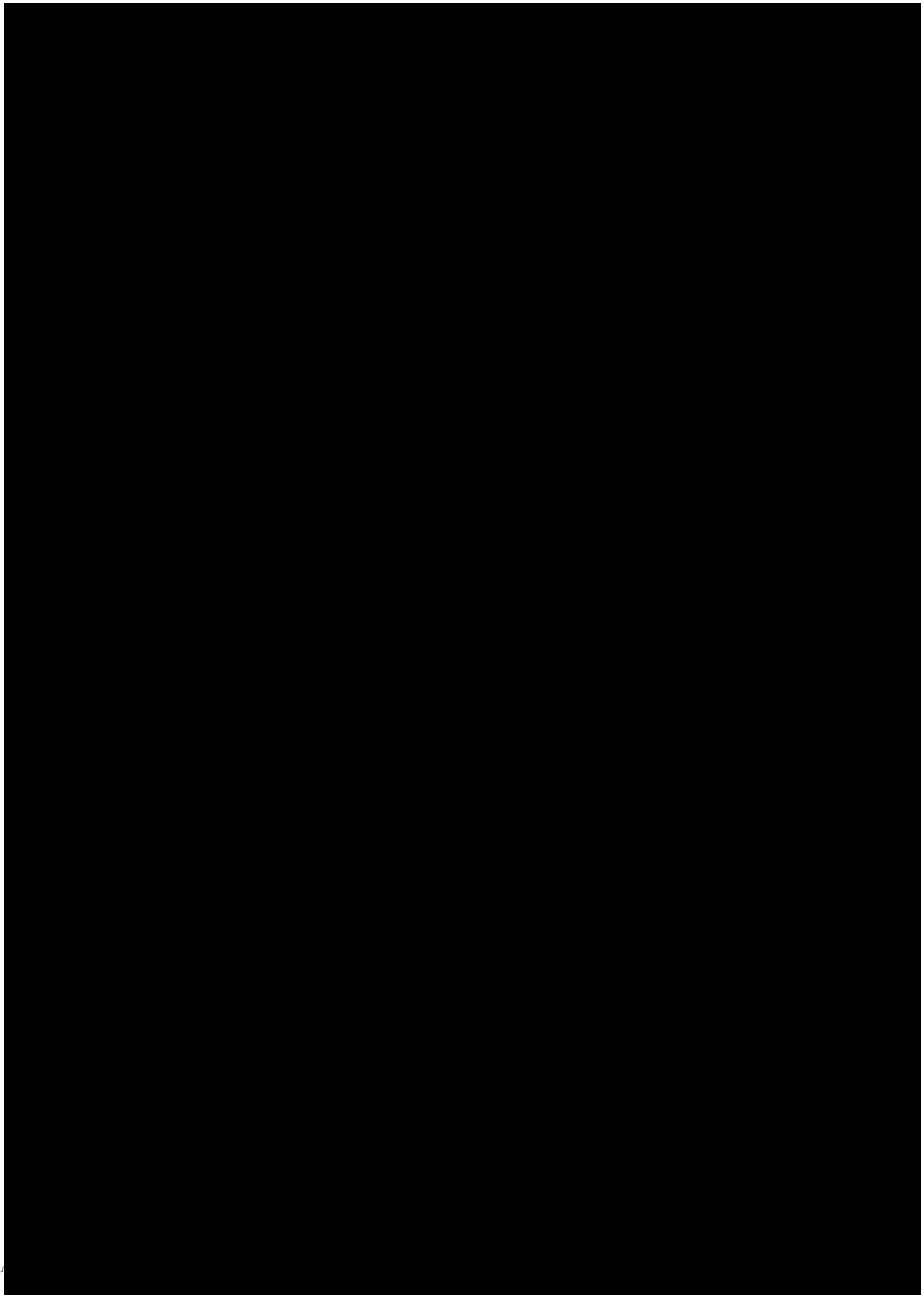
The broad clearance area has been requested to identify features for protection given the lateral (subsurface) component of wells may be located underneath features that span several km's from the lease pad. The horizontal laterals are anticipated to be located >2000m below ground level (noting the Velkerri B shale averages ~3000m in the area) and can be used to locate the surface pad away from the sensitive surface features for their protection i.e. locating infrastructure away from watercourses or wetlands with the laterals accessing below these areas without harm.

When determining how an area is to be protected, Tamboran respectively request that the NTH's consider whether some features could have horizontal wells permitted to be drilled under. The surface pads can be located several kms away, with the lateral drilled 2-3000m under the feature. This would ensure no surface impacts to the feature, while minimising the amount of resource missed. This could be achieved by nominating a minimum vertical separation within certain RWAs to ensure a minimum separation distance to underlying activities is achieved-for example 1000m. We are happy to provide additional information on our activities to provide assurance to NTH's that all sacred sites will be protected.

5.3 Picture of key activities

The following section provides general pictures on the core components of the activities subject to this report. Additional informational information is provided in Appendix A.

a)



b)

Figu

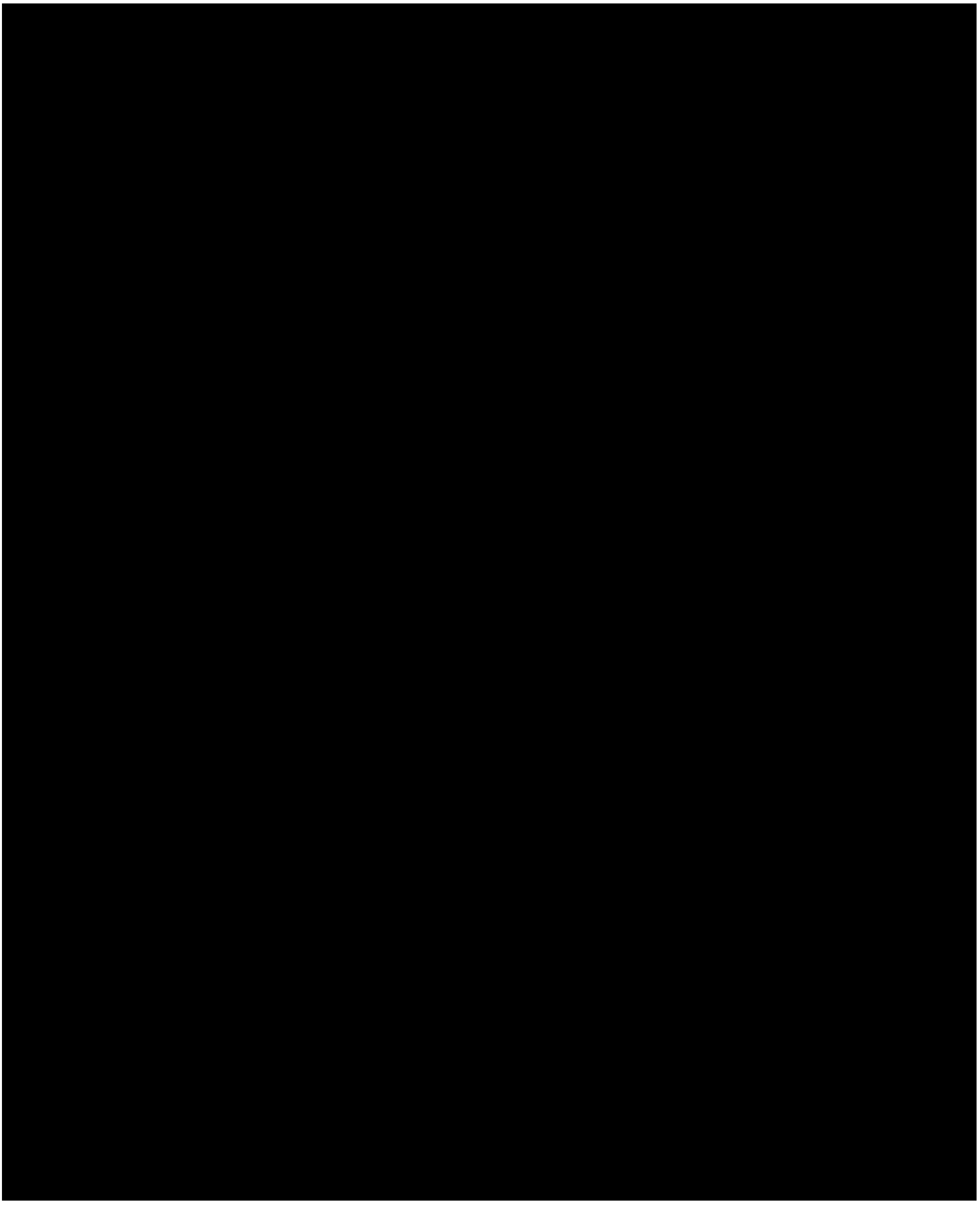
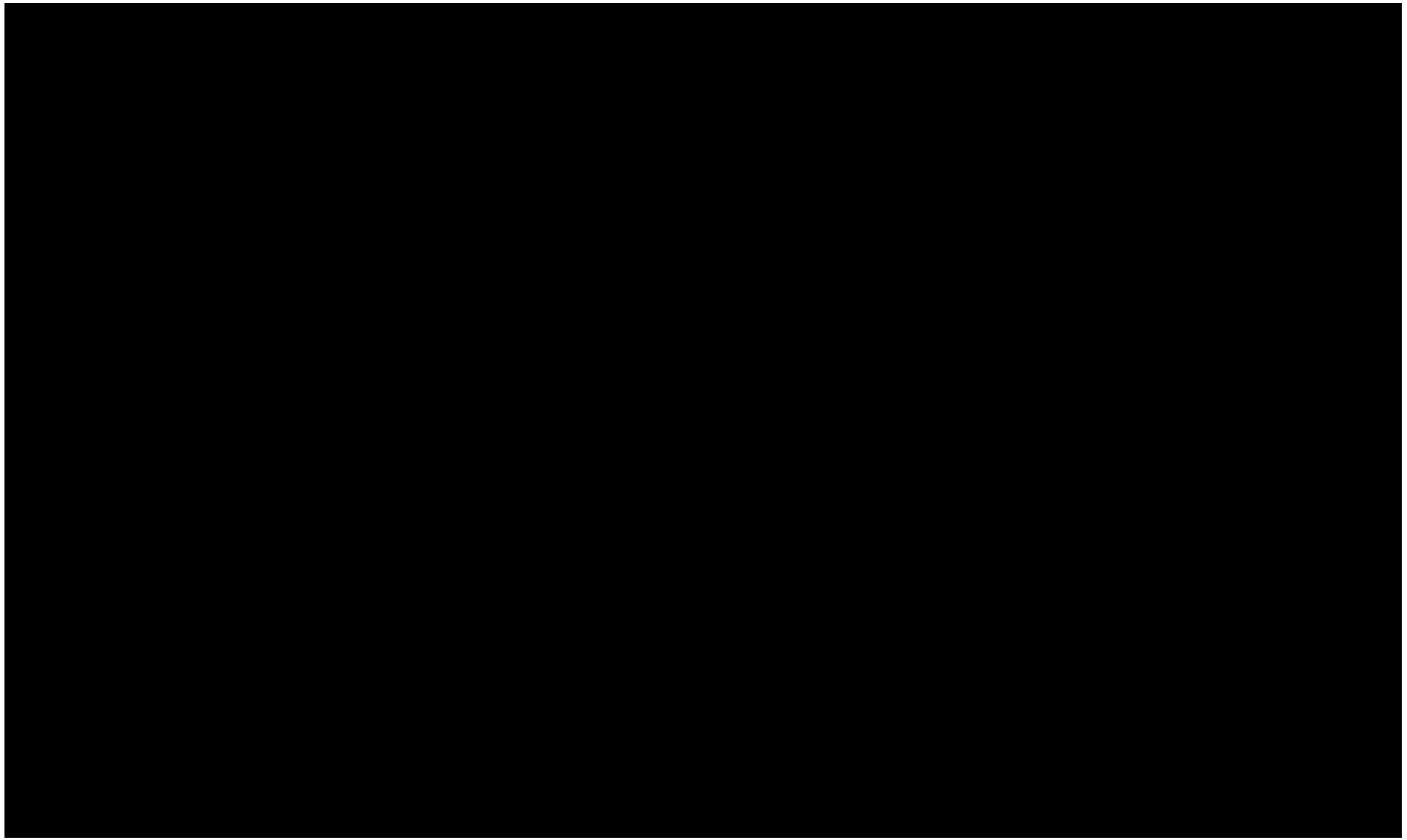
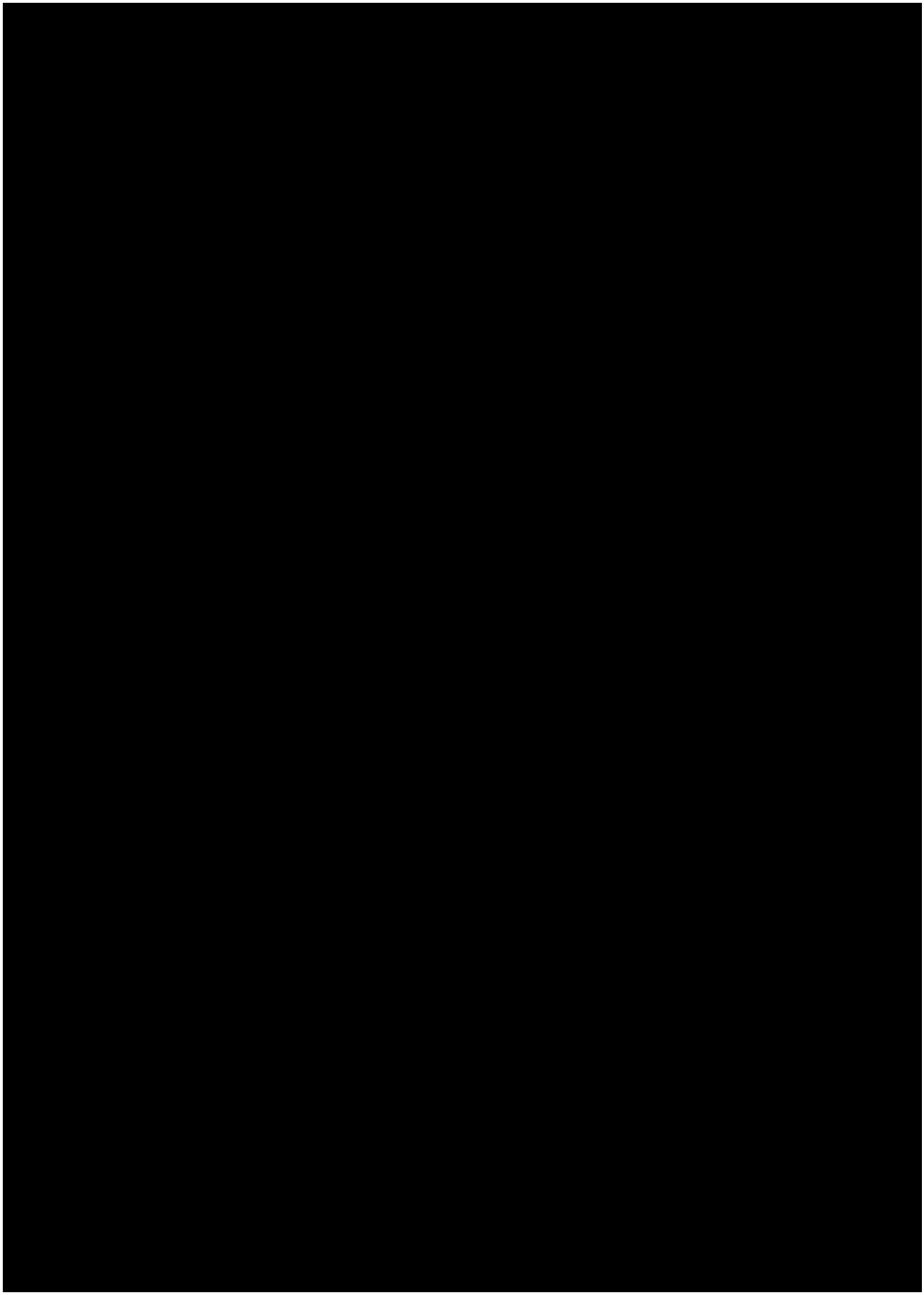


Figure 9 Examples of hydraulic fracture stimulation spreads – a) Shenandoah S2 set-up currently underway and b) Kyalla 117 N2 site, 2024. Noting the proposed future hydraulic fractures will be larger.





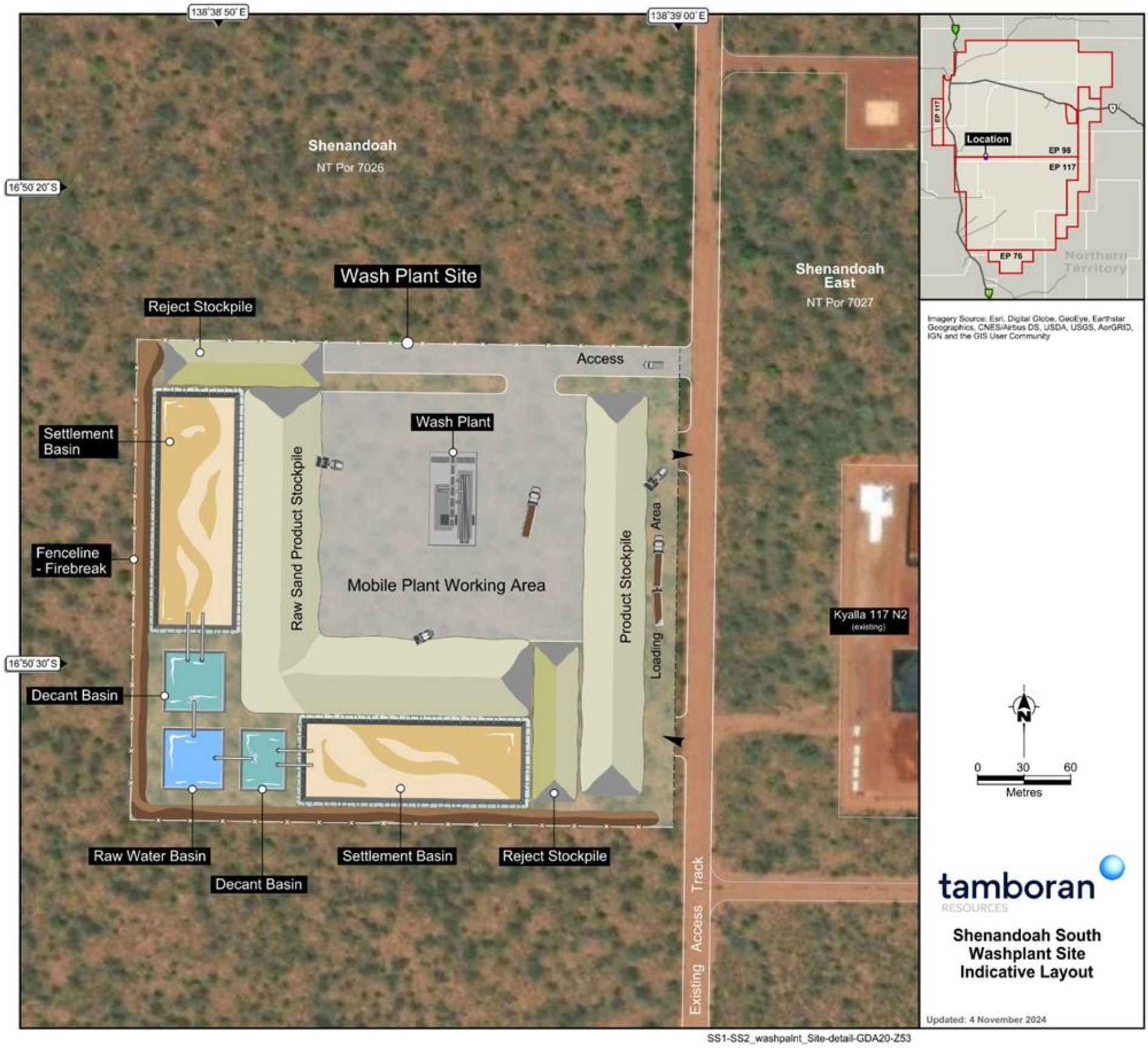


Figure 13 Indicative site layout of the Shenandoah sand wash plant on EP 117

6 2025 NLC Requests

To support the proposed E&A strategy and work program, Tamboran B2 seeks NLC support for a range of NTH engagement as per the following:

- On country meeting with Native Title holders covering CY 2025 work program, approvals and sacred site clearance scope (**March**).
- Organising engagement and input provision from NTHs on the planning for SIA consultation activities, including Environmental related activities, with Aboriginal stakeholders and the broader Elliott community **(March/April)**
- Sacred site clearance requests covering the proposed new clearance areas **(April)**
- Ecology and heritage scout for new EMP locations (**March/ April)**
- Cultural Manager participation in the 3D Seismic execution. Requested support covers 6-8 Cultural managers to work in the 3D seismic work for ~ 6 weeks between **July to September.** These workers will be assisting in identifying and avoiding heritage features during the survey, with additional roles to support the deployment of nodes.
- Collaboration in the SIA consultation activities particularly the activities related to the Environmental component required for key approvals (**June/August**).

APPENDIX A Detailed description of regulated activity

The following table provides details of the proposed exploration activities proposed **within the requested clearance areas**. These descriptions are indicative and general in nature, minor departures from such descriptions are likely to occur and such departures are covered as much as practicably possible by the content of this activity description.

Table 3 Description of proposed regulated activity details within the clearance areas

Activity description	Disturbance area	Typical personnel numbers	Timing	Duration	Activity example pictures
Site selection and scouting The first step of the process when undertaking exploration activities is site selection. Proposed E&A sites are chosen based upon their assessed chances of exploration success and are ranked as either a priority site (highly prospective) or a contingent site (if a priority site is unavailable due to a constraint). The selection of a site from a subsurface point of view, is often based upon existing exploration information (or lack of), such as seismic data, inferred resource depth (within the oil generating window for example) and previous drilling results. It also includes an assessment of geohazards, such as known major faults or structural features. Once a location has been proposed (including for other infrastructure such as pipelines, access tracks, gravel pits etc.), each site is assessed for suitability using a multi-criteria analysis. This analysis covers several disciplines, including cultural, environmental, pastoralist, regulatory and constructability requirements. Once proposed sites have been identified, each site is assessed using a desktop screening process covering the following: • Cultural constraints: sites are chosen to avoid known sacred sites and other restricted areas identified through previous NLC field clearance reports, AAPA certificates or heritage mapping. • Environmental constraints: proximity to sensitive ecological features such as water courses, flood heights, high conservation areas, threatened species and habitats and sensitive soil units • Leaseholder constraints: proximity to existing pastoral infrastructure and activities, such as cattle yards, fence lines, access tracks, water supply networks, water bores, homesteads and laneways. At this stage, leaseholders are engaged to ensure early input into the location of potential exploration sites. Activities also considers timing constraints such as mustering. • Regulatory constraints: proximity to water bores, well pad spacing, landscape amenity and proximity to roads and communities. The number of sites are re-ranked and potentially eliminated based upon their constraints assessment. A revised list of sites will then undergo field “scouting”, to further assess their suitability. Scouting involves assessment by several different specialists with a “scouting party”. Scouting activities include: • NLC field clearance: Tamboran B2 submits its proposed work program to NLC annually and then initiates field clearance surveys. Traditional owners are then engaged by the NLC and inspect all sites/areas to determine the potential for sacred sites or other areas of cultural significance in the vicinity of the activity. A final report is submitted to AAPA by NLC to generate AAPA certificates which outline the activity constraints and no -go areas. • Environmental: areas are inspected by ecologists to ground truth for areas of potential high conservation, evidence of threatened flora and fauna, overland flow paths, drainage lines, soil erosion susceptibility, areas of high habitat value (such	N/A	2-6	During activity planning.	<4 weeks	

Activity description	Disturbance area	Typical personnel numbers	Timing	Duration	Activity example pictures
as large hollow bearing trees) buffer zones (from high conservation value areas) and future rehabilitation constraints. The infrastructure (including access tracks, well pads and associated infrastructure) is orientated to minimise clearing (such as picking open woodland rather than dense Bullwaddy or Lancewood communities) and impacts on overland flow. A land condition assessment is completed for the proposed sites. • Archaeological scouting: detailed scouting is completed by a qualified archaeologist to identify any artefacts (such as spear tips, axes, stone workings etc.), scar trees or potential heritage features at the proposed sites. This is undertaken in addition to the NLC Traditional Owner clearances. • Constructability assessment: Constructability constraints are identified including geotechnical assessments, cut/fill requirements, soil types, rig operational requirements (orientation) and access construction constraints (such as access track design, water course crossings etc.). This often includes preliminary pegging of the proposed location Once the location of infrastructure has been proposed and finalised, the final location is pegged and surveyed. The engineering designs are updated and issued for construction.					
Access track construction Access tracks will be constructed to connect the proposed infrastructure to existing roads. Tracks will generally be constructed to at least NT Standard Drawings (CS3003) for Typical Cross Section for Rural Environment – Pastoral Access Road 2. Where possible access tracks will align with the existing seismic lines or other clearances/disturbances to minimise vegetation clearing. Access tracks will typically be less than 14m wide, with sections up to 20m wide where truck turn outs, erosion and sediment control and cut out drains are required. Access tracks will have various levels depending on landform and soil types. Each road will be constructed with an appropriate fall to prevent water pooling on the road surface. Drainage channels and cut outs are constructed to manage stormwater and discharge away from the road surface. Culverts, drains and bed level watercourse crossing are used to ensure overland flow is not impeded. Construction of erosion and sediment controls will be constructed in accordance with a Certified Practitioner in Erosion and Sediment Control (CPESC) accredited erosion and sediment control plan. Gravel will be used to form up access tracks in places to enable all weather access. Where access tracks intersect with main roads (such as the Stuart and Carpentaria Highway), intersections will be upgraded to accommodate turning truck traffic in accordance with the Department of Infrastructure, Planning and Logistic (DIPL) design requirements. Access tracks are anticipated to be the first piece of infrastructure constructed to enable preliminary activities, such as the construction of groundwater monitoring bores.	<25ha (dependent on access track length)	<12 people	First activity required to enable civil construction and drilling.	Access tracks are likely to be continually maintained and surfaced throughout the life of the activity	

Activity description	Disturbance area	Typical personnel numbers	Timing	Duration	Activity example pictures

[redacted]

Activity description	Disturbance area	Typical personnel numbers	Timing	Duration	Activity example pictures
Groundwater (monitoring and extraction) bore installation Up to 10 bores may be constructed per E&A location. Installation of control and impact groundwater monitoring bores may be constructed on each of the well pad within the underlying aquifers. These bores are required under the Code of Practice to establish baseline groundwater level and quality data prior to completing hydraulic fracture stimulation activities. Monitoring bores are required to be drilled and tested prior to hydraulic fracturing activities and are often the first activity undertaken on a site (other than access tracks). Monitoring will continue throughout the life of the activity. The bores will also be used for groundwater extraction to support exploration activities. The construction of the groundwater monitoring bores will typically utilise a water bore drilling rig to construct the bores, similar to the rigs used to drill pastoral water bores. All groundwater monitoring bores will be constructed in accordance with the Minimum Construction Requirements for Water Bores in Australia. Bores may drill into the Anthony Lagoon formation (if present and saturated), Gum Ridge formation and other viable water bearing formations if encountered. Waste cuttings, drilling fluids, muds and formation fluids will be collected in a small earthen sump and managed in alignment with the practices outlined in the. Minimum Construction Requirements for Water Bores in Australia. The fluid (which is anticipated to be fresh) will be discharged to grade and the area surrounding the lease. The formation cuttings and drill muds will be mixed with soil onsite and incorporated into the well pad surface.	N/A located on proposed well pad	<12 people	The drilling of water bores is generally one of the first activities undertaken to provide water for construction and drilling activities. Additional monitoring bores are also likely to be drilled prior to stimulation	<4 weeks	

[redacted]

2025 Work Program Update and Clearance Request

Activity description	Disturbance area	Typical personnel numbers	Timing	Duration	Activity example pictures
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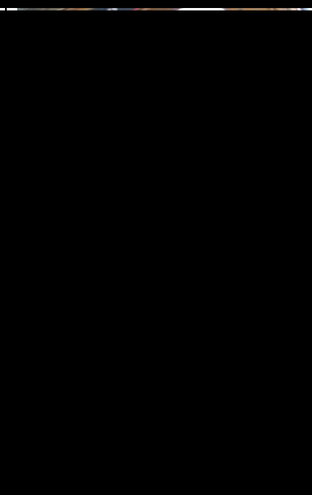
[redacted]					

Activity description	Disturbance area	Typical personnel numbers	Timing	Duration	Activity example pictures
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Activity description	Disturbance area	Typical personnel numbers	Timing	Duration	Activity example pictures
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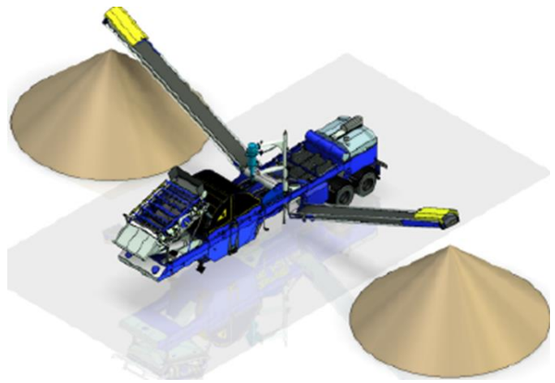
2025 Work Program Update and Clearance Request

Activity description	Disturbance area	Typical personnel numbers	Timing	Duration	Activity example pictures
[redacted]					

Activity description	Disturbance area	Typical personnel numbers	Timing	Duration	Activity example pictures
[redacted]					

2025 Work Program Update and Clearance Request

Activity description	Disturbance area	Typical personnel numbers	Timing	Duration	Activity example pictures
Sand wash plant site establishment and operation An ~11ha site to the west of the Kyalla 117 N2 well pad has been identified as the preferred location for the establishment of a small mobile/modular sand wash plant and associated infrastructure to process local sand to enable its use in E&A well completions. Processing will initially commence on a trial basis which, if successful, will transition to ongoing processing to produce the required volumes of sand for future E&A drilling programs. The wash plant site will be cleared of vegetation, stripped of topsoil to approximately 100mm depth, and fenced. Topsoil will be stored around the edge of the wash plant site pad to form a bund, which will be used as both an erosion and sediment control measure and to prevent overland flow access to the site. Erosion and sediment controls will be constructed around the disturbed areas (such as rock check drains, diversion drains and bank stabilisation using fallen debris). Construction at the site will involve surface preparation of the wash plant and stockpile areas (grubbing, grading, sheeting and compaction as required), excavation of water management infrastructure (including raw water ponds, settlement basins, decant water ponds, above-ground water pipelines, etc), installation minor support facilities (demountable site office, ablutions block, fuel tank, etc) and construction of access tracks. The mobile/modular wash plant (including screens, conveyors, etc) will be mobilised to site and installed. Existing infrastructure (e.g. access tracks, camps, water bores, etc) will be utilised to support the sand washing operations where possible. Suitable raw sand to feed the proposed sand wash plant may be sourced from a variety of sources, including raw sand generated during Tamboran's construction activities within EPs 76, 98 and 117; and/or raw sand sourced locally from extractive mineral titles held by entities associated with Tamboran or third parties. Raw sand will be stockpiled at the wash plant site ready for washing. Raw water supply for the wash plant will be sourced under existing water extraction licences using existing water bores where possible, although an additional 2 water bores may be constructed within the wash plant site if requried. The wash plant site has been designed to maximise the recycling of water, with a recycling rate of >80% targeted. During operation, sand will be removed from the raw sand stockpiles by loader and fed into the wash plant via a hopper and conveyor. The washplant will consist of a series of stages which will likely include sizing screens, spirals, hydrocyclones and dewatering screens. The aim of the washing process is to remove oversize (coarse sand) and undersize (very fine sand, silt and clay) material from the raw sand to enable the product sand to meet the required particle size specifications. Depending on the raw sand source, it would be expected that between 50-70% of the raw sand is within the required specification and will be retained, with the remaining undersize and oversize material separated during the washing process and reporting to a 'reject' stream. The oversize reject sand will report to a separate stockpile for future use in rehabilitation or another use, while the fine reject material will report to the settlement basin along with the process water, where the fine sand will settle and the water will be recovered for reuse. Washed sand will be stored in a covered product sand stockpile ready to be loaded out for use when required. Approximately 40,000 of product sand will be required for the 2025 frac program, which will require processing of approximately 60,000t of raw sand. Future sand requirements will depend on future E&A programs.	11ha	3-4 people	Mid-2025	Initial 10-week trial period, potentially ongoing for duration of activity	 

Activity description	Disturbance area	Typical personnel numbers	Timing	Duration	Activity example pictures
The sand wash plant site may be operated on a ‘campaign’ basis (where a set volume of sand is washed over a nominal period of time) or on an ongoing basis. Where the wash plant is not required for a period of time it may be demobilised from the site and remobilised at a future date. Once the wash plant site is no longer required, the site will be reshaped as required. Topsoils will be spread and fallen vegetation returned to aid site stability. The area will be remain fenced (if required) to allow vegetation regrowth. Seed may be added to the site to support natural regeneration if required. Settlement ponds and other water storages may be converted to pastoral watering points where appropriate and approved by pastoralists.					

Activity description	Disturbance area	Typical personnel numbers	Timing	Duration	Activity example pictures
[redacted]					

Activity description	Disturbance area	Typical personnel numbers	Timing	Duration	Activity example pictures
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Activity description	Disturbance area	Typical personnel numbers	Timing	Duration	Activity example pictures
[redacted]					

2025 Work Program Update and Clearance Request

Activity description	Disturbance area	Typical personnel numbers	Timing	Duration	Activity example pictures
[redacted]					

2025 Work Program Update and Clearance Request

Activity description	Disturbance area	Typical personnel numbers	Timing	Duration	Activity example pictures
[redacted]					

Activity description	Disturbance area	Typical personnel numbers	Timing	Duration	Activity example pictures
[redacted]					

2025 Work Program Update and Clearance Request

Activity description	Disturbance area	Typical personnel numbers	Timing	Duration	Activity example pictures
[redacted]					

2025 Work Program Update and Clearance Request

Activity description	Disturbance area	Typical personnel numbers	Timing	Duration	Activity example pictures
Site monitoring and inspections consisting of the following: • **Groundwater monitoring:** Groundwater monitoring bores are required to be installed on the well pad before the commencement of hydraulic fracture stimulation activities. Groundwater monitoring is undertaken at the site commencing 6 months before stimulation and then quarterly for 3 years after. Groundwater monitoring involves purging a monitoring bore of water, measuring field parameters (level, electrical conductivity) and collecting laboratory samples and • **Site and exploration well monitoring-** an operator or contractor will access the site to perform checks on the exploration well and stability of the site. Checks include pressure readings and visual checks of valve integrity. In some cases, a helicopter may be utilised to complete the inspections. Surveys are completed fortnightly. • **Weed inspections-** Access to the site by several contractors/ Tamboran personnel in light vehicles to identify weeds. In some cases, a helicopter may be utilised. Contractors may perform spot sprays with a NTG recommended weed treatment. Surveys are completed pre and post wet season. • **Erosion and sediment control inspections-** Access to the site by several contractors/ Tamboran personnel in light vehicles to identify erosion or stability issues. Inspection will be used to schedule maintenance to repair any defects identified. In some cases, a helicopter may be utilised to complete the inspections. Surveys are completed pre and post wet season. • **Gas leak detection surveys-** Access to the site by 2- 3 contractors or Tamboran personnel in light vehicles to perform mandatory gas testing using handheld gas meters. Surveys are completed every 6 months. • **Build up pressure monitoring-** Post stimulation and well testing, the exploration well may be shut in with pressure monitoring equipment installed to monitor build up pressure. This requires the installation of a solar panel and telemetry equipment, with monthly equipment inspections (typically)	N/A	<2-6 people	Fortnightly/ 6 monthly (depending on activity)	1 day per inspection	

Activity description	Disturbance area	Typical personnel numbers	Timing	Duration	Activity example pictures
Site maintenance (well pad, camp pad, access tracks and gravel pit) Each site will be periodically maintained, which includes grading, erosion and sediment control repair, vegetation management, firebreak management, weed management, fence repair and all other ancillary activities required to maintain a site and associated with infrastructure. This includes maintenance of the access tracks. The work will be undertaken by civil maintenance contractors and Tamboran personnel.	N/A	<10 people	6 monthly- pre and post wet season maintenance	<7 days per activity depending on the nature of the activity.	

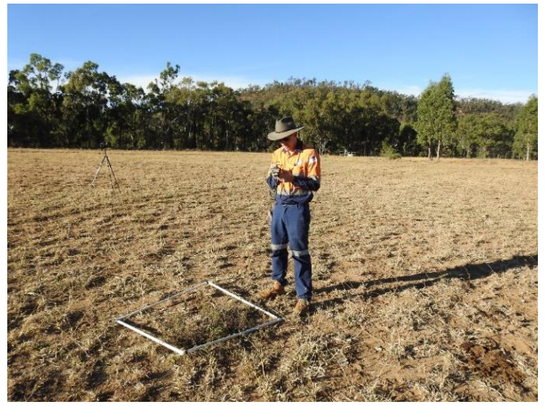
[redacted]

Activity description	Disturbance area	Typical personnel numbers	Timing	Duration	Activity example pictures
[redacted]					

Activity description	Disturbance area	Typical personnel numbers	Timing	Duration	Activity example pictures
Chemical and fuel storage- All chemicals and fuels (diesel) required to support exploration activities will be stored in accordance with the relevant regulatory requirements, including the use of secondary containment (bunding) onsite. The Code of Practice has implemented a range of additional controls, including requirements for routine inspections, emergency response procedures and spill management. Anticipated chemical and fuel volumes vary dependent on activity, but may involve the storage of the following types of chemicals and volumes: • Stimulation and drilling chemicals (friction reducers, surfactants, crosslinkers, breakers, buffers, acids, bases, biocides, scale inhibitors, corrosion inhibitors, clay stabilisers, loss of circulation material, drilling muds, salts etc.) Volumes are typically less than 20KL per chemical, with some chemicals stored at higher (such as pH control) or lower (such as biocides and corrosion inhibitors) volumes depending on their purpose and planned use. • Diesel – typically 100KL stored but may be 500KL if wet season activities are proposed. • Other chemicals and hydrocarbons- such as oils and greases, lubricants, hydraulic fluid, cleaning chemicals, domestic chemicals etc. used to support operations.	0.5ha (on existing well pad or laydown yard)	N/A	During exploration activities	During exploration activities.	
Waste management: Any waste generated during exploration activities will be stored onsite in accordance with the NT *Waste Management and Pollution Control Act 1998* and Code of Practice and transported offsite to a licenced waste management facility. All wastes (other than drilling mineral waste) will be stored within skips or equivalent and removed from site at the end of each activity.	N/A	1 -2 trucks per day during operations	During explorations activities	During explorations activities	

2025 Work Program Update and Clearance Request

Activity description	Disturbance area	Typical personnel numbers	Timing	Duration	Activity example pictures
Groundwater extraction: Groundwater extractions from the purpose built groundwater monitoring onsite or another approved extraction bore (which may include trucking water from adjacent properties) will be completed periodically to support exploration activities. All groundwater take will likely be from the Gum Ridge Formation and will be licenced under Tamboran's existing Water Extraction Licence (WEL) GRF 10285. A new WEL may be submitted to increase the water take and/or covering take an alternative formation where present. It is anticipated that groundwater extraction volumes to support this program will be in the order of 250-750ML per year (conservatively) , primarily used for civil construction, drilling and to stimulate the E&A wells. Once drilling and stimulation has ceased, minimal ongoing water extraction from the site will be required. Where possible, recycled flowback will be utilised within stimulation to reduce raw water usage.	N/A	N/A	Ongoing to support exploration activities.	During exploration activities	
Traffic management Access to the site will be via a combination of existing and new access tracks, located approximately 15-20km South of Dunmarra on the Stuart Highway and/ or from the Carpentaria highway. Minor traffic disruptions may occur during the construction of the access track intersection with the Stuart highway. During this period, a traffic management plan will be implemented, with traffic control utilised in accordance with DIPL requirements. Peak traffic volumes are anticipated to be associated with the drilling rig mobilisation and demobilisation. Traffic volumes may reach up to 44 vehicles per day spread over a 4 week period. Transportation of sand and other material is likely to extend over 3-4 months, with 2-3 trucks per day. During operations (drilling, stimulation (including proppant transport) or well testing), vehicle movements to the site are anticipated to be less than 10-12 movements per day. This period is likely to extend typically 60 days per exploration well, 45 days per stimulation and during the duration of a well test/appraisal gas sale (30-365+ days). Once the well is suspended or decommissioned, vehicle movements will reduce to 1 vehicle per fortnight or 1 vehicle per 6 months respectively.	N/A	N/A	During operations	During operations	

Activity description	Disturbance area	Typical personnel numbers	Timing	Duration	Activity example pictures
Site rehabilitation Within 6 months of the E&A wells being plugged and decommissioned, a site will be rehabilitated. This involves: a) the removal of all surface facilities (well heads, fencing, water bores, tanks etc.) b) deep ripping of compacted surfaces c) recontouring landforms d) respreading of topsoil from the topsoil stockpiles, e) re-seeding (if required;) and f) ongoing monitoring and maintenance of the rehabilitation.	N/A		Within 6 months of the plugging and abandonment of all E&A wells	<14 days, with ongoing monitoring and maintenance	 

Appendix B Summary of Environmental outcomes, impacts, risk and controls

An overview of the potential environmental outcomes, potential impacts and risks associated with the proposed exploration activities within this clearance request are summarised in Table 3. This information will also be provided in the EMP covering the proposed regulated activity, which will be submitted to the Department of Environment, Parks and Water Security (DEPWS) for formal assessment and approval.

An environmental outcome means an outcome that will be achieved if the environmental impacts and environmental risks of a regulated activity are reduced to a level that is as ALARP, and acceptable.

Environmental impacts are defined as any adverse change, or potential adverse change, to the environment resulting wholly or partly from a regulated activity.

Environmental risks are defined as the chance of something happening that will have an environmental impact, measured in terms of environmental consequences and the likelihood of those consequences happening.

Both the consequence and likelihood of a potential impact can be reduced through the adoption of controls, which must be applied to reduce a risk down to an ALARP and acceptable level.

Table 4 Environmental outcomes, impacts, risk and controls

Aspect	Environmental outcomes	Environmental impacts	Potential risk	Controls
Groundwater use and quality	• To manage exploration activities to prevent unsustainable depletion of groundwater resources • Preserve groundwater quality to protect environmental and pastoral use	• No adverse changes to groundwater quantity is anticipated to be associated with exploration activities. • Impacts to aquifers levels anticipated to be negligible, with rapid recharge observed from other Gum Ridge Formation bores utilised within the Basin. • No material changes to groundwater quality anticipated from exploration activities. • No impact to Groundwater Dependent Ecosystem's (GDE) , stygofauna or Sacred sites from exploration activities (extraction and well construction) • No reduction in pastoral productivity through reduced groundwater volumes	• Low risk of groundwater contamination from drilling fluids during construction of the conductor/ surface casing in the Cambrian Limestone Aquifers due to the selection of low toxicity drilling fluids • Low risk of cross flow of deep formations (such as the target shales) to shallow aquifers through inappropriate well barrier design and construction due to the presence of the Code of Practice controls and verification processes. • Low risk of crossflow through fracture growth into aquifer from stimulation activities allowing the migration of fluid and gas due to the controls within the Code of Practice and underlying separation distance between the target formation and Cambrian Limestone aquifers. • Low risk of stimulation activity inducing seismic activity that enables cross formational flow between shallow aquifers due to seismic stability of region and lack major faults or fracture zones. • Low risk of stimulated zones intersecting offset wells (including the adjacent horizontal wells) or intersecting an existing geohazard due to seismic control, pressure monitoring during stimulation and lack of older petroleum wells in close proximity. • Low risk of crossflow/well integrity caused by the deviation of an E&A well into the adjacent well during drilling due to downhole GPS tracking tools and proximity alarms • Low risk of leakage of either flowback, produced water, or hydrocarbons (liquid and gaseous) from suspended or abandoned wells to groundwater due to well design and integrity management. • Low risk of leaks from gathering lines, with gathering lines constructed as per Australian Standard, leak detection in place to identify pipeline failures and routine inspections completed. • Low risk of surface contamination from storage and disposal of drilling fluids, additives, muds and cuttings on-site due to low toxicity of drilling muds and disposal risk assessment process. • Low risk of groundwater contamination from surface spills from storage, handling and transportation of flowback water due to the storage and spill management requirements outlined int eh Code of Practice. • Low risk of groundwater contamination from the storage, handling and transportation of chemicals, fuels and wastes due to the mandatory code of practice controls (such as mandated use of secondary containment) • Low risk of groundwater contamination from overtopping of drilling sumps and flowback tanks (including during wet season) due to level alarms and use of enclosed tanks. • Low risk of groundwater contamination from a	• All petroleum wells are to be designed, constructed, operated and decommissioned in accordance with the mandatory controls within the Code of Practice. The Code of Practice outlines specific controls measures designed to protect underlying groundwater resources including: ○ Exploration wells designed with multiple cement and steel casing barriers to protect aquifers ○ Well cement and casing is designed to address the underlying formation characteristics in terms of corrosion risk, heat, temperature and pressure risks from each formation. ○ Drilling fluids and muds must have a low residual toxicity ○ Groundwater monitoring must be completed before and after stimulation to detect contamination ○ Well integrity confirmation to prove barrier performance aquifer isolation (casing pressure tests, formation leak off tests, cement bond logs etc.). ○ Separation between stimulated shale resources and aquifers must be sufficient to ensure the risk of fracture growth is ALARP ○ Pressure monitoring completed to ensure maximum allowable operating pressure is not exceeded during stimulation. ○ Ongoing well integrity monitoring and maintenance throughout the life of each well to ensure aquifers are protected ○ Maintenance completed on wells to ensure well barriers are working appropriately. ○ All wells are to be decommissioned in accordance with the Code of Practice, with cement plugs utilised to separate aquifer units. • All surface storages of wastewater and chemicals to have secondary containment to prevent spills to the ground • An emergency response plan must be implemented outlining how spills and emergencies will be responded to. • Drilling fluids and wastes to be stored within a lined sump • Gathering lines and pipelines constructed as per Australian standard, leak detection in place to identify pipeline failures and routine inspections completed. • Flowback wastewater must be stored in double lined tanks with leak detection and level monitoring • Double lined enclosed wastewater tanks with leak detection and level monitoring utilised to store all wastewater, with open treatment tanks used to reduce wastewater volumes • All open treatment tanks are to be operated with a 1:1000 Annual re-occurrence interval (ARI) wet season or dry season (whichever is applicable) freeboard • All flowback wastewater to be transferred to enclosed tanks within 8 hours of a significant rainfall event occurring (such as a cyclone) • Groundwater monitoring from monitoring bores installed at the site must be completed prior to and after stimulation to detect any contamination. • All water take covered by an existing Water Extraction Licence (WEL) GRF 10285 • New extraction bores must model potential impact on adjacent pastoral bores prior to being added to WEL. • All water take to be metered and reported quarterly to the regulator

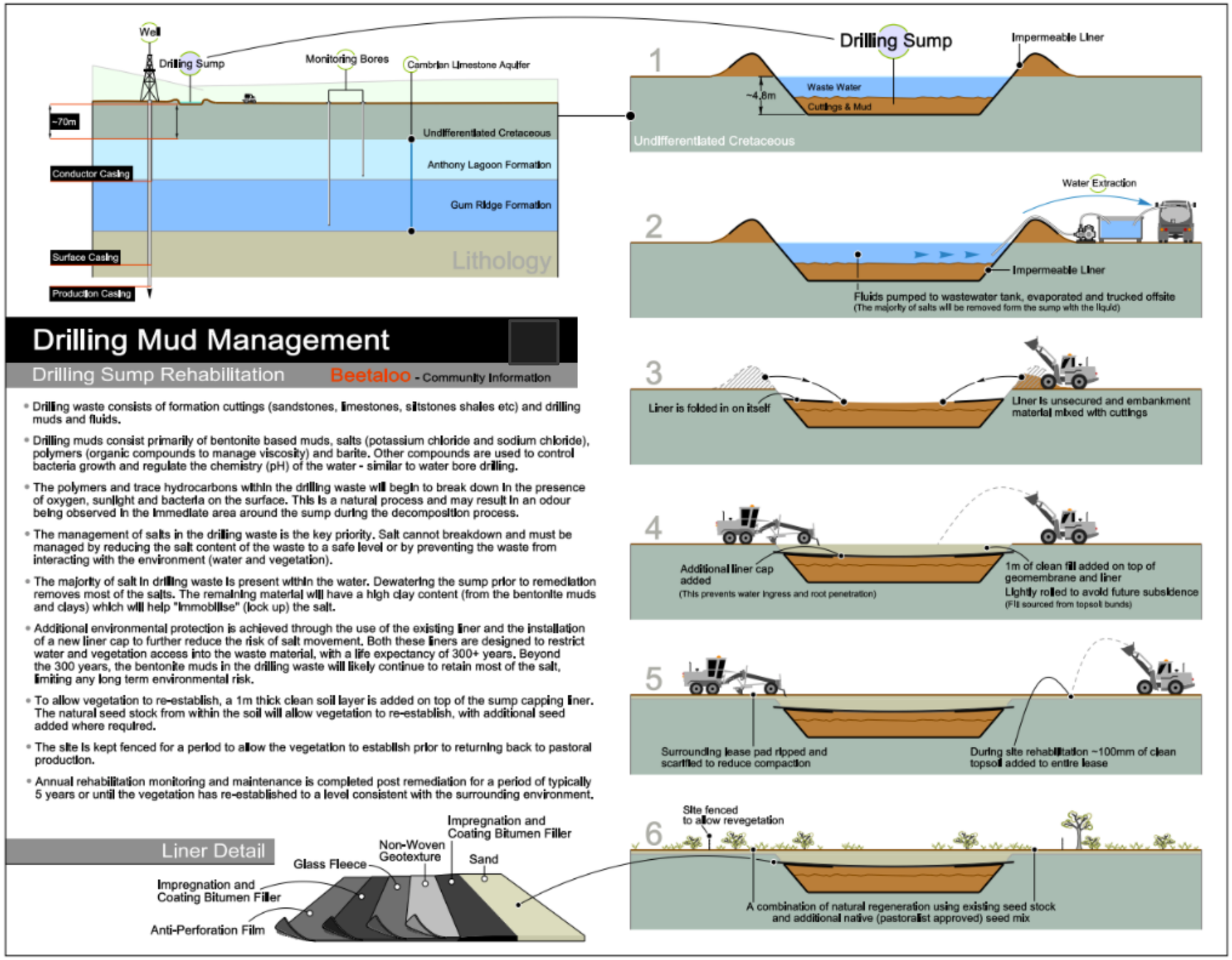
Aspect	Environmental outcomes	Environmental impacts	Potential risk	Controls
			failure of flowback storage tank due to the design standards of the tank (cyclone rated steel tank structures) and routine integrity inspections • Low risk from over extraction of groundwater for civils, drilling and stimulation activities due to limited nature of take (one off), yield of the Cambrian Limestone Aquifers and available allocation volumes (as assessed in the WEL).	• No pastoralists groundwater bores within 1 km of each proposed site • No water related sacred sites within 10kms of the site- noting the CLA and surface water bodies are not connected. • Flowback to be preferentially used in stimulation fluid to reduce raw water usage.
Soils	• Avoid, minimise and control soil erosion and discharge of sediment or soil into waterways or established drainage systems • Minimise disturbance of soil, vegetation and drainage during site activities • Prevent the contamination of soil to maintain the viability of soil resources • Minimise residual impacts to pastoralist usage of exploration areas	• Clearing of vegetation to support exploration activities. • Soil compaction from access tracks, leases, appraisal gas infrastructure and seismic lines. • Increased sedimentation transportation from disturbed areas • Loss of productivity of disturbed areas until final rehabilitation has been achieved • Contamination of soils from disposal of dill cuttings.	• Medium risk of soil erosion from cleared areas (access tracks, well pads, camp pads, gravel pits and laydown areas) occurring on disturbed sites due to high intensity wet seasons. Risk is a low consequence (minor impact), possible (<50% chance of occurring) event. • Low risk reduction in land production (including pastoral and NTH use) through poor erosion and sediment control practices • Low risk of spills/leaks from the on-site storing and handling of fuels. Condensate, hydrocarbons, drilling additives, stimulation additives, flowback fluid, solid wastes, storage and transportation of wastes causing soil contamination. • Low risk of drill sump and flowback tank overtopping due to mandatory freeboard and monitoring controls • Low risk of chemical and waste transportation accident causing soil contamination due to licenced chemical/ waste provider use, spill response and emergency response requirements. • Low risk of contamination from on-site disposal of drill muds and cuttings with site specific assessment completed to ensure disposal is environmentally acceptable • SBM fluids are biodegradable and low toxicity. Cuttings drying will reduce oil on cuttings to as low as possible. • Low risk of contamination from a flowback wastewater tank failure due to the structural design of the tanks, site bunding, emergency response requirements and spill management requirements. • Low risk of wastewater evaporation mist transported offsite during wastewater treatment due to wind speed/direction cut offs and routine site inspections during operations. • Low risk of greywater and sewerage disposal from camp wastewater treatment plants due to the irrigation area being appropriately sized, fenced and quality aligning with the NT Department of Health requirements. • Low risk of reduction in land production through poor infrastructure placement as infrastructure is preferentially located in existing disturbed area, with no sensitive soil types present in the immediate vicinity. • Low risk of reduction in land productivity from poor rehabilitation due to mandatory rehabilitation requirements and security bond requirements	• Site selected to avoid sensitive soil units and slopes which may increase erosion hazard. • All land clearing (including during the establishment of seismic lines) to align with the requirements of the code of Practice and NT Land Clearing Guidelines (2019) • Erosion and sediment control practices to be utilised at all disturbed sites to minimise erosion. • Sites (including gravel pits) maintained to minimise sediment releases, with erosion and sediment control plan in place • Pre and post wet season monitoring completed on all disturbed areas (including seismic lines) to identify and repair erosion • Construction within the wet season to be avoided to reduce the erosion risk. • Vegetation clearing watercourses to be avoided as far as reasonably practicable (i.e. only when a new access is required to be constructed) • During seismic surveys, vegetation clearing within open woodlands to be minimal • All chemicals and fuels to be stored with secondary containment as per code of Practice. • All chemicals to be risk assessed to ensure they do not represent an unacceptable risk to people, the environment and community, with all spills cleaned up as soon as practicable. • During flowback wastewater storage, the site is to be fully bunded to contain the volume of an entire wastewater tank if a structural failure occurred • Flowback wastewater must be stored in double lined tanks with leak detection and level monitoring • Double lined enclosed flowback wastewater tanks with leak detection and level monitoring utilised to store all wastewater, with open treatment tanks used to reduce wastewater volumes • All open treatment tanks and sumps are to be operated with a 1:1000Annual re-occurrence interval (ARI) wet season or dry season (whichever is applicable) freeboard • All flowback wastewater to be transferred to enclosed tanks within 8 hours of a significant rainfall event occurring (such as a cyclone) • Stormwater to be retained onsite during wastewater storage and tested prior to release • Stormwater falling within the SPGCF compressor area shall be treated to remove oil, prior to release to soaker trenches. • All spills of chemicals and wastewater to be cleaned up upon detection. • Irrigation of greywater and treated effluent to be undertaken in accordance with DoH requirements • Disposal of drilling muds, cuttings and mineral waste to be undertaken in accordance with Code of Practice, with onsite disposal only permitted where the potential harm to the environment can be demonstrated as ALARP and

Aspect	Environmental outcomes	Environmental impacts	Potential risk	Controls
			• Low risk of pipeline subsidence creating erosion	acceptable. • SBM to be recycled with cuttings dryers used to minimise oil on cuttings. • Site to be rehabilitated back to pre-existing/ agreed state with pastoralist input. • Pipeline monitoring and repair work to minimise/ respond to pipeline subsidence
Emissions (dust, greenhouse and combustion emissions)	• Avoid environmental nuisance at sensitive receptors • Minimise impacts to pastoralists and surrounding ecological communities from dust • Minimise greenhouse gas emissions	• Dust on vegetation in the immediate vicinity of activities reduces plant palatability • Impacts of dust nuisance to birds and fauna in the immediate vicinity of activities, specifically access tracks and seismic lines • Emissions from the combustion of diesel. • Emissions from gas fired power/ compressor generation. • Fugitive emissions and VOC's • Generation of Greenhouse gasses	• Low risk of dust impacts generated during Civil activities, drilling operations, well testing due to use of dust suppression and routine maintenance of access tracks and infrastructure • Low risk of reduction in regional air quality resulting from emissions from the combustion of diesel due to the limit nature of the activities, selection of low pollution equipment (such as low NOx engines) and lack of regional pollutant sources. • Low risk of reduction in regional air quality from gas and condensate flaring due to the combustion efficiency of the flare and operating procedures. Emissions from these facilities will be modelled to ensure compliance with NEPM guidelines. • Low risk of air emissions from chemical releases during drilling and stimulation activities impacting livestock, fauna and people due to chemical handling procedures limiting emissions during mixing. • Medium risk of bushfire from accidental ignition by site activities (civil works, drilling, flaring, grinding) or personnel. The consequence of a fire is considered serious, with the likelihood Highly unlikely. • Low risk of uncontrolled release of gas impacting a receptor during drilling, stimulation, barrier failure, operator error or vehicle collision due to the well design, blow out prevention, well integrity and lack of sensitive receptors preventing impacts. • Low risk of leak of gas from wells due to the well design, routine leak detection and repair and separation distance from receptors, • Low risk of greenhouse gas emission impacts from appraisal gas sale/ well testing through avoidance of venting and prioritisation of appraisal gas sale over flaring.	• Site located away from sensitive receptors, such as homesteads • Dust suppression to be used on access tracks, well pads and gravel pits to minimise dust emissions where practicable • Outside of high intensity activities (such a s civil construction, drilling and stimulation) Dust levels consistent with standard pastoral activities (such as mustering/truck load outs) on the property • Venting of raw gas is tightly controlled under the Code of Practice, with no material volume of gas to be vented • A reduced emission completion (flare) to be utilised to combust all hydrocarbons • Flares to be compliant with USEPA design standards, including 98% flare efficiency • Stimulation chemical mixing procedures deployed (such as enclosed hoppers) that minimises dust emissions • Firebreaks to be maintained around well and camp pads to minimise bushfire risk • Flaring exclusion zones to be maintained around flare • No flaring during total fire bans • Slashing, grinding and other higher risk fire activities to be undertaken with appropriate controls to mitigate he risk of bushfire (such as buffer zones, use of fir trailers, fire breaks etc.) • During seismic surveys, no vegetation is to be mulched and bushfire management protocols implemented. • Vehicles to be equipped with fire extinguishers • 6 monthly gas leak detection on all exploration wells, equipment and compressors, with annual inspections on pipelines • Gas is lean, with very low levels of higher order hydrocarbons, BTEX, Radon or other harmful contaminants- noting gas will not be vented.
Surface Water	• Avoid and minimise the potential contamination caused by the discharge of sediment or contaminated storm water to waterways or established drainage systems. • Contain any potential contaminants for treatment or disposal.	• Increased sedimentation transportation from disturbed areas (access tracks, well pads, seismic lines etc.) • Release of contaminated stormwater • Accidental release of wastewater (flowback or drilling fluids)	• Low risk of contamination from a flowback wastewater tank failure due to the structural design of the tanks, site bunding, emergency response requirements and spill management requirements. • Low risk of gathering pipeline failure and release of flowback • Low risk of drill sump and flowback tank overtopping due to mandatory freeboard and monitoring controls • Low risk of a transportation accident releasing chemical or wastewater (drilling fluid and flowback) due to the use of licenced wastewater/ chemical transportation providers, spill	• No take of surface water permitted or proposed • Well pad located away from watercourses- typically 1km or greater • Seismic activities to: o avoid vegetation clearing as much as practicable o In open woodlands, limit clearing to grasses and shrubs o Maintain viable root stock to promote rapid rehabilitation o Avoid seismic lines in water courses (unless co-located with an access track) • Site maintained to minimise sediment releases, with erosion and sediment control plan in place • Double lined enclosed wastewater tanks with leak detection and level

Aspect	Environmental outcomes	Environmental impacts	Potential risk	Controls
			management and emergency response requirements. • Low risk of spills to surface water from chemicals and fuel storage and handling activities due to use of secondary containment and separation distance to watercourses. • Low risk of stormwater releases from activities contaminating surface water due to stormwater segregation and testing procedures. • Low risk of infrastructure (including pipeline) changing surface hydrology and flow due to infrastructure design and avoidance of overland flow locations. • Low risk of changes to terrestrial ground surface levels associated with seismic activity due to the stability of the basin and geomechanical properties of the target and overlying formations. • Low risk of gathering line failure releasing flowback fluid to the environment	monitoring utilised to store all wastewater, with open treatment tanks used to reduce wastewater volumes • All wastewater tanks engineered to withstand failure, cyclone rated construction • All open treatment tanks and sumps are to be operated with a 1:1000Annual re-occurrence interval (ARI) wet season or dry season (whichever is applicable) freeboard • All wastewater to be transferred to enclosed tanks within 8 hours of a significant rainfall event occurring (such as a cyclone) • During wastewater storage, the site is to be fully bunded to contain the volume of an entire wastewater tank if a structural failure occurred • All gathering lines to be welded as per Australian Standards, hydrotested during construction to verify integrity prior to being brought into service • Gathering lines to utilise flowmeters/ pressure monitoring to identify leaks (such as flow/ pressure drops) • Gathering lines to be inspected 6 monthly to identify subsidence/ potential integrity issues. All spills of chemicals and wastewater to be cleaned up upon detection. • Irrigation of greywater and treated effluent to be undertaken in accordance with DoH requirements • No offsite releases of drilling or stimulation wastewater proposed or permitted • Stormwater retained onsite during wastewater storage, with testing completed prior to offsite release • Site selected to avoid major structural features, such as faults • Basin is seismically stable, with low seismic activity reported.
Flora and Fauna	• Minimise disturbance to flora and fauna • No disturbance to high conservation areas • Avoid the introduction of weeds • Avoid the spread of existing weeds • Minimise the loss of pastoral/ NTH traditional productivity	• Clearing of vegetation communities (such as Open Corymbia/eucalypt woodland, Bullwaddy and/ or Lancewood) to support exploration activities (well pad extension and seismic lines). • Loss of fauna and flora habitat • Loss of livestock grazing area • Loss of productivity of disturbed areas until final rehabilitation has been achieved • Impact on livestock and fauna from transport accidents • Disturbance of fauna from activity noise/ dust	• Low risk of impacts to sensitive vegetation communities from seismic activities, with high ecological areas avoided • Low risk of threatened fauna mortality during clearing, with all sites to be inspected prior to clearing to avoid fauna. • Low risk of vehicle , machinery noise, plant noise, and lighting on well pads, access tracks and gas plant causing material impacts to threatened fauna or livestock. • Low risk of contamination from a flowback wastewater tank failure due to the structural design of the tanks, site bunding, emergency response requirements and spill management requirements. • Medium risk of introduction and spread of weeds in the area due to equipment washdowns, inspection and certification requirements. Monitoring and routine treatment completed on identified outbreaks. Impact from weed introductions/spread is considered moderate, with likelihood Unlikely. • Medium risk of bushfire from accidental ignition by site activities (civil works, seismic activities, drilling, flaring, grinding) or personnel on fauna, flora and land productivity. The consequence of a fire is considered serious, with the likelihood	• Seismic activities to: ○ avoid clearing of mature trees and protected flora ○ In open woodlands, limit clearing to grasses and shrubs ○ Maintain viable root stock to promote rapid rehabilitation ○ Drainage depressions ○ No seismic lined in riparian ○ Implement fire management controls, include rapid response • No mulching of vegetation to occur which reduces risk to fire • Vegetation to be walked down and inspected for fauna prior to clearing. Where fauna are identified, work shall stop in the immediate vicinity until they leave the area. • E&A sites to be fully fenced during operations • Wastewater and spill management plans in place to prevent offsite release of wastewater • Stormwater released from wastewater areas tested to ensure no contamination • Open pits to be fully fenced to prevent livestock access • Sumps to have fauna ladders or liner material (such as coletanche) with sufficient friction to allow fauna to escape. • Gravel pits to be left open to act as watering point for livestock when not in use. High risk pits to be fenced to prevent livestock where

Aspect	Environmental outcomes	Environmental impacts	Potential risk	Controls
			Highly unlikely. • Low risk of flora, fauna and livestock being trapped and drowning in storage tanks, sumps and pits due to the design of storages and fencing. • Low risk of contaminants in water and soil pass through the food chain and bioaccumulate in fauna causing detrimental impacts to local species and communities due to chemical storage and handling practices and lack of contaminants within gas stream. Fences are utilised to restrict livestock access. • Low risk of vehicle collisions with fauna – fauna mortality results in a localised impact to listed threatened species, due to speed limit restrictions and number of vehicle movements. • Low risk of reduction in land productivity from poor rehabilitation due to mandatory rehabilitation requirements and security bond requirements Reduction in land production through bushfire. • Low risk of impacts to flora and fauna through the encouragement of feral animals and other pest species leading to competition with native species. This includes the introduction of cane toads.	appropriate (i.e. when cattle death is expected or observed) • Vehicle speed limit restricted to 60km/hr • Dust suppression used to limit dust impacts to vegetation • Site to be rehabilitated back to pre-existing/ agreed state with pastoralist • All equipment and loads to be inspected and certified weed free prior to entry • 6 monthly weed inspections to be completed with all identified weeds treated. • Weeds sprayed periodically to restrict weed numbers.
Environmental Nuisance and Amenity- including dust, noise, light, odour and vibration	• Minimise impacts to pastoralist operations • Minimise impacts to NTH traditional use of the surrounding area	• Construction of exploration infrastructure onsite changes land use from pastoral/ natural to industrial. • Light and noise nuisance to fauna and livestock in immediate vicinity of activity • Increased traffic to proposed exploration area • Noise, light, odour and dust emissions in the immediate vicinity of the well pad. • A visible hue visible from operations at night during flaring or from activity lighting. • Noise impacts from helicopter movements • Noise and vibration impacts during seismic activities.	• Low of changes in property amenity through the construction and operation of exploration infrastructure due to location of activities and separation distance from receptors • Low risk of increased vehicle accident or traffic impacts through associated with low traffic volumes anticipated and limited peak traffic periods. • Low risk of adverse impacts to fauna from traffic are not anticipated, with impact levels consistent with standard road traffic levels. • Low risk of helicopter movements causing impacts to receptors based on location of site away from homesteads • Low risk of noise, dust, light and vibration impacts associated with temporary appraisal gas facility • Low risks of pollutants extending beyond the boundary of the activity (water, air and soil) impacting on NTH foraging/use due to environmental controls utilised.	• On country meeting completed with NTH's to communicate project location and scope • Sites located away from homesteads and local communities • Flaring to be minimised to avoid light generation • Site is located away from pastoralist main access points • Maximum peak traffic during mobilisation and demobilisation is likely to be typically less than<44 vehicle movements per day for 2 weeks. • Speed limit restricted on the access tracks to <60km/hr • Dust suppression to be utilised to minimise dust emissions • Where helicopter movements are planned, the pastoralist to be engaged prior to ensure helicopter do not interfere with pastoral activities. • Seismic surveys to avoid sensitive receptors, such as homesteads, local communities, sacred sites etc. • Lighting of infrastructure designed to minimise aesthetic impacts during the evening

Appendix C- Drilling Waste Mix Bury Cover schematic



Appendix J.1.2 08 250630 RE_EP98 117 – Tamboran AAPA cert status quo and action

Outlook

RE: EP 98 117 - Tamboran AAPA cert status quo and action

From Matt Kernke [redacted]
Date Mon 6/30/2025 2:40 PM
To [redacted]
Cc Emily Beresford-Cane [redacted]Tamboran Contact <tamboran.contact@tamboran.com>

1 attachment (12 MB)
FW: Variation to certificate C2024/030- extension of subject land 1 and new subject land 6;

Hi [redacted]

Apologies for the delay.

Thank you for the confirmation regarding variation to C2024/065. Please let me know if you require any further information.

[redacted]

Talk soon
Matt

From: [redacted]
Sent: Wednesday, 18 June 2025 2:47 PM
To: Matt Kernke [redacted]
Cc: Emily Beresford-Cane [redacted]amboran Contact <tamboran.contact@tamboran.com>
Subject: EP 98 117 - Tamboran AAPA cert status quo and action

Hi Matt,

In regards to the timing and requirements of NLC for Tamboran's AAPA cert applications. Could you please provide comment.

I am currently aware of three AAPA requirements and outline their status below:

Application for variation - C2024/065
Status: AAPA application received by NLC from APAA.

[redacted]

[redacted]

I note that the Sand Wash Facility is included in this cert, and included in your Approvals Slide deck as recently issued to the NLC. Post meeting, the NLC will DRAFT report to AAPA.

[redacted]

The NLC can undertake these activities from the documentation received form Tamboran, however the docs received from AAPA reference the content in a different way, therefore risks further consultations.

Walter & myself intend on undertaking the Sacred Site clearances for this activity in Mid-late August. Could you please confirm this is acceptable.

[redacted]

Further, You have provided slides on these three certs in your June Approval slide pack. We will need to consult on this material. We are still reviewing the content of this slide deck and will provide comments once our review is completed. I will also review the certs once received from AAPA and compare it against what we have already consulted on. I will provide update on this after we receive the relevant requests from AAPA.

Kind regards,

[redacted]
Senior Project Officer
Resources & Energy Branch
Northern Land Council

[redacted]

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Appendix J.1.2 09 250630 NLC comments on Sand Wash EMP

Outlook

[Draft] NLC comments on Sand Wash EMP

From

1 attachment (87 KB)
250630 Comments on Sand Wash EMP.pdf;

From: [redacted]
Sent: Monday, 30 June 2025 4:53 PM
To: Emily Beresford-Cane [redacted] Matt Kernke [redacted]
Cc: [redacted] Armando de la Flor Olavide [redacted] Tamboran Contact [redacted]
Subject: NLC comments on Sand Wash EMP

Hi Emily and Matt

I attach comments on the Sand Wash EMP for Tamboran's consideration.

Regards

[redacted]

Senior Lawyer (Resources & Energy)

Northern Land Council

NORTHERN LAND COUNCIL
Our Land, Our Sea, Our Life

[redacted]

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Reference	Text	Comment
Page IV (Table 1) & Page 16 (Table 5)	Processing of up to 70 kt of raw sand in 2025, increasing to above 150 kt of sand in 2026	Above is limitless- an upper limit should be provided.
Page V (Table 1) & Page 16 (Table 5)	Raw sand may be sourced from various locations including: suitable sand that is generated incidentally during construction activities associated with Tamboran's approved activities within EPs 76, 98 and 117. o Suitable sand that is extracted from granted Extractive Mineral Titles held by entities associated with Tamboran*. o Suitable sand that is sourced from Extractive Mineral Titles held by third parties*.	An indicative portion of material should be provided for each source. Evidence should be provided that consuming and changing the structure of material that is generated incidentally during construction activities associated with Tamboran's approved activities within EPs 76, 98 and 117 does not compromise objectives, rehabilitation plans that have been approved in other EMPs.
Page V (Table 1) & Page 16 (Table 5)	Management and recycling of SWP water, including management of fine 'reject' material (organics, clays, silts, ultra fine sand).	Implications of fines material for rehabilitation should be specifically considered in the Rehabilitation Plan as a "subsoil" of such material may impede the establishment of vegetation similar to surrounding reference communities.
Page 16 (Table 5)	Backfilling basins/ponds, grading and recontouring to the desired final landform, re-spreading topsoil, re-seeding (where required) and raking back felled vegetation.	A Trigger for "where required" should be provided.
Page vi	Land condition in the bioregion is moderate to good but is threatened by impacts from weeds, feral animals, pastoralism and changed fire regimes.	Note that pastoralism is recognised as a threat to land condition. Not specific to the sand wash EMP but the implications of leaving voids as a result of a deficit of material (as a result of sand

		extraction) increasing the number of stock watering points may have consequences for land condition.
Page ix	Reduction in agriculture productivity through the introduction and spread of weeds in the area or accidental ignition (bushfire) from surface activities – risk ID 16, risk ID 17, risk ID 18, risk ID 19 and risk ID 20	The risk should also consider implication for the rights of Native Title Holders.
Page 26	Management and recycling of SWP process water and entrained fine 'reject' material, including water pumping, settlement of solids from water (including flocculation if required) and recovery of process water for reuse. As noted in Section 3.4, installation and alteration of existing settlement basins and decant/raw water ponds may be ongoing during the operational phase as required, while periodic removal of deposited sediment from retention basins to maintain capacity and freeboard may also be undertaken if required.	Detail should be provided on the fate of periodically removed deposited material noting fines material has potential to result in turbidity if it enters surface water and may present challenges as growth medium.
Page 29	The settlement basins have been sized and designed to progressively fill with fine sediment until such time as decant water can no longer be efficiently recovered for recycling. The settlement basins are not intended to be desilted during the operational life of the facility; however, some desilting may be undertaken if required.	Implications of fines material for rehabilitation should be specifically considered in the Rehabilitation Plan as a "subsoil" of such material may impede the establishment of vegetation similar to surrounding reference communities.
Page 31	3.7.5.1 Stormwater limit justification	No information is provided on tolerance of dominant grasses to predicted levels of salinity.
Page 35	3.8 Rehabilitation	Specific information should be provided on rehabilitation of sedimentation ponds.
Page 45	Inspection by cultural managers prior to ground disturbance activities	Will the cultural monitors be assisted by a qualified archaeologist?

Page 68	No critical fauna habitat for threatened fauna has been identified in the vicinity of the SWP area.	A definition of critical habitat should be provided.
Page 70	Grey Facon - Possible	Text notes a recent record of Grey Falcon but occurrence is only considered possible.
Page 72	Greater Bilby	Inconsistent conclusion on presence of suitable habitat.
Page 101 (Table 37)	Row 1	The “Records” are short term measures whereas the “Standard” and “Criteria” are long term.
Page 113	Removal of all weeds and contaminated materials/wastes	Information should be provided on the elimination of the seed bank.
Appendix G	5-year final criteria	Some justification given for a set 5-year timeline as opposed to meeting the criteria. Some justification should be provided for the 60% similarity value being an acceptable criteria.

Appendix J.1.2 10 250716 RE_NLC comments on Sand Wash EMP

Outlook

RE: NLC comments on Sand Wash EMP

From Matt Kernke [redacted]
Date Wed 7/16/2025 4:08 PM
To [redacted]
Cc [redacted] Armando de la Flor Olavide [redacted] Tamboran Contact <tamboran.contact@tamboran.com>; Brad O'Reilly [redacted] Emily Beresford-Cane [redacted]

1 attachment (272 KB)
250716_TBN Response to NLC SWP Comments.pdf;

Dear [redacted]
Please find attached Tamboran's responses to the NLC comments.

Kind Regards
Matt

From: [redacted]
Sent: Monday, 30 June 2025 4:53 PM
To: Emily Beresford-Cane [redacted] Matt Kernke [redacted]
Cc: [redacted] Armando de la Flor Olavide [redacted] Tamboran Contact <tamboran.contact@tamboran.com>
Subject: NLC comments on Sand Wash EMP

Hi Emily and Matt

I attach comments on the Sand Wash EMP for Tamboran's consideration.

Regards

[redacted]
Senior Lawyer (Resources & Energy)
Northern Land Council

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[redacted]

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TBN Response to NLC SWP EMP Comments (*250630 Comments on Sand Wash EMP)*

TBN Ref #	Reference	Text	Comment	TBN Response
1	Page IV (Table 1) & Page 16 (Table 5)	Processing of up to 70 kt of raw sand in 2025, increasing to above 150 kt of sand in 2026	Above is limitless- an upper limit should be provided.	Changed to: *Processing of up to 70 kt of raw sand in 2025, increasing to approximately 150 kt of sand in 2026, with volumes for subsequent years dependent on proppant requirements for Tamboran's E&A activities* Also updated s3.6 on that basis
2	Page V (Table 1) & Page 16 (Table 5)	Raw sand may be sourced from various locations including: • suitable sand that is generated incidentally during construction activities associated with Tamboran's approved activities within EPs 76, 98 and 117. • Suitable sand that is extracted from granted Extractive Mineral Titles held by entities	An indicative portion of material should be provided for each source. Evidence should be provided that consuming and changing the structure of material that is generated incidentally during construction activities associated with Tamboran's approved activities within EPs 76, 98 and 117 does not compromise objectives, rehabilitation plans that have been	Added: *The proportion of each raw sand source (as listed above) to be processed through the SWP will be dependent on the physical characteristics of the raw sand and the demonstrated ability of the SWP to process it to produce a suitable proppant material*. Also added to 3.5: Suitable raw sand to feed the SWP may be obtained from a variety of sources, including: • incidental sand generated during Tamboran's construction activities within EPs 76, 98 and 117. *It is noted that the construction activities related to Tamboran's wider petroleum activities typically result in a net excess of material being available, mainly due to the generation of drill cuttings from down-hole, which are permanently deposited into drilling sumps. Much of the material removed from the initial sump construction is therefore surplus material and its use (if suitable) as raw sand to be processed through the SWP will not result in a deficit of material required for the rehabilitation of Tamboran's wider petroleum activities;*

TBN Ref #	Reference	Text	Comment	TBN Response
		associated with Tamboran*. • Suitable sand that is sourced from Extractive Mineral Titles held by third parties*.	approved in other EMPs.	
3	Page V (Table 1) & Page 16 (Table 5)	Management and recycling of SWP water, including management of fine 'reject' material (organics, clays, silts, ultra fine sand).	Implications of fines material for rehabilitation should be specifically considered in the Rehabilitation Plan as a "subsoil" of such material may impede the establishment of vegetation similar to surrounding reference communities.	Added: Management and recycling of SWP water, including management of fine 'reject' material (organics, clays, silts, ultra fine sand) *in settlement basins*. Also refer to responses for Item 7 and Item 8
4	Page 16 (Table 5)	Backfilling basins/ponds, grading and recontouring to the desired final landform, re-spreading topsoil,	A Trigger for "where required" should be provided.	Added Backfilling basins/ponds, grading and recontouring to the desired final landform, re-spreading topsoil, re-seeding (*where identified during rehabilitation monitoring as a necessary action*) and raking back felled vegetation.

TBN Ref #	Reference	Text	Comment	TBN Response
		re-seeding (where required) and raking back felled vegetation.		
5	Page vi	Land condition in the bioregion is moderate to good but is threatened by impacts from weeds, feral animals, pastoralism and changed fire regimes.	Note that pastoralism is recognised as a threat to land condition. Not specific to the sand wash EMP but the implications of leaving voids as a result of a deficit of material (as a result of sand extraction) increasing the number of stock watering points may have consequences for land condition.	Noted – no change made
6	Page ix	Reduction in agriculture productivity through the introduction and spread of weeds in the area or accidental ignition	The risk should also consider implication for the rights of Native Title Holders.	The referenced risk refers specifically to reduction in agricultural productivity. The Risk Assessment considered risks associated with disturbance of sacred/culturally sensitive areas and decline in value of areas used for cultural purposes separately – e.g. refer to Item 1 on Page ix. No changes made.

TBN Ref #	Reference	Text	Comment	TBN Response
		(bushfire) from surface activities – risk ID 16, risk ID 17, risk ID 18, risk ID 19 and risk ID 20		
7	Page 26	Management and recycling of SWP process water and entrained fine 'reject' material, including water pumping, settlement of solids from water (including flocculation if required) and recovery of process water for reuse. As noted in Section 3.4, installation and alteration of existing settlement basins and decant/raw water ponds may be ongoing during the operational phase as required, while	Detail should be provided on the fate of periodically removed deposited material noting fines material has potential to result in turbidity if it enters surface water and may present challenges as growth medium.	Added: *Any sediment that has been removed from a settlement basin during operations will be stored adjacent to the settlement basin such that any run-off from the stockpiled material will report to the settlement basin. Sediment that has been removed from a settlement basin (that is not utilised elsewhere for TBNs activities) will ultimately be re-deposited in a settlement basin to a minimum depth of 0.6m below natural ground level, which is beyond the root zone of the typical grass and shrub species which will establish during rehabilitation. It is noted that this 'fine' material will still retain a proportion of coarse material which is not removed by the SWP.*

TBN Ref #	Reference	Text	Comment	TBN Response
		periodic removal of deposited sediment from retention basins to maintain capacity and freeboard may also be undertaken if required.		
8	Page 29	The settlement basins have been sized and designed to progressively fill with fine sediment until such time as decant water can no longer be efficiently recovered for recycling. The settlement basins are not intended to be desilted during the operational life of the facility; however, some desilting may be undertaken if required.	Implications of fines material for rehabilitation should be specifically considered in the Rehabilitation Plan as a "subsoil" of such material may impede the establishment of vegetation similar to surrounding reference communities.	Added: *Any sediment that has been removed from a settlement basin during operations will be stored adjacent to the settlement basin such that any run-off from the stockpiled material will report to the settlement basin. Sediment that has been removed from a settlement basin (that is not utilised elsewhere for TBNs activities) will ultimately be re-deposited in a settlement basin to a minimum depth of 0.6m below natural ground level, which is beyond the root zone of the typical grass and shrub species which will establish during rehabilitation. It is noted that this 'fine' material will still retain a proportion of coarse material which is not removed by the SWP.* *Coarse reject sand (which will also contain a proportion of finer material which is not separated by the SWP) will be stockpiled separately and will be similarly used to backfill settlement basins or for other suitable purposes. Once a settlement basin is no longer required, a minimum 0.5m thick layer of the coarse reject material will be placed over the deposited fine material. Ongoing SWP operations will likely result in the installation of replacement basins and ponds within the footprint of the SWP beyond those shown in Figure 6.*

TBN Ref #	Reference	Text	Comment	TBN Response
9	Page 31	3.7.5.1 Stormwater limit justification	No information is provided on tolerance of dominant grasses to predicted levels of salinity.	Edited paragraph- *To understand the sensitivity of the receiving vegetation to salinity, a literature review was completed by EHS (2024). This identified that the receiving environment is characterised by native grasses (including spinifex and tussock) and trees that are moderately to highly tolerant to salinity.[9] Eucalyptus species are known for their salt tolerance and can withstand salinity levels up to 8,000 µs/cm and greater. For example, Eucalyptus camaldulensis is present in the area (Table 19 of the Land Condition Report) is tolerant to salinity up to 8,000 µs/cm.[10] Several of the eucalyptus species in the area including Eucalyptus microtheca and Eucalyptus camaldulensis are specifically noted in the Salinity Management Handbook (Queensland Government) as suitable for saline discharge sites.[11] Acacia and Melaleuca species found in the area can tolerate at least 2,000 µs/cm and greater than 16,000 µs/cm. Corymbia (Bloodwood) generally exhibit moderate to low salinity tolerance compared to eucalypts, yet still greater than 2,000 µs/cm and up to 4,000 µs/cm.* [9] EHS 2024, *Response to Comments on Environment Management Plan for Shenandoah South - Stormwater and Brine releases from Water Treatment Plant (Revision 1)* [10] https://www.agric.wa.gov.au/soil-salinity/salinity-tolerance-plants-agriculture-and-revegetation-western-australia. [11] Table 43 Salinity Management Handbook, Queensland.
10	Page 35	3.8 Rehabilitation	Specific information should be provided on	Added the following:

TBN Ref #	Reference	Text	Comment	TBN Response
			rehabilitation of sedimentation ponds.	*Areas of residual settlement basins which are to be permanently retained below natural ground level (typically <4m below natural ground level) will be shaped to exclude external run-off from entering, and to shed internal run-off to pond at the lowest point of the basin. The remainder of the basin area will be retained as a shallow slope up to natural grade. This sloped area will remain above the ponded water level and will be rehabilitated to the surrounding pre-disturbance land-use. These areas will function as 'internally draining land forms' whereby the majority of the area will function as a low-intensity grazing land-use, with the low-point to become a semi-permanent watering point. An example of this type of rehabilitation at a sand extraction site in the Northern Territory is shown in Figure 10.*
11	Page 45	Inspection by cultural managers prior to ground disturbance activities	Will the cultural monitors be assisted by a qualified archaeologist?	No change. Cultural heritage clearances are completed by qualified archaeologists as part of the site selection. There is no requirement to engage a qualified archaeologist for the inspection prior to disturbance. However, where an suspected heritage item/s are identified by cultural managers, the Unexpected Heritage Finds protocol (Appendix B.2) will be implemented, which includes engaging with a qualified archaeologist.
12	Page 68	A definition of critical habitat should be provided.	A definition of critical habitat should be provided.	Footnote provided on first use of critical habitat included on Page 71 - [18] Critical habitat': *"…habitat critical to the survival of a listed threatened species or ecological community."* https://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Environment_and_Communications/Completed_inquiries/2010-13/threatenedspecies/report/c05

TBN Ref #	Reference	Text	Comment	TBN Response
13	Page 70	Grey Falcon - Possible	Text notes a recent record of Grey Falcon but occurrence is only considered possible.	Section 4.2.3.1 notes that while the Grey Falcon has been observed in the vicinity during a wider field survey, suitable breeding habitat does not occur within the SWP area. As such a likelihood of 'possible' is appropriate.
14	Page 72	Greater Bilby	Inconsistent conclusion on presence of suitable habitat.	Amended to: *Unlikely* *No recent records occur in the vicinity of the SWP area although potentially suitable habitat is present.*
15	Page 101 (Table 37)	Row 1	The "Records" are short term measures whereas the "Standard" and "Criteria" are long term.	The intent of this comment is unclear.
16	Page 113	Removal of all weeds and contaminated materials/wastes	Information should be provided on the elimination of the seed bank.	Added: Removal of all weeds (*including reproductive material where present)* and contaminated materials/wastes And: *Any weeds that have been introduced into the area by the activity will be identified and managed during the rehabilitation monitoring and maintenance period*
17	Appendix G	5-year final criteria	Some justification given for a set 5-year timeline as opposed to meeting the criteria. Some justification	Removed final success criteria ~~(5-year)~~ in Appendix G. Noting final success is based on: • 5 years post rehabilitation or when achieve final success criteria.

TBN Ref #	Reference	Text	Comment	TBN Response
			should be provided for the 60% similarity value being an acceptable criteria.	

APPENDIX K

Emergency Response Plan

Beetaloo Basin

Emergency Response Plan

(This ERP has been prepared for EMP submission. This ERP provides the foundation of Tamboran ERP. Actual ERP will differ based on activity and location.)

TAMBORAN RESOURCES LIMITED INTEGRATED MANAGEMENT SYSTEM		
DOCUMENT TITLE:	Emergency Response Plan	
DOCUMENT NO:	TBN-HSE-MP-05	REVISION NO: 0
DOCUMENT CUSTODIAN:	HSE Manager	REVISION DATE: 30/04/2025

Revision

Rev. No	Revised By	Justification	Date
0	AC	ERP has been prepared for EMP submission. This ERP provides the foundation of Tamboran ERP. Actual ERP will differ based on activity and location	30/04/2025

Document Approval

Responsibility	Approver
Owner of the Emergency Response Plan	Ed Wong VP Drilling and Completions

Abbreviations and acronyms

Abbreviation	Definition
AAR	After Action Review
BMP	Bushfire Management Plan
CMT	Crisis Management Team
DLPE	Department of Lands, Planning and Environment
DME	Department of Mines and Energy
DMO	Duty Medical Officer
EAP	Employee Assistance Program
EMP	Environment Management Plan
EMT	Emergency Management Team
EMT-L	Emergency Management Team Leader
EPT	Extended Production Test
ERP	Emergency Response Plan (this document)
ERT	Emergency Response Team
ERIP	Emergency Response Implementation Plan
GPS	Global Positioning Systems
HSEMS	Health and safety management system
HLSO	Helicopter Landing Site Officer
HAZCHEM	Hazardous chemicals
OSC	On-Scene Commander
MAE	Major Accident Event
PPE	Personal protective equipment
PPRR	Prevent Prepare Respond Recover
SITREP	Situation Report
SEMT	Site Emergency Management Team
SEMT-L	Site Emergency Management Team Leader
SERP	Site Emergency Response Plan
SERT	Site Emergency Response Team
SIMOPS	Simultaneous Operations
SIF	Serious Injury or Fatality
SPCF	Sturt Plateau Compression Facility
SMP	Spill Management Plan
SWP	Sand Wash Plant
TPC	Third party contractor
VP	Vice President

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1 Introduction

1.1 Purpose

This Emergency Response Plan (ERP) is designed to guide the Site Emergency Team to respond effectively to a site level emergency and return the site/facility to normal operations.

The plan will:

- Describe the emergency response philosophy and structure
- Explain the notification and escalation pathway
- Identify key personnel and their role in an emergency scenario
- Describe information about the site including:
    - Site location/s and geographic area
    - Emergency equipment and medical resources available
    - Exclusion zones (if applicable)
- Identify the tools for use during an emergency
- Identify the escalation process from site emergency response team up to the crisis management team.

Support for the Emergency Management Team is provided through the Tamboran Crisis Management Plan (TRL-HSE-PL-03).

1.2 Scope

This emergency response plan encompasses all Tamboran's activities within the Beetaloo Basin. The plan applies to all employees, contractors, and visitors and includes (but is not limited to) the following activities:

- All regulated activities approved under the environment management plans (EMPs) and legislated under Regulation 5 of the Petroleum (Environment) Regulations 2016
- Transport to and from work areas (excluding chartered flights to and from Daly Waters)
- Field scouting (environmental, cultural heritage, constructability etc)
- Groundwater bore construction, monitoring and sampling
- Site inspections and well-head maintenance.

Where site operations are under the HSEMS of a Lead Contractor then bridging arrangements and interfaces will be agreed to and documented.

Out of scope:

- Charter flights and commercial flights to and from Daly Waters and Darwin
- Logistics and freight haulage from depots to Daly Waters laydown
- Accommodation in commercial establishments (hotels etc.).

1.3 Compliance with Legislation

This plan meets the requirements as identified by legislation for emergency response plans including:

- Work Health and Safety (National Uniform Legislation) Act 2011
- Work Health and Safety (National Uniform Legislation) Regulations 2011
- Petroleum Act 1984
- Petroleum Regulations 2020
- Petroleum (Environment) Regulations 2016
- Code of Practice for Petroleum Activities in the Northern Territory 2019

- Bushfire Management Act 2016
- Bushfire Management (General) Regulations 2018
- Dangerous Goods Act 1998
- Dangerous Goods Regulations 1985
- Transport of Dangerous Goods by Road and Rail (National Uniform Legislation) Act and Regulations
- Waste Management and Pollution Control Act 2016
- Northern Territory Contaminated Land Guideline (June 2017)

1.4 Operator Details

Tamboran Resources Ltd (Tamboran)

100 Barangaroo Avenue

Barangaroo NSW 2000

1.5 Beetaloo Basin Location

The Beetaloo Basin is located approximately 700 km south of Darwin with operational activity being undertaken in 4 permit areas (EP 76, EP 98, EP 117 and EP 136) as per Figure 1.

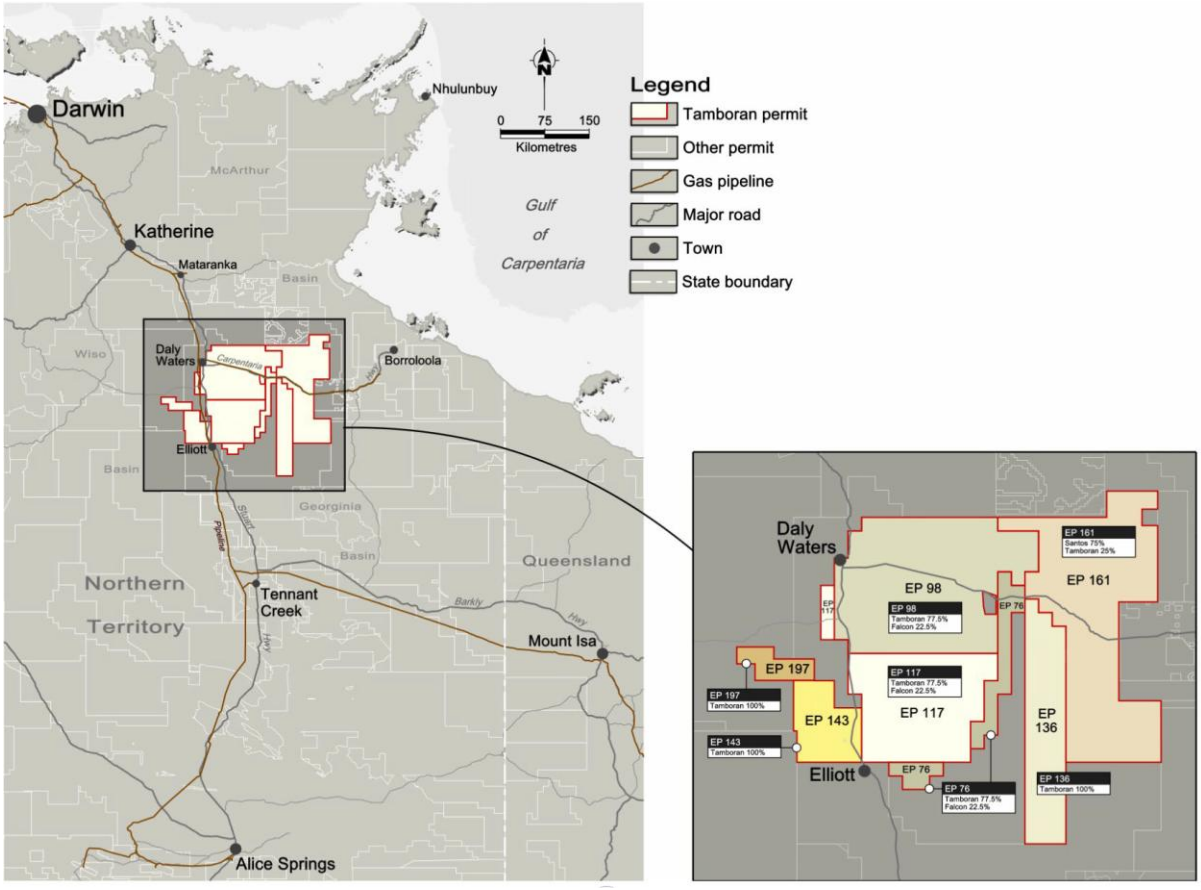


Figure 1. Beetaloo Basin permit area

2 Emergency Management Structure and Escalation

2.1 Emergency Response Philosophy

The site emergency response team will have the ability to provide a basic response to small fires, spills and medical emergencies to preserve life and reduce the impact to people, environment, assets and community.

Personnel dealing with emergencies strictly adhere to the PEARL[1] process as the safety of people is the highest priority. This philosophy is a hierarchal approach to emergency response in the below order.

Where increased response capability to mitigate the consequences of incident types such as loss of containment (Appendix F) or bushfire, specialist contractors (including emergency services) will be engaged to undertake the response.

Table 2. PEARL process

PEOPLE	• Evacuate and muster (if deemed necessary) • Account for all people and determine missing persons • Prevent unauthorised access to the site • For emergencies that are safe to manage, (such as small fires in non-hazardous areas, leaks and/or medical first aid emergencies. • Provide a technical resource to the Emergency Services when called • Alert other nearby stakeholders
ENVIRONMENT	• Control and contain the emergency to minimise environmental impact
ASSETS	• Monitor automatic shutdown of the equipment or part thereof or initiate manual shutdowns where safe to do so. • Mobilise emergency services to intervene
REPUTATION	• Notification to relevant stakeholders if required. Including TO's, Pastoralists and Regulatory Bodies
LIABILITY	• All personnel responsible for responding to an emergency will be trained in this ERP • The ERP will be reviewed annually and updated as necessary • Exercises and drills will be conducted regularly each year in accordance with the drill schedule.

[1] People, environment, assets, reputation, liability.

2.2 Emergency Management Structure

The overall Emergency Management structure is three-tiered as shown in Figure 2 with:

- An Emergency Response Team (ERT) on site. This will be led by a Tamboran Representative and supported by specialist contractors and local emergency services.
- An office-based Emergency Management Team (EMT) lead by a Tamboran Operations Representative.
- The Tamboran Crisis Management Team (CMT) is led by the Tamboran Chief Operating Officer.

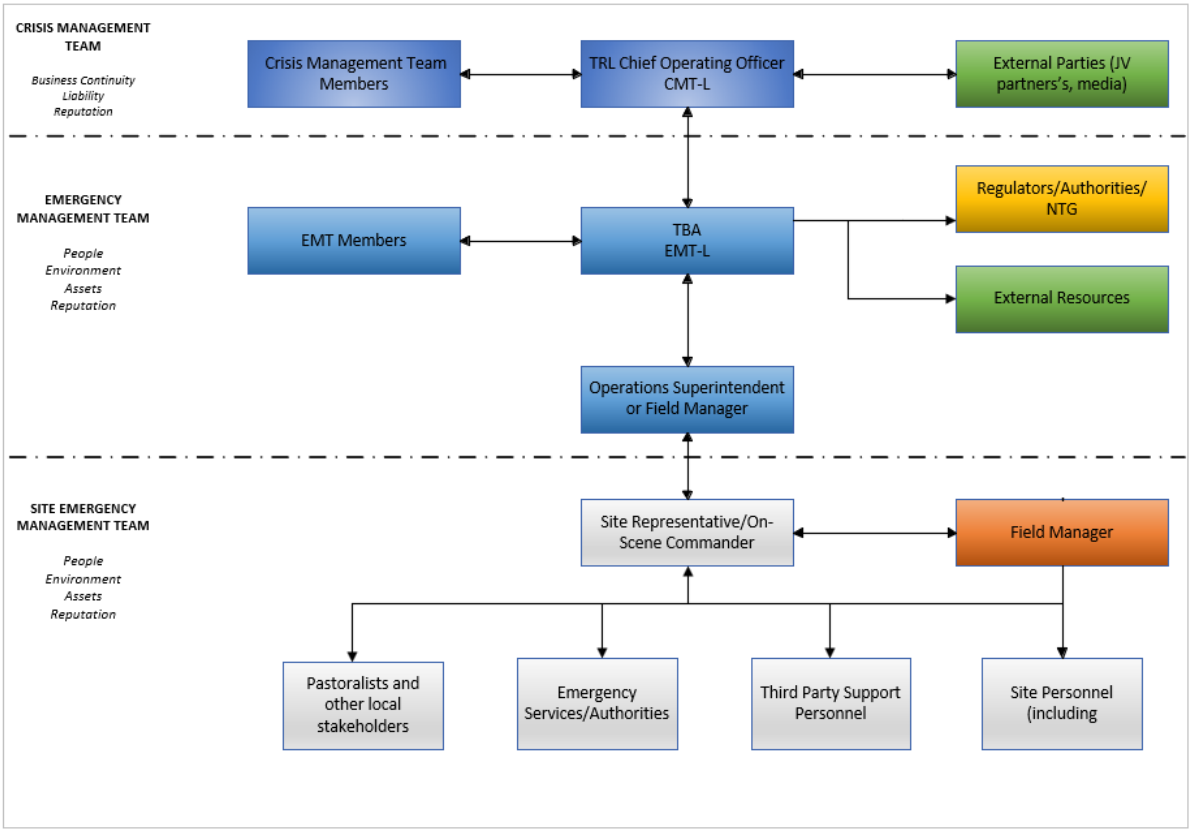


Figure 2. Emergency Management Structure

3 Emergency Management

3.1 Definition of a Site Emergency

An emergency is defined as an unplanned event which requires a response to normalise an activity that has or could result in harm to people, the environment, assets or Tamboran's reputation.

Tamboran's response to an emergency has a tiered 3 level approach.

Level 1 – an event that can be managed on site using the response resources readily available. This type of event typically does not require additional resources or assistance.

Level 2 - an event that requires or may require additional or external resources to respond to or recover from an emergency event.

Level 3 - an event where high-level strategic direction and decision making is required to respond to or recover from an emergency event. Given the complexity of level 3 events, strategic direction due to impact to business continuity, reputation and liability is required.

3.2 Emergency Response Plan Activation

The Site Emergency Management Team Lead (SEMT-L) has the authority to activate this Site Emergency Response Plan (SERP). Escalation to the Emergency Management Team Lead (EMT-L) must occur so that activation of the EMT can be considered and stood up if required.

Appendix A describes the activation pathway for the Site Emergency Response Team (SERT).

3.3 Escalation

Escalation of emergencies should be undertaken in accordance with the following. If in doubt, escalate up, it is always easy to de-escalate if required.

Table 3. ERP activation and escalation

Tamboran Response	ERP activation SERT-Leader must notify immediate line manager who will notify the EMT-L	EMT activation (EMT Leader will brief CMT leader)	CMT Activation CMT activation can occur in the event there is a developing threat or issue or in a standalone event where the SERT or ERT are not activated.
Severity Level	**Site Emergency Response – L1**	**Emergency Management – L2**	**Crisis Management – L3**
People **Environment** **Asset** **Reputation** **Liability (including business continuity)**	A level-1 event is an event that can be managed on site using the response resources available. A level 1 event does not require additional assistance however the SERT-L should consider the potential for the situation to escalate. Example (including but not limited to): • Injury or ill health requiring medical treatment (Tamboran or Contractor • Non-work-related illness (Tamboran or Contractor) that requires medivac • Loss of containment to land (spill) within the confines of the site (eg facility, well site) • Minor fire (non-hazardous area with facility or well pad) • Bushfire (non-threatening) • Potential for production loss • Local community concerns • Predicted localized flooding or storm causing damage to assets • Possible security concern or protest activity	A level-2 event is an event that requires or may require additional or external resources to respond to or recover from an emergency event. Example (including but not limited to): • Serious injury ill health requiring extensive medical treatment and medivac (Tamboran or Contractor) • Loss of containment to land (spill) that is not contained within the site causing extensive environmental damage or contamination • Loss of containment (hydrocarbons) unable to be isolated or contained. • Overdue or lost aircraft • Missing worker • Non-compliance with conditions of license to operate an asset or to conduct an activity. • Litigation and exposure to damages/fines/costs. • A fire in a hazardous area • Production loss • A bushfire threatening site operations with the potential for site evacuation	A level-3 event is an event where high-level strategic direction and decision making is required to respond to or recover from an emergency event. Given the complexity of level 3 events, strategic direction due to impact to business continuity, reputation and liability is required. Example (including but not limited to): • Life-threatening injury/illness, fatality or multiple fatalities (Tamboran or Contractor) • Destruction of an area of significant environmental or cultural significance with remediation not possible • Major litigation/prosecution with damages or fines • Criminal charges against an employee, director or senior executive • Suspension of operational activities or restrictions placed on operations • Loss of production and facility shutdown • Major security incident or cyber attack • JV partner crisis

3.4 Emergency Response Scenario Guides

The Emergency Scenario Guides provide an easy to understand, detailed response to emergency situations. The guides define the key roles and responsibilities to ensure essential response actions are undertaken and should be used in conjunction with this plan.

Category	Response Procedures
Fire or Explosion	▪ Bushfire ▪ Plant fire or explosion
Personal Safety and Security	▪ Medical emergency ▪ Vehicle accident ▪ Missing overdue worker ▪ Lone worker ▪ Snakebite ▪ Man down ▪ Electrical ▪ Security alert (bomb threat, armed intruder, protest/trespass, lockdown)
Environment	▪ Environment – weather related incident – storm and lightning/cyclone/flood ▪ Environment related incident – earthquake/cyclone ▪ Loss of containment – wastewater or chemical spill
Process safety	▪ Hazardous chemicals (gas, diesel) ▪ Loss of well control (Level 1 or 2).
Security	▪ Major structural or mechanical failure

3.4.1 Spill Response

The Beetaloo Spill Management Plan (TB2-HSE-MP-09) provides specific information on how to manage and handle spill responses within the Beetaloo Assets (including spills located off tenure. This document should be referenced for all emergency spill response scenarios.

Refer to Appendix F for additional guidance steps and considerations in the event of a loss of containment from wastewater storage.

3.4.2 Hazardous Materials

A chemical response guideline (CDN 4411922) provide specific information for specific chemicals that are used and stored on Tamboran assets. The guidelines provides information on:

- PPE requirements
- Chemical details and description
- First aid considerations
- Evacuation considerations
- Fire and spill management

A hard copy emergency manifest, identifying notifiable quantities of hazardous substances (schedule 11 and 15 substances) must be included in the red HAZCHEM (hazardous chemicals) case at the emergency muster point. Safety data sheets (SDS') for each stored chemical must also be included.

Additionally, a Chemical Risk Assessment was completed for activities. The fluid systems reviewed were:

- Hydraulic fracture stimulation fluids;
- Hydraulic fracture chemical tracers; and
- Drilling fluids.

As part of the Chemical Risk Assessment a hazard assessment was undertaken with the evaluation of the environmental hazard of the chemical additives in the hydraulic fracturing fluid systems, based on their environmental persistence, bioaccumulation, and aqua□c toxicity proper□es. Also included was an evaluation of human health effects (i.e. genotoxicity, carcinogenicity, reproductive toxicity, oral toxicity, inhalation toxicity, dermal toxicity, chronic repeated dose toxicity).

A hard copy emergency manifest, identifying notifiable quantities of hazardous substances, must be in the emergency box located at the muster point of all field locations.

3.4.3 Bushfire

A bushfire management plan (BMPs) have been prepared for Tamboran's assets. A copy of the relevant BMPs is found on site and is easily accessible for all personnel.

The below tools shall be utilised by site personnel for additional support and guidance during bushfire season (Northern Territory runs from April – November) can provide technical advice in developing bushfire management processes and emergency planning during the fire season.

- https://www.pfes.nt.gov.au/incidentmap
- NAFI (firenorth.org.au)

3.4.4 Security

In addition to the ER response guide, the Tamboran Beetaloo Basin Security Plan (TBN-OPS-MP-01) should be enacted and supports a response to security scenarios.

3.4.5 Aviation

Daly Waters Airstrip

Daly Waters Airstrip is used for undertaking medical retrievals by Care Flight and The Royal Flying Doctors. Tamboran has supplied a set of emergency landing lights which must be deployed for night landings. These lights are for use by Tamboran and the Daly Waters community and are stored within the Tamboran storage shed at Daly Waters. Contact the Tamboran Field Manager for deployment or access to the lighting. See Appendix G for Daly Waters Emergency Landing Lights Layout.

Helicopter Landing Site Officer (HLSO)

If a helicopter is required for an emergency a designated trained Helicopter Landing Site Officer (HLSO) should be sourced (where available) to support ground activities (Appendix G). It is the responsibility of the HLSO to ensure that they are familiar with the landing location.

A purpose-built helicopter landing pad is located at Amungee NW, Velkerri 76, Kyalla 117 N2 well sites.

Landing site coordinates are identified in the Emergency Response Notification (ERN) document that is prefilled by the Tamboran Operating Company Representative when moving to a new well location or if conducting a campaign then nominated in the campaign specific bridging document.

3.4.6 Medical Emergency

First Responders must notify the On-Scene Commander (OSC) and in turn the SEMT-L if they call Emergency Services. Once notified, the OSC is responsible for all communications back to the SEMT.

In the event of a medical emergency, the medical clinician, and first aiders (if requested to assist) will commence immediate treatment.

Due to the remoteness of the Beetaloo Basin, there may be a delay to external medical resources responding should they be required therefore life-threatening injury/illness should be escalated without delay.

To initiate external medevac support for priority 1 and 2 patients:

- The onsite medical clinician is to contact emergency services by calling the St John on call Duty Medical Officer (DMO) on 08 8999 8666 or using 000
- External medical resources will be arranged by the DMO and deployed. Providers include Care Flight, St Johns Ambulance (from Katherine) and Royal Flying Doctor Service.
- At the first available opportunity, the Aspen Duty Medical Officer will also be contacted by the medical clinician and informed of the incident, the patient's condition, and current treatment / medivac plan.

Depending on the situation, the Aspen Duty Medical Officer will assist with telehealth advice in consultation with the Care Flight and Top End Health Services Duty Medical Officers.

Priority 1 – Life threatening / time critical

Priority 2 – Urgent (early surgical intervention required)

Priority 3 - Serious but not time critical

For Priority 3 patients alternate medivac options may be available to the medical clinician and these need to be considered on a case-by-case basis in consultation with the Duty Medical Officers and Tamboran Site Representative

Priority 4 (illness/injury that can be treated onsite with capability and resources available) the medical clinician will commence treatment and will contact the Aspen Duty Medical Officer as required to discuss treatment strategies.

3.5 Contractor scenarios

If an incident occurs, the Tamboran Representative will become the On-Scene-Commander (OSC) and liaise with the associated contractor. If an emergency event exceeds the contractor's capability, ie loss of well control, then Tamboran will assume control of the incident and delegate management as required.

When working under their own HSEMS, it will be the responsibility of the Contractor to provide an initial emergency response and co-ordinate the emergency event. If a Tamboran employee is involved in an emergency event at a site under the control of a contractor, it is expected that the Tamboran employee will conform to the contractor's response requirements and support the contractor if willing and competent to do so.

3.6 Major Accident Event

A Major Accident Event (MAE) is an uncontrolled incident, including fire, explosion, or release of dangerous substance with the potential to lead to multiple fatalities of persons at or near the facility.

MAE's will be identified during the hazard and operability study with guidance provided to the ER teams on how to manage these.

4 Roles and Responsibilities

The following roles and responsibilities are essential to ensure effective communication when responding to emergency events.

- First Responder (FR), located at the incident scene and may be a Contractor
- Site Emergency Management Team Leader (SEMT-L)
- On Scene Commander (where appointed will be located at the incident scene)

Individuals may undertake multiple roles depending on the nature of the emergency, its duration and complexity. The functional roles that will assist are listed below and known as the Emergency Management Team (EMT).

- Operations
- Planning
- Logistics
- Log Keeper

Additional roles such as technical engineering, travel and accommodation services may support the CMT depending on the type of incident.

If the EMT-L is unable to undertake their responsibilities a competent alternate or delegate must be appointed to ensure the EMT continues to function.

SERT Roles	Responsibilities
Work parties (including contractors) / First Responder	▪ Respond to the situation as per the contractor's emergency response plan ▪ Activate ESD/isolate equipment as necessary and safe to do so. ▪ Raise the alarm (location, type and extent of incident) by radio or phone to the SERT-L. ▪ Provide first aid as required and if qualified to do so. ▪ Follow instructions from Emergency Controller, Emergency Services personnel, First Aiders, and other designated emergency personnel as appropriate.
First Aiders	▪ Provide first aid treatment or assessment as needed whilst working within their skill level. ▪ Determine need for medical assistance and provide information to medical personnel or emergency services as required. ▪ Ensure that all treatments provided, regardless of the type or complexities are recorded.
Site Medical	▪ Be familiar with current work groups and work locations within Beetaloo Basin ▪ Provide emergency healthcare on site (12 hr workday and on call 24/7). ▪ Ensure that medical response emergency equipment (including medications and ambulance) is fit for purpose, in date and in good working order. ▪ Liaise with external medical emergency services (Care Flight, St Johns etc).
Site Emergency Response Team Leader (SERT-L)	▪ Manage first response at site level. During first response, ensure safety of other personnel and ensure that the emergency is communicated effectively to the required people. ▪ Nominate personnel to act in support roles (log keeper, logistics). ▪ Mitigate hazards to ensure personnel safety. ▪ Escalate to Emergency Services, if required. ▪ Ensure that emergency equipment is maintained in good working order
On-Scene Commander	▪ Is deployed as determined by SERT-L and should be utilised when external support for an emergency is required. ▪ Manage site access and restrictions. ▪ Manage communications to the SERT-L. ▪ Co-ordinate emergency actions as requested by SERT-L. ▪ Liaise with emergency services. ▪ Mitigate hazards to ensure personnel safety.

SERT Roles	Responsibilities
Site ERT members	▪ Follow the direction of the SERT-L, keeping themselves and others safe from danger during an emergency. ▪Escorting the emergency services upon arrival to where the Site ERT Leader is situated. ▪ Managing additional communications. ▪Providing information relating to site safety.
Emergency Management Team	▪ Ensure adequate personnel and resources are available to manage and support an emergency. ▪ Nominate personnel to act in support roles (log keeper, logistics etc). ▪ Provide technical support and advice. ▪ Support field team with emergency service direction/calls as requested. ▪ Escalate and communicate with Crisis Management Team if required.

Table 4. Roles and Responsibilities

4.1 Toolkit and Supporting Resources

The forms and checklists below provide a detailed overview of the additional administrative tools to be utilised by the emergency team.

Operations Checklist	TBN-HSE-FRM-02
Planning Checklist	TBN-HSE-FRM-03
Logistics Checklist	TBN-HSE-FRM-04
Administration/Log Keeper Checklist	TBN-HSE-FRM-05
Situation Report Form (SITREP)	TBN-HSE-FRM-06

4.1.1 Emergency Response Equipment

The below emergency response equipment is available within the facility. An equipment map showing the exact location of the equipment will be developed.

Additional emergency response equipment will be onsite during the wet season and determined after a risk assessment.

Equipment	Location
Medical	
Remote Area Nurse/Paramedic and Ambulance and medical clinic	Based within the camp accommodation and supports the Beetaloo Operations. Used to provide basic primary health care and emergency medical care.
First aid kits	Site vehicles Workshop Control room
Defibrillator	Control room
Environmental	
Spill kits (oil/fuel and general purpose)	Spill kits are strategically located within the facility. The size of kits is dependent on type and volume of substances stored.
Vac truck	Vac truck – onsite during wet season as required
Firefighting – PORTABLE	
Fire extinguishers	Fire extinguishers to be strategically located in: ○ Control room ○ Diesel generators ○ Workshop
Fire trailer	Within facility compound
Firefighting - FIXED	

Fire detection and protection	A fire detection and deluge system may be installed in certain areas of the facility.
Safety and Emergency Shutdown	
Safety and emergency shutdown systems	Emergency shutdown system may be installed to shut down the facility
General Safety	
Gas detectors	Within facility compound between the hazardous and non-hazardous areas
Combination safety shower/eyewash unit	Within facility compound in chemical storage and use areas.
Low voltage rescue kit	Workshop

5 Emergency Management and Control

After an emergency is detected, the following management stages will be used to control and contain the incident and return to business as usual (see Appendix B).

- Raise the alarm
- Isolate and secure
- Evacuate and muster
- Communicate and escalate
- Respond and recover.

5.1 Raise the alarm

To raise the alarm, one or more of the following methods can be used:

- in person
- radio (UHF)
- phone (mobile, satellite or landline)
- emergency alarm/siren
- leak detection alerts at unmanned locations.

5.2 Isolate and secure

Stop all work and make sure the immediate work area is safe. If safe to do so:

- Isolate and de-energise equipment
- Initiate emergency shutdown system (where installed)
- Activate fixed fire protection e.g. deluge or fixed monitors to provide initial containment and/or suppression (if installed)

5.3 Evacuate and muster

If you need to abandon a vehicle:

- pull over and park in a safe area
- ensure access and egress to the site is not impeded
- switch off and leave the keys in the ignition

Plan a safe route to the muster point and avoid movement through unsafe areas:

- account for all people
- standby at the muster point until instructed to evacuate

The primary muster point for each location is at the main gate. If the primary muster point is compromised, an alternate muster point shall be utilised.

A site-specific evacuation plan workplace illustrating the location of fire protection equipment, emergency exits, and muster points will be developed.

5.4 Communicate and escalate

- Gather information – where is the emergency, what has happened, who is affected, is anyone missing, where are the safe areas
- Advise and update the Tamboran Supervisor
- Appoint on on-scene commander (if required)
- Call Emergency Services (Police, Ambulance, Fire) if required
- Identify meeting points for responders
- EMT and/or CMT to be activated if required

5.5 Respond and recover

- Apply first aid to injured people (if safe to do so)
- Consider Simultaneous Operations (SIMOPS), advise nearby work groups
- Assist Emergency services
- Follow response procedures.
- Secure the scene if Regulator involvement is required. This should include physical barricading (flagging, rope) to ensure equipment is not interfered with.
- Initiate incident investigation
- Conduct after action review of the emergency response effort and assign corrective actions

6 Other Considerations

6.1 Meeting Emergency Services

Where Emergency Services such as Ambulance, Police and Fire are dispatched by road or air, a Tamboran employee will meet the Emergency Service at a designated location and guide them to the incident site.

Designated location: Property entrance off Stuart Highway.
GPS co-ordinates: 16°51'40.20"S 133°25'34.75"E

Additional meeting points can be established and identified and communicated on call out. These will be dependent on the type of emergency, access availability and exclusion zones.

To enable an effective response, a copy of this ERP will be provided to NT Police, Fire & Emergency Services.

Handover to the emergency services is required to be efficient and effective to ensure the continuity of emergency control objectives. The On-Scene Commander is responsible for the handover to emergency response personnel involved in the emergency. This will be achieved by:

- Having the appropriate information on hand to brief the incoming emergency services personnel of the current situation.
- Establishing a contact as a continuous liaison point with the emergency services personnel.

6.2 Hazard Awareness

All personnel arriving at the incident site must be made aware of:

- Hazards present because of the incident (fire, heat radiation, chemical exposure etc)
- Hazardous areas and exclusion zones
- Safe locations and muster points
- Additional personal protective equipment (PPE)

6.3 Shift Changeover

Shift changeovers are required for continuity of emergency management. The EMT-L is responsible for changeover of personnel involved in the emergency. Effective changeover will be achieved by:

- Staggering changeover times
- Avoiding changeovers during critical periods
- Having changeovers in daylight, where possible
- Briefing incoming personnel

7 Termination of Emergency

The emergency can be considered over when:

- Emergency services have declared the emergency over and have returned control of the site back to Tamboran
- The emergency team has returned the site to a safe condition
- All personnel are accounted for
- Injured/ill personnel have been stabilized and/or evacuated
- Environmental controls are in place

8 Recovery and Post Emergency Actions

8.1 After Action Review

After Action Review (AAR) is to be held after each emergency. This process is designed to discuss strengths and weaknesses and necessary improvements for this plan and related procedures. All actions arising from the review shall be entered into Tamboran's Risk and Compliance Management System and tracked through to completion and closure.

8.2 Incident Investigation

Incident investigations should be undertaken in accordance with Tamboran's Incident Investigation processes with the following steps being considered:

- Securing the incident site and restricting access until investigators (both internal and external) have completed their work and handed back control of the site.
- Gathering of evidence that may assist the investigation (list of personnel involved, response logs, situation boards, photographs)

8.3 Recovery Actions

Prior to resuming work, develop a recovery plan that considers the following:

- Check plant and equipment for structural, physical, and electrical/instrumentation integrity
- Ensure all active detection and protection systems are restored
- Replenish emergency response equipment as required
- Replace or return third-party emergency equipment

In addition, consider the following points:

- People who were involved may require counselling, depending on the nature of the incident
- People should be debriefed with all relevant information captured for a "lessons learnt"
- Conduct a toolbox talk on specific start up activities before restarting work
- Consider the potential for loss of confidence or potential IR issues following the incident or the response to that incident
- Emergency response plans and training may need to be revised before resuming the work activity

8.4 Clean Up

Post incident clean up should be done using the following guidelines:

- Conduct initial site inspection to identify extent of equipment and/or plant damage
- Assess potential decontamination requirements (removal of chemicals/foam/oil/contaminated soil)
- Store all contaminated material in proper containers pending offsite disposal by licensed hazardous waste contractors
- Assess damage or potential damage to surrounding environment. This may include conducting soil testing of contaminated areas to inform site remediation requirements.
- Repair and/or replace damaged equipment/plant
- Inspect and test affected equipment

9 Training and Capability

All personnel must be given specific training on how to respond to an emergency, fulfill their role in the site ERT and use of emergency equipment available.

Training may be in the form of:

- External or internal competency-based training
- Emergency response drills (both practical and desktop exercises)

9.1 Exercises and Drills

Emergency response exercises using credible scenarios will be conducted monthly as per the schedule below.

Exercises must involve escalation and activation of the Emergency Management Team (EMT) and Crisis Management Team (CMT) as indicated on schedule below.

	JAN	FEB	MAR	APR	MAY	JUN
Primary	HAZMAT	Structural failure	Environment	Personnel safety – medical emergency	Fire	Personnel safety
Secondary	Flood	Personnel safety	HAZMAT	Personnel safety	Personal safety	Personnel safety

	JUL	AUG	SEP	OCT	NOV	DEC
Primary	Personnel safety	Fire	Environment – oil/chemical spill	Personal safety – medical emergency	Flood	Structural failure
Secondary	Security - protest	Personal safety	HAZMAT	Security	Personal safety	Environment - loss containment

Table 5. Emergency response exercise schedule. Note white shading indicates inclusion of EMT and CMT in the exercise

Muster alarm testing and full site evacuation drills will be undertaken at a frequency to be determined.

All lessons learned from the exercises should be incorporated when appropriate to continually improve Tamboran's response to such an event.

10 Stakeholder Management

10.1 Pastoralists

Contact with Pastoralists can be initiated by the SEMT-L in urgent circumstances (i.e. bushfire threat) however, the Landholder Relations Advisor should be used in the first instance. See Appendix E for contact details.

10.2 Next of Kin

In the event of a death, serious injury or other emergency, involving Tamboran personnel, advice to relatives about the condition of a person or about the incident will be coordinated by Human Resources through the Crisis Management Team.

During or after an emergency, the SEMT-L will refer any queries or concerns from relatives to Human Resources. Human Resources may also activate Employee Assistance Program (EAP) providers to support site personnel or relatives affected by an incident.

Contractor companies are responsible for management of next of kin communication in consultation with Police services, and EAP management in accordance with their emergency response plans and HR procedures.

10.3 Dealing with Media Enquires

During an emergency event, media attention may occur at the affected site.

If personnel receive an enquiry from a journalist or reporter, whether in person or by phone and are asked about Tamboran, they should say:

"I am not able to comment. If you give me your name and telephone number I will organise for the most appropriate person to call you."

Always ask for:

- the journalist / reporter's name.
- publication / media outlet.
- contact phone number and/or email.

It is important to remember that there is no such thing as "off the record". Even if you are speaking informally, you may be quoted at any time.

The EMT-L will advise the CMT-L of any media contact or enquiry.

11 Review and Update

The ERP will be reviewed and updated as necessary in response to one or more of the following:

- annually
- when major changes have occurred, which may affect the response coordination or capabilities.
- following routine testing of the plan
- after an actual emergency

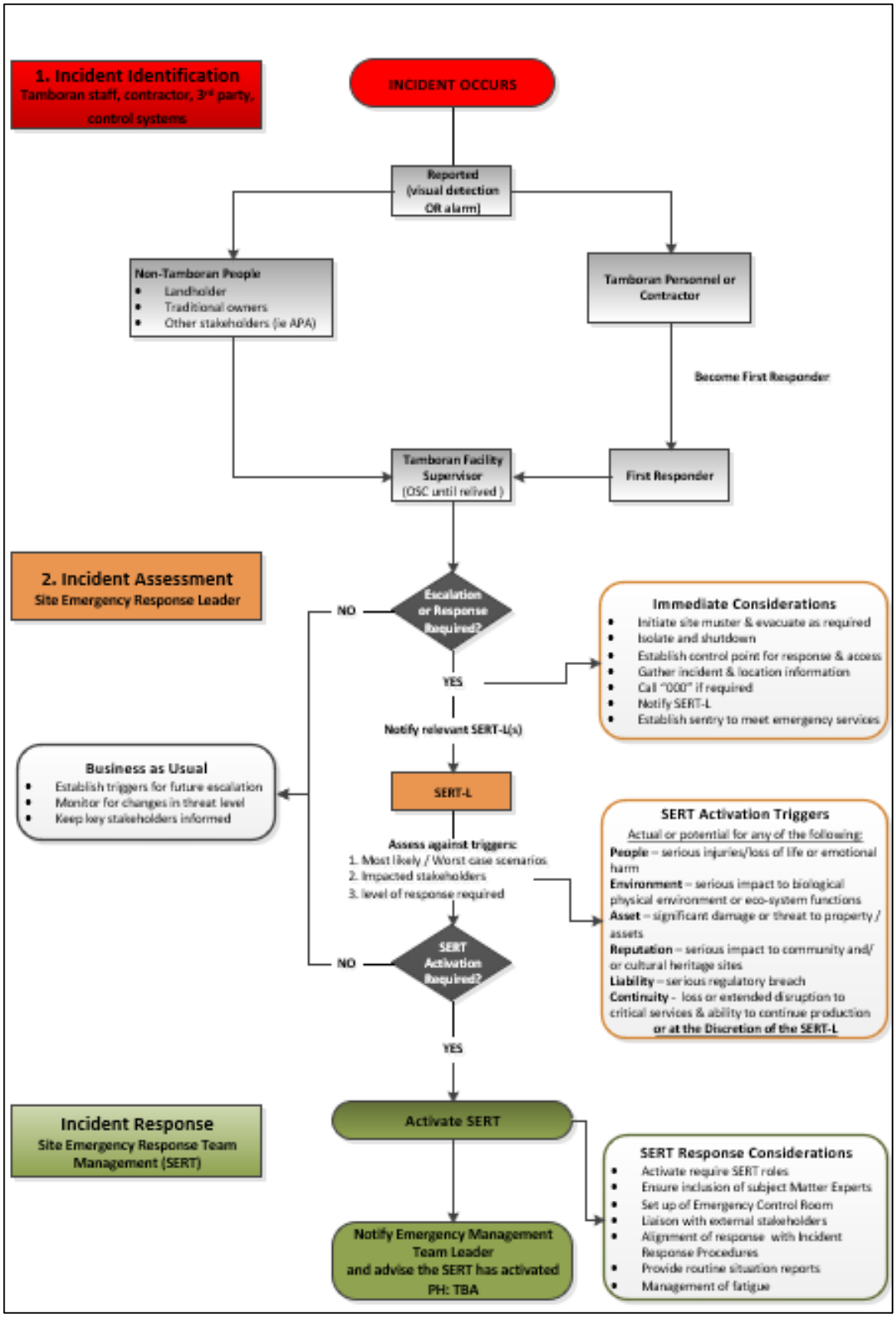
During the review, the following aspects are to be considered:

- lessons learned from an emergency
- changes in legal requirements
- improvements to effectiveness in terms of response strategy, management, and communication
- developments in the latest techniques and technology in handling an emergency.
- changes to, or movement of people within the organization
- changes to contact numbers of internal and external organizations
- revisions to existing or availability of emergency management tools and equipment, resource suppliers or contractors

12 Associated Documents

Document	Document Reference
Beetaloo Basin Spill Management Plan	TB2-HSE-MP-09
Emergency Response Scenario Guide	NA
After Action Review	TBN-HSE-FRM-07
Tamboran Risk Toolkit	NA
Bushfire Management Plans	Appendix to approved EMP
Tamboran Resources Crisis Management Plan	TRL-HSE-PL-03

Appendix A. ERP Activation Pathway



Appendix B. Emergency Management

Triggers for Activation			
People	Serious injury/illness or worse to any person/s		☐
Environment	Moderate effects on biological physical environment and serious short-term effect to eco-system functions		☐
Asset	Serious damage to plant, loss of containment, production loss		☐
Reputation	Serious impact to community or other stakeholder		☐
Liability	Serious breach of law or regulation		☐
1 – Isolate and Evacuate			
Muster	Account for all personnel (upwind) whilst assessing the situation		☐
Isolate	Either through Emergency Shutdown System (ESD's) or remotely		☐
	Activate fixed fire protection e.g. deluge or fixed monitors to provide initial containment and/or suppression		☐
Evacuate	If required evacuate to designated evacuation points either upwind or at a safe distance as determined by event type or respective response guideline		☐
Control	Establish control points to coordinate response and restrict access		☐
Meeting Points	Nominate pre-determined emergency services meeting point and establish personnel to meet emergency services upon their arrival		☐
2 – Communicate and Escalate			
Confirm	Confirm details of the emergency (type of emergency, injuries, contained or uncontained etc.) and response required.		☐
Activate	Activate SERT, EMT and CMT, contact Emergency Services and communicate with other Stakeholders		☐
Escalate	Consider likely impacts		☐
Impacts (actual & potential)	Most likely	What is realistically likely to happen and who / what is impacted?	
	Worst case	How bad could it really get and then who / what is impacted?	☐
3 – Respond			
• Continually reassess situation		• Appoint OSC	☐
• Designate communication channels		• Establish exclusion zones	☐
• Activate appropriate resources		• Develop SMEACS briefing	☐
• Apply Incident Response Guidelines		• Provide regular updates	☐
4 – Response Management			
Personnel	Appropriate personnel in the ERT, CMT and from outside resources		☐
Resources	Appropriate resources available to manage the incident		☐
Tools	Appropriate tools available for the ERT, CMT, OSC and other responders		☐

Appendix C. Contact List (Tamboran)

Tamboran Contacts		
Role	**Name**	**Primary contact details**
Field Manager		
Operations Superintendent	TBA	TBA
Production operator	TBA	TBA
Production operator	TBA	TBA
Tamboran Field HSE		
HSE Manager		
VP Environment and Permit Approvals		
Logistics Superintendent		
Senior Counsel		
Landholder Relations		
Human Resources		

Appendix D. Contact List (External Agencies)

External Agencies		
Role	**Name**	**Primary**
Emergency Services	Police, Fire, Ambulance	000 (or 112 from mobile)
St Johns Duty Medical Officer	N/A	(08) 8999 8666
Hospital	Katherine Hospital Kintore Clinic Katherine	(08) 8973 9211 (08) 8972 1677
SPCF accommodation camp	TBA	TBA
Bushfires NT	Fire control officer	Katherine (08) 8973 8871 Darwin (08) 8922 0844
Volunteer Bushfire Brigade	N/A	(08) 8975 9936
Emergency helicopter operations	HM Air Services	[redacted]
Regional Shire Council	Roper Gulf Shire	(08) 8972 9000 OR (08) 8977 2300 (Mataranka Office)
Regional Shire Council	Barkley Shire	(08) 8962 0000 OR 0448 071 878 (after hours emergency)
Police (non-emergency)	Police Link	131 444 Elliott – (08) 8969 2010 Katherine – (08) 8973 8000
Poisons Information Centre	N/A	13 11 26
Bureau of Meteorology	Cyclone Warnings Forecasts & Warnings	1300 659 211 (08) 8920 3826
NT DITT Petroleum Operations	N/A	+61 1300 935 250
NT DLPE	N/A	1800 064 567 onshoregas.dlpe@nt.gov.au
NT EPA Pollution Hotline	N/A	1800 064 567
NT WorkSafe	N/A	1800 019 115 ntworksafe@nt.gov.au
National Land Council	N/A	[redacted]

Appendix E. Contact List (Pastoralists)

Property Name	Contact Name	Phone
Amungee Mungee		
Beetaloo Station		
Sturt Plains Hayfield/Shenandoah		

Appendix F. Loss of containment - wastewater

In the event of a loss of containment from the wastewater storage, the following guide will be used to ensure the appropriate steps are implemented to minimise environmental harm. All actions are to be undertaken as a part of the steps outlined in section 5 of this plan and the Spill Management Plan.

1. Loss of containment detected	
Type of infrastructure involved: ▪ Enclosed tank ▪ Pipework	How has the loss of containment been detected? ▪ Routine inspection ▪ Remote telemetry/alarm

2. Response actions to be implemented

1. Commence rapid spill assessment in accordance with SMP and actions below.
2. Progress with site assessment and clean up in accordance with the SMP and actions below.
3. Confirm perimeter bund is intact and that wastewater hasn't left the site.
4. Inspect the storage infrastructure and identify exact location and cause of leak.
5. Determine whether further loss can be prevented. Consider:
    - Closing or replacing valves
    - Transfer of fluid to alternate storage (if available)
    - Emergency earthworks using equipment available on site
6. Determine extent of contamination
    - Estimate volume of the release
    - Undertake field test of water quality (pH and EC)
7. Recovery response actions. For ponding and spilled wastewater, actions need to be planned with weather conditions and site access in mind, especially during periods of high rainfall (wet season) and constraints such as road closures. Equipment needed to recover fluid:
    - Vacuum truck
    - Trash pumps and hoses
    - Front end loader
    - Mobilisation of earthmoving equipment may need to be considered.

Appendix G. Daly Waters Runway Lighting Plan

Daly Waters Aerodrome
Emergency Landing Lights Layout Procedure

Purpose

This procedure describes how to layout the Eflare night landing lights for the safe arrival and departure of emergency aeroplanes such as Careflight and RFDS in under 60 minutes from the time of activation.

Scope

The Daly Waters community and any other stakeholders who may be able to assist in the lay out emergency landing lights in the event of an emergency.

Minimum Resources

Vehicles - to have UHF, amber flashing light / hazard lights and headlights on.

Personnel - to have torch, hi vis and reflective personal protective equipment.

Communications - UHF channel 16 is being monitored by all personnel in the aerodrome.

Key contacts

NT Careflight Operations
1300 650 654 or 0417 826 336

RFDS Alice Springs

For 24-hour medical and emergency assistance call:

NT (Central Australia) - 1800 733 768

HF Radio (4010kHz, 6890kHz or 8165kHz)

Satellite Telephone: 08 8648 9555 or +61 1800 733 772

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Activation from Emergency Services → **CONFIRM** who is in charge (for Origin this is the On Scene Commander) → **CONFIRM** the arrival time of the a/c and CTAF freq (126.7) → **ACTIVATE** oher personnel to assist (refer to Daly Waters Aerodrome Plan for contact numbers) → **COLLECT** Eflare kit from the Origin Office at the Daly Waters Pub → **MEET** at Daley Waters Aerodrome apron gate

Set up and planning

1. Split into 2-3 teams each with 2 persons and 1 vehicle.
   Teams: Runway 14, Runway 32 and Taxiway / Apron
2. Prepare vehicle - conduct radio checks, check lights and clear our rear seat including footwells.
3. Secure the respective eflare kit in back right seat of the vehicle with the seatbelt.
   Each kit to include the following lights and rubber bases:

Runway 14	Runway 32	Taxiway / Apron
• 24 x White lights	• 23 x White lights	• 2 x Orange hold point lights
• 4 x Red threshold lights	• 4 x Green/Red threshold lights	• 22 x Blue lights
• 8 x Green displaced threshold lights		

4. The On Scene Commander to monitor the time of arrival and monitor the CTAF frequency and provide updates and warning to personnel via UHF radio deploying eflares as necessary.
5. CAUTION: Where the aerodrome is delayed in setting up the eflares and leaving the aerodrome in an unsafe state for a landing, the pilot is to be notified on the CTAF 126.7 frequency advising on when the aerodrome will be available.
6. In the event an approaching aircraft is spotted either notify the aircraft directly or if unsuccessful notify personnel deploying the eflares on the UHF "Vacate runway immediately, aircraft on final, vacate runway immediately".
7. Where time permits a final runway inspection is conducted to identify any foreign objects or debris as part of the Eflare deployment. The vehicle should head on a 32 approach so approaching aircraft can be seen.

Placing and retrieving eflares

WARNING: When both deploying and retrieving eflares, the passenger needs to get out of the vehicle to place each light. Don't reach down from the vehicle as this risk over extension resulting in a back injury.

The driver must:

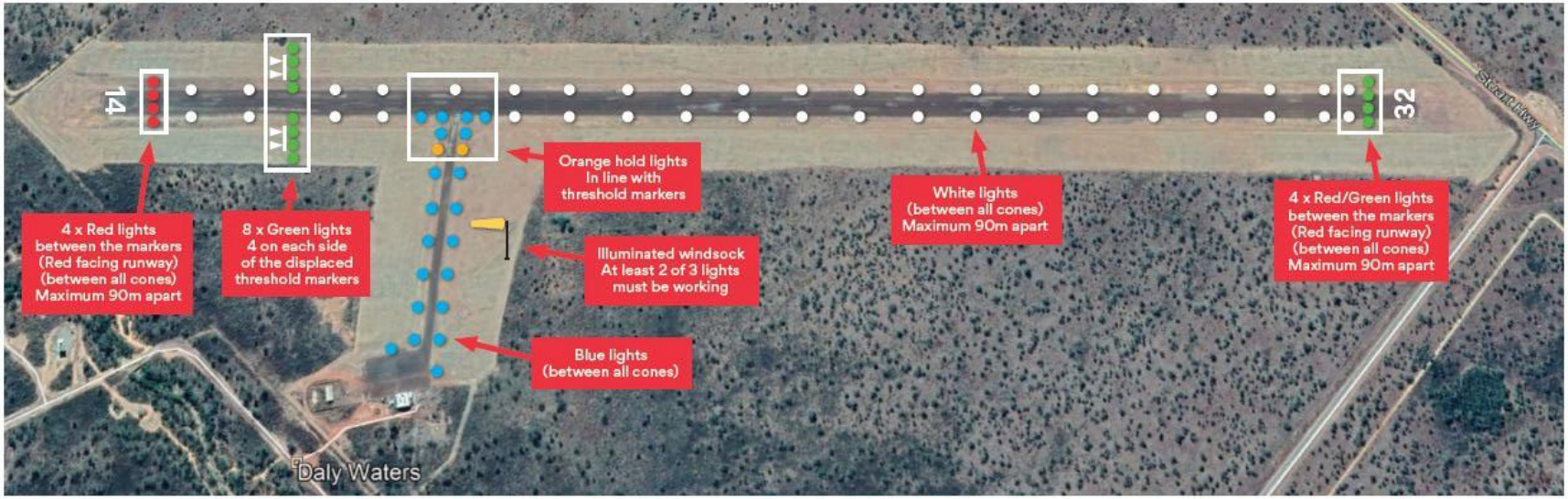
- Drive no faster than 25km/hr
- Drive on the right-hand side of the runway cones
- Stop in line with the rear left passenger door
- Wait for passenger to indicate they are ready before proceeding to the next light location

The person deploying the eflares must:

- Only remove the seatbelt on the runway when travelling less than 25km/hr
- Only set up 1 light at a time
- Avoid turning on the light in the vehicle
- Indicate to the driver when ready to go to next light location

Wait 10 minutes after aircraft has taken off before retrieving runway eflares.

Daly Waters Aerodrome Lighting Plan



Layout Procedures

Layout Runway 14

1. Start at the 14 end of runway (**turn left** from the taxiway).
2. 4 x Red lights - place evenly between the end cones. Locations are indicated with spray paint.
3. 4 x Green lights (each side) – placed each side on the white displaced threshold markers.
4. 8 x White runway lights – start on the East side or the **left side** if looking down the runway.
   Place a light between each cone so no more than 90m apart. Locations are indicated with spray paint markings.

Layout Runway 32

1. Start at the 32 end of runway (**turn right** from the taxiway).
2. 4 x Green/Red lights - place the Green side facing the away from the runway, evenly between the end cones. Locations are indicated with spray paint.
3. 23 x White runway lights – start on the East side or the **left side** if looking down the runway
   Place a light between each cone so no more than 90m apart. Locations are indicated with spray paint markings.

Layout apron / taxiway

1. Start on the runway and work back towards the apron.
2. 6 x Blue lights – 3 lights placed each side of the taxiway between the cones. Locations are indicated with spray paint.
3. 2 x Orange lights – place each side on the taxiway. Locations are indicated with spray paint.
4. 14 x Blue lights – placed between the cones along the taxiway. Remaining lights spaced approximately 60m apart.
5. 1 x Red light – placed near unserviceable marker in centre of apron.

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Appendix H. Care Flight Helicopter Briefing Card

Important information required by the helicopter

Location
- As a latitude and longitude from a GPS receiver.
- State direction and distance from an obvious landmark, town or major road.
- Military Grid Reference System (MGRS) may also be helpful.

Contact details of people at the scene, i.e. mobile phone, satellite phone and UHF (CB) radio.

Note: Helicopter will monitor UHF (CB) channel 16 simplex or marine 16.

Number of injured and nature of injuries.

Current weather conditions at your location.

WARNING: Significant dust and rotor wash hazard. DO NOT PLAN to land the helicopter close to accident debris or any patients. Dry season dust can be generated up to 200m.

Landing zone selection and preparation

- **Size:** prefer 40m x 40m, although smaller may be usable.
- **Slope:** area needs to be as flat as possible.
- **Surface:** prefer no dust. If dusty wet down surface if possible.
- **Surrounds:** prefer clear of wires, trees and poles.
- **Wind:** note direction the wind is coming from, as helicopter will land facing into wind.
- **Lighting:** illuminate landing zone as per diagram over page.
- **Security:** clear all non-essential personnel.
- **Loose articles:** remove all loose debris.
- **Traffic:** be ready to close through traffic if applicable.
- **Personnel:** brief on rotor wash hazards and need to protect eyes.
- **NEVER approach the helicopter:** the crew will come to you.

When helicopter is heard or seen

- **Contact the helicopter via radio:** if possible.
- **Describe landing zone:** HAZARDS, WIRES AND WIND.
- **Traffic:** close all through traffic.

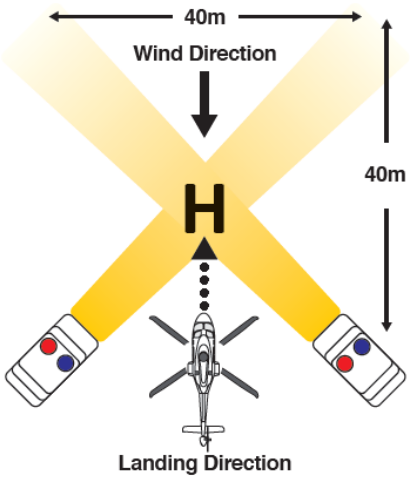
As helicopter approaches

- Confirm landing area is clear of personnel.
- **Protect** patient and all personnel from rotor wash/dust.
- **If night:** turn off beacons if safe to do so.
- Turn lights to low beam or **parkers if facing helicopter.**
- **Never** shine light towards the helicopter.
- If helicopter is landing close to you, go down on one knee and protect eyes.

After helicopter lands

- **Never** drive or permit any vehicles under the rotor blades.
- **Never approach the helicopter:** the crew will come to you.

CareFlight operate night vision goggles



Once helicopter has identified your location:
- **Use low beam only**
- Turn off beacons at landing zone if traffic hazard permits
- Avoid shining ANY light towards the helicopter

Appendix I. Emergency Response Planning Map