Petroleum Exploration Program
Sweetpea Petroleum Pty Ltd
16-Dec-2021

Unique Reference No. SWP2-3

Civil Construction and Water Bore Environment Management Plan

EP136 - Beetaloo Sub-basin, NT

APPENDIX E to APPENDIX M

Civil Construction and Water Bore Environment Management Plan

EP136 - Beetaloo Sub-basin, NT

APPENDIX E to APPENDIX M

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Cover Photo: View of EP136 vegetation community structure

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Civil Construction and Water Bore Environmental Risk Assessment

Appendix E Civil Construction and Water Bore Environmental Risk Assessment

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Risk #	Activity Description	Aspect	Impact	Inherent Risk Assessment							Mitigation Measures (Note preliminary mitigation summary, full mitigation required are presented in Section 7.0 of the EMP and associated Appendices))	Residual Risk Assessment							ALARP Discussion (Hierarchy of Controls)
				Environment and Community			Law, Regs and Civil Action			Risk		Environment and Community			Law, Regs and Civil Action			Risk	
				Consequen	Likelihood	Risk Level	Consequen	Likelihood	Risk Level			Consequen	Likelihood	Risk Level	Consequen	Likelihood	Risk Level		
LAND																			
1	Civil Construction – access tracks, water bore, lease pad and camp	Management of Land - Soil and Erosion	Soil erosion and sedimentation resulting from ground disturbance activities. **Description** • Erosion susceptibility varies throughout the Sweetpea project area, dependent upon the soil types, slope and extent of ground disturbance. Apart from the erosive impact of climatic conditions, soil erosion is influenced mainly by the inherent properties of the soils and the processes which occurred during the formation of the landscapes. • Post construction, the ground surface to be stabilised before the onset of the wet season (October to April), and only where an alternative route is unavoidable.	2	3	M	2	3	M	M	• Use existing road and tracks where practicable and ensure suit intended purpose and volume of traffic required for the civil construction activities. • Newcastle Creek intersection with Eastern Access Track will be 'Transit' only in accordance with RWA2 conditions of AAPA certificate. • Civil construction activities where possible to be conducted during the dry season or under wet weather contingency planning if occur in wet season (refer Section 8.5). • Site environmental inductions for all site personnel and contractors in relation to land management tasks. • Undertake selective clearing (only clearing areas that are necessary for civil construction and safe operation of lease area. Refer Section 4.1.1 ESCP Treatment Options for specific situations in Appendix K. • Lease pad access will be formed as a class 5 pastoral 2 (type c) and gravel pit access will be formed as a class 5 pastoral 1 (type c) unsealed track in accordance with NTG standard drawing CS3003 Typical of cross sections for urban and rural environments (2017) and will be implemented in accordance with ESCP (Appendix K). • Ground surface to be stabilised before the onset of the monsoon (November to March). Noting that controls to be established during October. • Gravel pits are to be progressively cleared and rehabilitated over the course of the program. Once extent of gravel has been won from site, the area will have topsoil returned and surface reprofiled to allow area to be restored and/or rehabilitated in accordance with Appendix F Rehabilitation Plan. • Previously removed vegetation and topsoil will be uniformly re-spread over disturbed area to assist with rehabilitation process through agencies of increased infiltration and return of seed-bearing topsoil. If required, additional native seed mix from the area could be respread to speed up	2	2	L	-	-	-	L	**Elim** • Avoid clearing vegetation by using existing pastoral tracks and disturbance areas (camp location and previously installed seismic lines). • No clearing of riparian vegetation along waterways. • No works within intersection of Newcastle Creek and Eastern Access Track at RWA2. Transit only. • Lease pad locations away from low drainage areas where vertosols of moderate erosion potential occur. **Sub** • If the 7-day forecast indicate rainfall is likely to result in an event that has potential to limit access to the work area, the civil construction contractor will stabilise the current work areas and go into standby mode until such time they can assess the track condition after an event to recommence activities. **Eng** • ESCP typical treatments for each lease pads and access track. • Progressive rehabilitation as activities completed on any part of the site, and disturbed areas are to be restored and/or rehabilitated.

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				Environment and Community			Law, Regs and Civil Action			Risk		Environment and Community			Law, Regs and Civil Action			Risk	
				Consequen	Likelihood	Risk Level	Consequen	Likelihood	Risk Level			Consequen	Likelihood	Risk Level	Consequen	Likelihood	Risk Level		
											rehabilitation process. This will be confirmed during rehabilitation monitoring activities. • Windrows to be removed as soon as practicable and all debris will be moved away from the fence line at least 5 m. • At completion of exploration activities, all disturbed areas will be reinstated to a stable landform, which supports a resilient self-sustaining vegetation community that can withstand impacts including fire and cattle grazing and is safe to humans and wildlife.								• Improve existing creek crossing to minimise impacts. **Adm** • Site environmental inductions. • Daily toolbox • Monitoring and Auditing (refer Section 8.5 and Section 8.6), including Photo Monitoring. • Spatial data before and after to confirm stayed within survey parameters.
2	Civil Construction – access tracks, water bore, lease pad and camp	Management of Land – Soil and Erosion	Dust impacts on built-up areas (camp site), Carpentaria Highway or other public roads, vegetation and amenity as a result of exploration activities. **Description** • Vehicles traversing across the site and access tracks have the potential to cause dust impacts on surrounding environment. • Bull dust generation may be an issue on areas of disturbed soil, primarily the grassland areas.	2	3	M	1	2	L	M	• Use existing road and tracks where practicable and ensure suit intended purpose and volume of traffic required for the civil construction activities and future exploration activities. • Restrict vehicle movement to the designated tracks for the program as detailed in Table 3. • Site environmental inductions for all site personnel and contractors in relation to land management tasks. • Minimise impact to vegetation and soils within the 200 m native vegetation buffers along pastoral property boundaries and 50 m buffer for land adjoining NTG road reserves. • All vegetation clearing must be in accordance with the Federal, Territory and local government vegetation clearing requirements and IECA Table 4.4.7 Best practice land clearing and rehabilitation requirements (refer Appendix J4 of the ESCP (Appendix K). • Best practice erosion control measures will be implemented in accordance with the ESCP following line preparation and site stabilised prior to anticipated rainfall. • Disturbed areas will be stabilised in accordance with the Rehabilitation Plan (Appendix F). • Vehicle speed restrictions apply when travelling in permit (60 km/hr on unsealed roads in proximity (<200 m) to sensitive receptors) or drive to condition. • Use water truck where applicable to manage dust emissions from vehicle movement on the site. • Monitor road conditions to ensure deterioration with possible increase in dust creation, does not	2	1	L	1	1	L	L	**Hierarchy of controls as per Risk Reference 1.** Erosion is considered a short-term impact confined to the project area. With successful implementation of an ESCP by a certified professional the likelihood of erosion impacts will be decreased.

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				Environment and Community			Law, Regs and Civil Action			Risk		Environment and Community			Law, Regs and Civil Action			Risk	
				Consequen	Likelihood	Risk Level	Consequen	Likelihood	Risk Level			Consequen	Likelihood	Risk Level	Consequen	Likelihood	Risk Level		
											occur and undertake road rehabilitation If required.								
3	Civil Construction, including water bore drilling operations	Management of Land - Soil and Erosion	Loss of topsoil and land suitability/capability **Description** • Loss of topsoil could impact on successful outcomes of rehabilitation.	2	3	M	-	-	-	M	• Allow enough area at the lease pads and gravel pits to stockpile material from the construction of lease pads, access tracks, camp and gravel pits for use in rehabilitation and/or stabilisation at completion of activities (i.e. topsoil, scrub and vegetation). • Topsoil and vegetation to be placed in designated areas. • Stockpiles are to be removed at completion of activity as part of the Rehabilitation Plan (Appendix F). • Stockpiles of erodible material that have the potential to cause environmental harm if displaced, must be: (i) Appropriately protected from wind, rain, concentrated surface flow and excessive up-slope stormwater surface flows. (ii) Located at least 2m away from any hazardous area (chemical storage) or retained vegetation. (iii) Located at least 200 m away from stream banks or bodies of water. (iv) Located up-slope of an appropriate sediment control system. (v) Provided with an appropriate protective, impervious cover (synthetic or vegetative) if the materials are likely to be stockpiled for more than 28 days. (vi) Provided with an appropriate protective, impervious cover (synthetic or vegetative) if the materials are likely to be stockpiled for more than 10 days during those months that have an erosion risk rating higher than medium. • A suitable flow diversion system must be established immediately up-slope of a stockpile of erodible material that has the potential to cause environmental harm if displaced if the up-slope catchment area draining to the stockpile exceeds 1,500 m^2. • Avoid creating windrows. Do not create windrows across creeks, use rollers when putting in tracks in preference to dozers, or walk the dozer with the blade raised off the ground.	2	2	L	-	-	-	L	**Hierarchy of controls as per Risk Reference 1.** Access tracks have been selected where possible to cover areas already disturbed by seismic line preparation or existing pastoral access tracks to minimise disturbance from the project. On a landscape scale, the clearing of the proposed 7 lease pads (~78 ha) is relatively insignificant. Effective storage and management of topsoil stockpiles and subsequent successful rehabilitation will decrease the likelihood and extent of environmental impacts, making the risk profile for this impact low.

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				Environment and Community			Law, Regs and Civil Action			Risk		Environment and Community			Law, Regs and Civil Action			Risk	
				Consequen	Likelihood	Risk Level	Consequen	Likelihood	Risk Level			Consequen	Likelihood	Risk Level	Consequen	Likelihood	Risk Level		
4	Civil Construction – access tracks, water bore, lease pad and camp	Management of Land - Soil and Erosion	Soil compaction as a result of civil construction of access tracks and lease pad. **Description** • Vehicle movement across the site has potential to cause soil compaction which will require remediation.	2	3	M	-	-	-	M	• Sufficient tracks and turning points will be created within the camp area and lease pads to minimise soil compaction due to vehicle movement. • Vehicle movement will be restricted to the designated tracks and lease pads. No off-track driving. • Environmental inductions on site for site personnel and contractors will include the issue of soil compaction, erosion and sedimentation, and protective measures to control erosion and sediment discharge into waterways and drainage systems. • After completion of a specific phase of activity, the camp site establishment will be inspected for early signs of compaction, erosion and soil degradation (generation of bulldust). • All compacted areas will be ripped and scarified to promote regeneration of vegetation at completion of activities.	2	1	L	-	-	-	L	**Hierarchy of controls as per Risk Reference 1.** The civil construction program for each lease pad is planned to occur over a period of approximately 4 to 6 weeks and within the designated areas indicated by this EMP. The impacts from soil compaction are therefore likely to be minor and short-term. Implementing the Rehabilitation Plan (Appendix F) and the Erosion and Sediment Control Plan (Appendix K) will minimise impact from compaction.
5	Rehabilitation	Visual Amenity	Scars on the landscape created by the construction of lease pads, access tracks and gravel pits **Description** • At completion of civil construction of lease pads, further environmental damage is to be avoided • Once gravel is won from the identified gravel pits these will be progressively rehabilitated to reinstate to a stable landform, which supports a resilient self-sustaining vegetation community that can withstand impacts including fire and cattle grazing and is safe to humans and wildlife.	2	3	M	3	4	M	M	• The exploration lease areas, including camp, access tracks and gravel pits will be rehabilitated once exploration activities have been completed. • Where possible, progressive rehabilitation of disturbed areas will occur as soon as practicable following completion of activities in accordance with Section 9.0 and Appendix F. • All compacted areas will be ripped and scarified to promote regeneration of vegetation. • All disturbed areas will be allowed to naturally regenerate or be revegetated on completion of use. • At completion of activities, establish vegetation to the standard of that registered in the pre-assessment, or better. • All disturbed areas identified as very low, low, medium or high erosion risk must be suitably stabilised prior to anticipated rainfall, from the day that soil disturbances on the area have been finalised as per the requirements of IECA Table 4.4.7 (Appendix K). • Stabilise disturbed areas quickly to reduce the potential for erosion. • Previously removed vegetation and topsoil will be uniformly re-spread over disturbed area to assist with rehabilitation process through agencies of increased infiltration and return of seed-bearing topsoil. If required, additional native seed mix	1	2	L	1	2	L	L	**Hierarchy of controls as per Risk Reference 1.** Effective rehabilitation of the project area, as outlined in the EMP, will reduce the extent of environmental impacts as well as the likelihood of significant environmental impacts. This in turn will reduce the likelihood of negative perceptions from stakeholders and the likelihood of legal or regulatory punishment Security bond will not be released until such time as regulator is satisfied that the project area is rehabilitated to the agreed state.

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				Environment and Community			Law, Regs and Civil Action			Risk		Environment and Community			Law, Regs and Civil Action			Risk	
				Consequen	Likelihood	Risk Level	Consequen	Likelihood	Risk Level			Consequen	Likelihood	Risk Level	Consequen	Likelihood	Risk Level		
											from the area could be respread to speed up rehabilitation process. This will be confirmed during rehabilitation monitoring activities. • Windrows to be removed as soon as practicable and all debris will be moved away from the fence line at least 5 m. • The type of ground cover applied to completed earthworks is compatible with the anticipated long-term land use, environmental risk, and site rehabilitation measures. • Implement the rehabilitation monitoring program as detailed in Appendix F.								
6	All Activities	Wet Weather	Timing of Civil Construction Activities - loss of soil and land stability, damage to existing road and track infrastructure and damage to waters ways from onset of wet season. **Description** • There is potential for rainfall events that prevent works from occurring safely resulting in rutting out of tracks and bogging of vehicles. • Ground conditions deteriorate quickly following rainfall event making access difficult.	2	4	M	2	4	M	M	• Wet weather contingencies have been identified in the ESCP (Appendix K) and Section 7.2.3 Land Management Tasks in Civil and Water Bore EMP. • Ground conditions following rainfall events can make access impossible. The primary mitigation will be to monitor 7-day forecasts leading up to mobilising and daily during the program. • Where rainfall forecast indicates a rainfall event that has potential to limit access, the subcontractor will stabilise the current work areas and go into standby mode until such time work can recommence. • If the conditions do not allow the activity to resume in the current schedule, the decision will be made to either curtail the program or resume when ground conditions allow. • Emergency response - a post-rainfall/flood damage reconnaissance and assessment will be undertaken as soon as area becomes accessible. Any damage observed would be repaired as soon as practicable after the event.	2	1	L	2	1	L	L	**Hierarchy of controls as per Risk Reference 1.** Monitoring of BOM 7-day forecast will allow measures to be in place prior to a rainfall event. In event of rainfall works will cease, area stabilised. It is noted that *Section 4.3.2.4 Timing and staging of works* in the Land Clearing Guideline identifies vegetation clearing in the NT usually occurs either start of the wet season after the first intense storms have ceased and before the monsoon arrives; or at the end of the wet season, after the monsoon has passed. Our program has considered this and believe the controls implemented will minimise risk to loss of soil and stability.
LAND – WATERWAYS																			
7	Civil Construction – access tracks, water bore, lease pad and camp	Management of Water - Surface Water	Damage to creek bed at crossing points. Earthmoving equipment altering natural drainage lines. **Description** • Creeks and drainage lines (also referred to as intermittent streams) will only be crossed whilst using the existing pastoral track to gain	2	2	L	-	-	-	L	• Avoid creation of new creek crossings for the delivery of the civil construction and water bore activities (refer Figure 15). • Existing crossings will not be altered but will be maintained to minimise impacts from the vehicle movements. • Minimise disturbance in the riparian buffers in accordance with the stream order of the encountered drainage line in accordance with the buffers (LCG, 2019).	1	1	L	-	-	-	L	**Hierarchy of controls as per Risk Reference 1.** Only two creek crossing are required to be made to deliver the civil construction and water bore drilling activities. These are existing pastoral track crossing points. **Elim** • The proposed construction activities are not located near large waterways; therefore, catchment flooding is

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				Environment and Community			Law, Regs and Civil Action			Risk		Environment and Community			Law, Regs and Civil Action			Risk	
				Consequen	Likelihood	Risk Level	Consequen	Likelihood	Risk Level			Consequen	Likelihood	Risk Level	Consequen	Likelihood	Risk Level		
			access for the lease pad, and gravel pit areas. • No additional tracks that are constructed for the civil works will require crossing of waterways.								• The activities to be completed in a manner that does not cause a: - material change to the shape of a waterway, - material change to the volume, speed or direction of flow or likely flow of water in or into a waterway, or - alteration to the stability of the bed or banks of a waterway, including by removal of vegetation. • Ongoing monitoring of the creek and drainage crossing condition prior to, during and at completion of rehabilitation will be required, including photo monitoring.								unlikely to occur in the project area. • No works within intersection of Newcastle Creek and Eastern Access Track at RWA2. Transit only. **Eng**: • Consideration was given to the placement of the access tracks to the lease pads and gravel pits that avoided creating new crossings on Newcastle Creek. • ESCP typical treatments for lease pad and access tracks. • No construction works are to be undertaken to disturb either the creek bank or bed, apart from the required ongoing maintenance of the crossing in condition that allows safe access. • Stabilisation of disturbed areas prior to commencement of wet season. **Adm**: • Photo points and rehabilitation monitoring will be used to monitoring crossings during the program.
8	Civil Construction – access tracks, water bore, lease pad and camp	Management of Water - Surface Water	Access tracks, gravel pits and lease pad construction may alter natural surface water flow, creating ponding and or erosion. **Description** • Sheet flow is likely to occur across the sites during monsoon rain events which could increase flow around installed infrastructure	2	3	M	1	3	L	M	• The actual location of each lease pad may vary within ~100 m to accommodate localised on-ground factors when the pads are being constructed. • Access to the lease pads and gravel pits require sections of the seismic lines on Tanumbirini Station to be retained and formed as a class 5 pastoral 2 (type c) unsealed track (lease pads) and class 5 pastoral 1 (type c) unsealed track (gravel pits) in accordance with NTG standard drawing CS3003 Typical of cross sections for	2	2	L	1	2	L	L	**Hierarchy of controls as per Risk Reference 1.** **Eng**: • ESCP typical treatments for lease pads, gravel pits and access tracks. • Stabilisation of disturbed areas prior to commencement of wet season.

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				Environment and Community			Law, Regs and Civil Action			Risk		Environment and Community			Law, Regs and Civil Action			Risk		
				Consequen	Likelihood	Risk Level	Consequen	Likelihood	Risk Level			Consequen	Likelihood	Risk Level	Consequen	Likelihood	Risk Level			
			(i.e. erosion beside access track and lease pad if Erosion and Sediment Control Plan not effectively implemented)								urban and rural environments (2017) and will be implemented under the ESCP (Appendix K). • Lease pads and access track will be constructed in accordance with best practice erosion control measures. • At completion of the lease pad, gravel pits and access tracks use, the disturbed areas are to be restored and/or rehabilitated to original pre-disturbed condition consistent with surrounding land use.									• Progressive rehabilitation of disturbed areas as activities are completed.
LAND – POLLUTION																				
9	Civil Construction – access tracks, water bore, lease pad and camp	Management of Land - Soil and Erosion	Soil contamination as a result of exploration activities. **Description** • General camp and civil construction activities have potential to contaminate surrounding soils if storage and handling of hazardous materials and waste are not managed appropriately.	2	3	M	1	3	M	M	• Ensure the Spill Management Plan (Section 7.6) summarises spill response actions and follow-up actions. • Plan logistics to minimise the quantity of fuel stored on site. • Plan for designated waste storage and handling areas located away from creeks or flammable vegetation. • Hydraulic fluid and fuel drums are to be stored within portable bunding (portable storage bunds create permanent or temporary relocatable watertight bunds that we can manufacture to size required and meet Australian Standards) (refer Section 3.3.3). • Plan for removal and disposal of hazardous wastes to be in accordance with NT hazardous waste disposal requirements. • Include provisions for fuel management, spill response equipment and waste disposal in contracts. • Ensure procurement and transport of spill response equipment is provided for. • Ensure tankers have all safety and response equipment in place. • Ensure the availability of spill clean-up equipment for operations. • All loading, unloading, transfer and refuelling operations are to be undertaken in designated areas, with portable bunding and away from any sensitive receptors. • Ensure internal tracks used for transporting fuel are adequate and safe. All transport of fuel to be carried out during daylight hours. • Ensure that personnel are familiar with this spill prevention and response plan and site environmental inductions cover transport,	2	1	L	1	2	L	L	**Eng** • Hydraulic fluid and fuel facilities/tanks are to be stored within portable bunding or in double-skinned fuel tanks, and placed away from any drainage lines or sensitive receptors (refer Section 3.3.5). • All loading, unloading, transfer and refuelling operations are to be undertaken in designated areas, with portable bunding and away from any sensitive receptors. • Spill response kits appropriate for types of spill at each facility and within each construction re-fuelling vehicle (PPE). **Adm** • Minimise the quantity of fuel and hydraulic oils stored on site to what is necessary to conduct activities. • SDS available for each chemical/fuel onsite and in vehicles (as required). • Personnel familiar with this spill prevention and response plan and site environmental inductions cover transport, storage,

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				Environment and Community			Law, Regs and Civil Action			Risk		Environment and Community			Law, Regs and Civil Action			Risk	
				Consequen	Likelihood	Risk Level	Consequen	Likelihood	Risk Level			Consequen	Likelihood	Risk Level	Consequen	Likelihood	Risk Level		
											• storage, refuelling, response and clean-up activities. • Regular assessment of unsealed road undertaken to ensure the quality of the road is suitable for transport during wet season. • Any fuel storage tanks used during activities will be double-skinned and meet standards of AS 1940:2004.								refuelling, response and clean-up activities. • Assess road and weather conditions prior to mobilising. • Spill Management Plan in event of spill event (refer Section 7.6.4 and Appendix M). • Monitoring and Auditing (refer Section 8.5 and Section 8.6), including Photo Monitoring.
WATER – POLLUTION																			
10	Camp Operations	Management of Water - Surface Water	Contamination or pollution of surface waters through waste impact **Description** • Inappropriate management of ablution and camp kitchen waste could impact on Site personnel and environment from contamination concerns and odours.	2	3	M	2	3	M	M	• Designated waste storage and handling area to be planned for and provided onsite at the construction camp. • The site assessment criteria provided in the DoH Code of Practice (2014) (Section 7.2) will be followed when planning and constructing effluent disposal systems (refer to DoH Environmental Health – Guidelines for Land Capability Assessment for On-site Waste Management (2014). • Detergents are to be biodegradable, environmentally sensitive for washing and cleaning	2	2	L	1	1	L	L	**Eng** • Wastewater tank and irrigation field placed away from any drainage lines or sensitive receptors. **Adm** • Emergency response plan in event of spill event (refer Section 7.6.4 and Appendix M). • Monitoring and Auditing (refer Section 8.5 and Section 8.6), including Photo Monitoring The proposed sewerage system is a chemical wastewater treatment system (2 x OzziKleen SK10 Sewerage Processing Unit (SPU) and 20,000 L Water Tank Skid) in accordance with Part 4 of the DoH Code of Practice for Small On-site Sewage and Sullage Treatment Systems and the Disposal or Reuse of Sewage Effluent 2014. For chemical systems, the contents are proposed to be irrigated. An application for irrigation of recycled water sourced from an approved recycled water system will be submitted to the DoH Environmental Health unit prior to commencing on site.

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				Environment and Community			Law, Regs and Civil Action			Risk		Environment and Community			Law, Regs and Civil Action			Risk	
				Consequen	Likelihood	Risk Level	Consequen	Likelihood	Risk Level			Consequen	Likelihood	Risk Level	Consequen	Likelihood	Risk Level		
11	Civil Construction - refuelling and equipment maintenance	Management of Water - Surface Water	Impacts associated with spills and leaks from refuelling and maintenance activities. **Description** • Refuelling and maintenance activities could cause contamination. Higher risk if conducted in water courses	2	1	L	-	-	-	L	A Spill Management Plan (SMP) (Section 7.6) has been developed for the project that outlines procedures for spill prevention, spill response and spill clean-up. The SMP includes the following spill mitigation methods: **Spill prevention:** • A designated hazardous materials storage area will be provided onsite. • Hydraulic fluid, oil and fuel drums will be stored within portable bunding. • Loading and unloading operations of hazardous liquids will be undertaken in designated areas with bunding. **Spill response:** • Spill clean-up material will be readily available at each work site and on designated mobile service vehicles where hydrocarbons and chemicals are stored and / or used. • The SMP outlines various spill clean-up and disposal methods and equipment to be used for different types of spills.	1	1	L	-	-	-	L	**Hierarchy of controls as per Risk Reference 10.**
WATER – GROUNDWATER USE																			
12	Civil Construction, Water Bore Drilling and Camp Operation.	Groundwater	Contamination or pollution of groundwater through waste impact (e.g. ablution facility operations, refuelling, chemical storage etc.) **Description** • Spills or leaks from activities impacting on the potable and stock water supply. • Groundwater is the primary water source for the Barkly Region.	2	1	L	3	1	L	L	• A Spill Management Plan (SMP) (Section 7.6) has been developed for the project that outlines procedures for spill prevention, spill response and spill clean-up. The SMP includes the following spill mitigation methods.	2	1	L	2	1	L	L	As per **Risk Reference 9** and **Hierarchy of controls as per Risk Reference 10.**
13	Civil Construction, Access, Water Bore Drilling and Camp Operation	Groundwater	Extraction of groundwater for the use during camp operations and civil construction activities impacting on groundwater supply for exploration operations and the wider area. **Description** • Pastoral groundwater bores suffer reduced groundwater yields.	2	1	L	3	1	L	L	• Water extraction will be metered to ensure target use is not exceeded. • Recycle of the treated effluent for dust suppression may be considered and will be based on water quality.	2	1	L	1	1	L	L	Groundwater supply bores will be required to conduct civil construction activities. The cumulative impact of groundwater extraction for all Sweetpea's proposed regulated activities assumes a maximum usage of 299 ML per annum in 2022. This groundwater extraction requirements associated with the regulated activities under this Civil and Water Bore EMP is estimated at 329.6 ML over the 4-year program (Section 6.2.1).

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				Environment and Community			Law, Regs and Civil Action			Risk		Environment and Community			Law, Regs and Civil Action			Risk	
				Consequen	Likelihood	Risk Level	Consequen	Likelihood	Risk Level			Consequen	Likelihood	Risk Level	Consequen	Likelihood	Risk Level		
			• Groundwater is the primary water source for the Barkly Region. • Groundwater extraction may impact on potential Groundwater Dependent Ecosystem (GDE) particularly in relation to stygofauna communities.																Water is proposed to be extracted under a water extraction licence. Any water extraction license granted will have a limit to the amount of water extracted. Provided Sweetpea adheres to the terms of the granted water extraction license, environmental impacts to groundwater will be unlikely to occur and minor in consequence. In relation to impacts on GDE and Stygofauna, the known factors affecting the distribution of stygofauna include: - Stygofauna predominantly found in aquifers with large pore spaces. - Abundance and diversity of stygofauna decreases with depth below ground, with fauna rarely found more than 100 m below ground level (Hose, GC et al 2015). - Stygofauna are more abundant in areas of surface water-groundwater exchange, compared to deeper areas or those further along the groundwater flow path remote from areas of exchange or recharge. The installation of the monitoring bores as part of the Civil Construction and Water Bore will provide baseline understanding of the underlying groundwater and will inform future EMP development. Based upon the above information, the presence of significant assemblages of stygofauna in the exploration area for the Civil Construction and Water Bore activities is considered limited and impacts considered unlikely.
Noise Vibration and Lighting																			
14	Civil Construction- access track, water bores, lease pads and camp construction	Noise, Vibrations and Lighting	Impacts to surrounding communities **Description** • Noise and vibration generated by construction activities are a potential nuisance to towns and communities.	1	1	L	1	1	L	L	• Ensure operating hours for civil construction activities are established and communicated to personnel and contractors. The operating hours proposed for the civil construction activities are 6am to 6pm, over 12-hours during daylight hours. • Consult with pastoral leaseholders prior to scheduling of activities to take into consideration stock movements.	1	1	L	1	1	L	L	**Eli** • Remote location. **Eng** • Vehicles, machinery and equipment is maintained in good working order. **Adm** • Operating hours of 12-hours during daylight hours. • Monitoring and Auditing (refer Section 8.5 and

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				Environment and Community			Law, Regs and Civil Action			Risk		Environment and Community			Law, Regs and Civil Action			Risk	
				Consequen	Likelihood	Risk Level	Consequen	Likelihood	Risk Level			Consequen	Likelihood	Risk Level	Consequen	Likelihood	Risk Level		
											• Provide at least two weeks notification to households and businesses if operations are to be conducted within 10 km of their premises. • All nuisance-related complaints from sensitive receptors investigated and reported upon. • Ensure site environmental inductions for all site personnel and contractors include noise, vibration and light emissions requirements. • Ensure vehicles, machinery and equipment is maintained in good working order. • Slow down vehicles when passing cattle and other wildlife. • Daily and ongoing consultation with station managers and station personnel.								Section 8.6), including Photo Monitoring. • Notice to pastoral lease holders and immediate response to nuisance-related complaints. • Daily and ongoing consultation with station managers and station personnel.
15	Civil Construction- access track, water bores, lease pads and camp construction	Noise, Vibrations and Lighting	Impacts to native fauna **Description** • Disrupting or altering fauna feeding, breeding or other activities through noise, vibration and lighting from use of mechanical equipment.	1	1	L	1	1	L	L		1	1	L	1	1	L	L	**Hierarchy of controls as per Risk Reference 14.**
16	Civil Construction- access track, water bores, lease pads and camp construction	Noise, Vibrations and Lighting	Impacts to stock **Description** • Interference with pastoral activities if noise, vibration and lighting affects behaviour of stock.	1	1	L	-	-	-	L		1	1	L	-	-	-	L	**Hierarchy of controls as per Risk Reference 14.**
WASTE MANAGEMENT																			
17	Civil Construction- access track, water bores, lease pads and camp construction	Waste	Contamination of soil or water through generation of or use of hazardous materials, domestic chemicals (detergents), industrial wastes and sewage. **Description:** • release of detergents into natural systems which may negatively affect some fauna • pollution of water through release of pollutants into nearby creeks • contamination of soil through inappropriate waste management.	2	2	L	1	2	L	L	• Controls detailed in Section 7.5 of the EMP for waste management include the following information: • A characterisation of the anticipated waste streams • The proposed method and location of water and waste storage, transportation, treatment, disposal and re-use • Strategies to minimise or reduce the volume of waste that will be disposed of off-site •Waste disposal records (tracking and disposal certificates) to be kept. • The controls detailed in the Spill Management Plan will prevent spills of hazardous materials and respond to and clean up any spills that do occur (refer to Risk reference 9 and 10).	2	1	L	1	1	L	L	**Hierarchy of controls as per Risk Reference 9.** The WMP (Section 7.5) and SPRP (Section 7.6) are effectively implemented to ensure contamination impact from hazardous wastes are minor. The short timeframe for civil construction also makes the risk profile for contamination from hazardous substances low. Sweetpea require civil construction contractors to adhere to the DoH and WorkSafe requirements for all operations.

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				Environment and Community			Law, Regs and Civil Action			Risk		Environment and Community			Law, Regs and Civil Action			Risk	
				Consequen	Likelihood	Risk Level	Consequen	Likelihood	Risk Level			Consequen	Likelihood	Risk Level	Consequen	Likelihood	Risk Level		
											• All Sweetpea staff and contractors are to be informed about the WMP and SMP as part of their site induction. • All detergents to be used for camp operation must be biodegradable.								
18	Camp Operations	Waste	Encouragement of pest species to waste receptacles on the camp site. **Description** • Incorrectly managing waste on site could potentially attract pest species.	1	3	M	1	2	L	M	• All waste contaminant will be covered or contained within dedicated waste disposal bins to prevent tampering or be opened by fauna. This minimises the likelihood of feral animal and pest species coming onto site.	1	1	L	1	1	L	L	**Hierarchy of controls as per Risk Reference 9.** If wastes are stored and disposed of in an appropriate manner as planned the likelihood of pest species being attracted to camp is highly unlikely. If pest species are attracted to camp by wastes the impacts will be minor and short-term.
AIR QUALITY																			
19	Civil Construction- access track, water bores, lease pads and camp construction	Air Quality and Emissions	Potential for an increase in dust during site preparation (clearing of access tracks, lease pads, gravel pits and camp area) and resulting from vehicular traffic **Description** • The road network within the permit area is almost entirely unsealed and dust is generated as a result of vehicle movements upon these roads during the dry season. Dust generation also occurs on other areas of the permits where vehicles are used off the existing road system, such as on internal tracks, firebreaks and fence lines.	1	5	M	1	1	L	M	• Ensure dust minimisation and suppression requirements are communicated to personnel including contractors. • Ensure site environmental inductions for all site personnel and contractors include protective measures to minimise dust evolution. • All vehicles and equipment used on site will be well maintained to minimise emissions. • If dust levels are high, particularly in the vicinity of public areas (e.g. Carpentaria Highway), use a water truck to manage dust emissions. • Minimise vehicle movements to those necessary in the camp area. • Implement controls as detailed in the Land Management Plan (refer Section 7.2) • Rehabilitate the ground surface as soon as practicable following disturbance. • Uniformly re-spread previously removed vegetation and topsoil over disturbed area to assist with rehabilitation process through agencies of increased infiltration and return of seed-bearing topsoil.	1	3	L	1	1	L	L	**Eng** • Implement dust control measures including use of water cart. • Retain vegetation as much as possible and stabilise disturbance before onset of wet season. • Stay within activity boundaries and to designated speed limits. **Adm** • Site environmental inductions, including protective measures to minimise dust evolution. • Monitoring and Auditing (refer Section 8.5 and Section 8.6). Impacts from the generation of dust on access roads will be limited to the vegetation in the immediate vicinity of roads and will be limited to the duration of exploration activities. If a water truck is used on site, then the likelihood of impacts from dust emissions are reduced from highly likely to possible. Impacts will remain minor and short-term.

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				Environment and Community			Law, Regs and Civil Action			Risk		Environment and Community			Law, Regs and Civil Action			Risk	
				Consequen	Likelihood	Risk Level	Consequen	Likelihood	Risk Level			Consequen	Likelihood	Risk Level	Consequen	Likelihood	Risk Level		
20	Civil Construction- access track, water bores, lease pads and camp construction	Air Quality and Emissions	Potential for an increase in exhaust emissions from contractors' vehicles and generators resulting in localised effect on air quality and global contribution to greenhouse gases. **Description** • Vehicle exhaust emissions are a current occurrence in the region, from users of the national highways and pastoral machinery. Portable diesel or petrol fuel generators may be used during the exploration phase and a larger diesel generator may be the only source of power and lighting for camp facilities.	1	1	L	1	1	L	L		1	1	L	1	1	L	L	**Hierarchy of controls as per Risk Reference 19.** Impacts from vehicle emissions will be minor and short-term.
21	Civil Construction- access track, water bores, lease pads and camp construction	Air Quality and Emissions	Potential for dust generated to impact on health and functioning of the surrounding vegetation. **Description** • Excessive dust deposited onto plant foliage can reduce the photosynthetic performance (photosynthesis, stomata conductance, transpiration etc.), thus reducing overall health and plant growth (Hirano 1995) although the type and severity of impacts is largely unknown. On the drill site, the extended dry season could result in high levels of dust generation by vehicular movement unless dust suppression methods are undertaken.	1	5	M	1	1	L	M		1	3	L	1	1	L	L	**Hierarchy of controls as per Risk Reference 19.** The use of a water truck during exploration activities will reduce the likelihood of vegetation being impacted by dust. Effective mitigation will ensure that dust impact to vegetation will be minor and short-term.

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				Environment and Community			Law, Regs and Civil Action			Risk		Environment and Community			Law, Regs and Civil Action			Risk	
				Consequen	Likelihood	Risk Level	Consequen	Likelihood	Risk Level			Consequen	Likelihood	Risk Level	Consequen	Likelihood	Risk Level		
FLORA, FAUNA, VEGETATION AND HABITAT																			
22	Civil Construction- access track, water bores, lease pads and camp construction	Natural Environment - Vegetation and Flora	Disturbance to native vegetation and flora and potential to change of vegetation structure **Description** • Direct impact to vegetation and flora species will occur during clearing for the lease pad, access tracks, gravel pits and camp site. • Slow growth of some vegetation, such as Lancewood/Bullwaddy.	2	5	M	1	1	L	M	• Minimise vegetation clearance by using existing access tracks and disturbed areas as much as possible. • Where practicable, align lease pads and access tracks to avoid mature trees and Lancewood / Bullwaddy areas which require longer to regenerate follow rehabilitation. Noted some areas unable to avoid. • Ensure site environmental inductions for all site personnel and contractors include the management of onsite vegetation and flora, including site personnel to stay within designated access roads and work areas. • Minimise disturbance in the riparian buffers in accordance with the stream order of the encountered drainage line in accordance with Appendix K ESCP. • Clearing to be conducted in accordance with the vegetation clearing protocol including utilising trained fauna spotter/catchers. • Strip and stockpile topsoil and surface material at camp area, lease pad, access tracks and gravel pits for use in regeneration or revegetation if possible. • Minimise vehicle movements during dawn and dusk to minimise risk of fauna strikes. • Restrict vehicle movement to designated disturbance areas only as detailed in Table 3. • Vehicle speed restrictions apply when travelling in permit (60 km/hr on unsealed roads in proximity (<200 m) to sensitive receptors) or drive to condition. • Retain topsoil, scrub and vegetation cleared to facilitate rehabilitation. • Rehabilitate the ground surface to near-natural condition. • Uniformly re-spread previously removed vegetation and topsoil over disturbed area to assist with rehabilitation process through agencies of increased infiltration and return of seed-bearing topsoil. • Refer to Section 9.0 and Appendix F.	2	3	L	1	1	L	L	**Eliminate** • Minimise vegetation clearance by using existing access tracks and disturbed areas as much as possible. **Eng** • Align lease pads and access tracks to avoid mature trees and Lancewood / Bullwaddy areas which require longer to regenerate follow rehabilitation. • Strip and stockpile topsoil and surface material at camp area for use in regeneration or revegetation if possible. • Ongoing maintenance of access tacks and lease pads. **Adm** • Implement Rehabilitation Plan (Appendix F). • Site environmental inductions for all site personnel and contractors include the management of onsite vegetation and flora, including site personnel to stay within designated access roads and work areas. • Speed restrictions (60 km/hr on access tracks) • Monitoring and Auditing (refer Section 8.5 and Section 8.6).
23	Civil Construction- access track, water bores, lease pads and camp construction	Natural Environment - Vegetation and Flora	Impact to listed threatened flora habitat	2	1	L	1	1	L	L		2	1	L	1	1	L	L	**Hierarchy of controls as per Risk Reference 22.** A desktop review of the project area revealed that threatened Commonwealth or NT listed flora species are unlikely be significantly impacted by activities.

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				Environment and Community			Law, Regs and Civil Action			Risk		Environment and Community			Law, Regs and Civil Action			Risk	
				Consequen	Likelihood	Risk Level	Consequen	Likelihood	Risk Level			Consequen	Likelihood	Risk Level	Consequen	Likelihood	Risk Level		
24	Civil Construction- access track, water bores, lease pads and camp construction	Natural Environment - Fauna	Injury or death of native fauna and cattle **Description** • Impacts to fauna within the vicinity of exploration activities, through the physical presence of machinery and people, are likely to occur. • Injury or death to native fauna and livestock.	2	5	M	1	1	L	M	• Site inductions will ensure that all personnel are aware of their obligations and know the correct procedures for fauna encounters. • Access tracks will avoid sensitive areas of fauna habitat wherever possible, such as Lancewood-Bullwaddy communities. • Common terrain or vegetation types will be favoured for access tracks because they will generally have lower habitat significance. • Vehicle movement will be restricted to existing access tracks within permit to 60 km /hr. • Driving on site will be restricted to daytime hours only. • Land clearing for lease pads and gravel pits to be conducted in accordance with the vegetation clearing protocol including utilising trained fauna spotter/catchers (areas of clearing vegetation greater than 1 ha in one location).	2	3	L	1	1	L	L	**Hierarchy of controls as per Risk Reference 22.** Civil construction activities may cause some disturbance but is unlikely to cause fauna mortality and impacts will be minor and short-term. The risk profile to native fauna is therefore low. It is anticipated that spotter/catchers will only be required in areas of clearing vegetation greater than 1 ha in one location (i.e. Lease Pads or Gravel Pits). It is unlikely that spotter/catchers for linear clearing activities (i.e. access tracks) will be required due to the methods employed that avoid wherever possible the removal of larger trees (including Corymbia and Eucalypt species) with a trunk diameter greater than 25 cm at 1.3 m.
25	Civil Construction- access track, water bores, lease pads and camp construction	Natural Environment - Fauna	Loss of habitat **Description** • Disturbance to and loss of habitat, particularly through civil construction and water bore drilling pad establishment. • Bushfire	2	5	M	1	1	L	M		2	3	L	1	1	L	L	**Hierarchy of controls as per Risk Reference 22 and 35 (Bushfire).** The extent of native vegetation clearing for the project will be minor at a landscape scale. Provided sensitive habitats are avoided the consequence of clearing native vegetation will be minor.
26	Civil Construction- access track, water bores, lease pads and camp construction	Natural Environment - Fauna	Loss or endangerment of Threatened fauna species **Description** • Civil construction activities may impact the habitat of listed Threatened fauna species.	2	4	M	1	1	L	M		2	3	L	1	1	L	L	**Hierarchy of controls as per Risk Reference 22.** A desktop assessment of the project area revealed that five threatened fauna species may occur. The project area is highly unlikely to hold a Nationally significant population of any of these species, therefore the consequence of impacts to native fauna is reduced. If mitigation measures are effectively implemented the risk profile will remain low.

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				Environment and Community			Law, Regs and Civil Action			Risk		Environment and Community			Law, Regs and Civil Action			Risk	
				Consequen	Likelihood	Risk Level	Consequen	Likelihood	Risk Level			Consequen	Likelihood	Risk Level	Consequen	Likelihood	Risk Level		
27	Civil Construction- access track, water bores, lease pads and camp construction	Natural Environment - Fauna	Fauna injury or mortality - Vehicle Strike **Description** • Fauna injury or mortality from road collisions is a high-risk factor for fauna. The risk is more pronounced at night-time when nocturnal wildlife often gathers on roads.	2	4	M	1	1	L	M	• Vehicle movement will be restricted to existing access tracks. • Speed limit of 60 km /hr whilst on permit area. • Driving on site will be restricted to daytime hours only, wherever possible. • Ensure site environmental inductions for all site personnel and contractors include the management of onsite vegetation and flora, including site personnel to stay within designated access roads and work areas.	2	3	L	1	1	L	L	**Hierarchy of controls as per Risk Reference 20.** Fauna mortality due to vehicle collision is a common occurrence on Australian roads and it is hard to avoid, especially when driving at night. Of the five threatened species identified as potentially occurring within the project area only the Plains Death Adder (*Acanthopsis hawke*i) would possibly be struck by a vehicle at night. The implementation of suitable speed limits (maximum 60 km/hr on permit area) and restricting night-time driving will reduce the likelihood of impacts occurring.
WEEDS																			
28	Civil Construction- access track, water bores, lease pads and camp construction	Natural Environment - Introduction and Spread of Weeds	Transport of weeds **Description** • Transport of weeds or other exotic species and plant diseases between regions through Transport operations that may compromise ecological integrity and impact pastoral and cultural activities in the area.	3	4	M	1	4	M	M	• A Weed Management Plan (WMP) (Appendix H) has been developed for the project that includes the following information: • Baseline weed assessments prior to regulated activities being undertaken • Ongoing weed monitoring • Weed prevention methods • Weed treatment • Provision of a dedicated weed officer. • Source machinery locally if available. • Ensure contractual requirements specify vehicle hygiene requirements, specifically that all equipment is cleaned and to have valid weed hygiene declaration prior to accessing pastoral properties. • Allow enough time and budget for weed survey, monitoring and control activities during and post exploration. • All staff to be trained in weed identification and reporting. • Weed surveys are to be conducted in all activity areas to establish a baseline, inform weed control activities and compare post-activity vegetation with the baseline (refer Appendix C and Appendix H). • Ensure machinery is clean and free from mud and plant material prior to entering or leaving the exploration area. • Site inductions are to ensure that all personnel are aware of vehicle weed hygiene requirements	2	1	L	1	1	L	L	**Eli** • Corrective action initiated immediately where weed outbreaks are reported. **Sub** • Source machinery locally if available to avoid importation of exotic weeds. **Eng** • All plant and machine operators to monitor for weeds during civil construction, including routine checks along access track and change in vegetation community. **Adm** • Site environmental inductions, including trained in weed identification and reporting. • Monitoring and Auditing (refer Section 8.5 and Section 8.6), including Photo Monitoring. • Spatial data before and after to confirm stayed within survey parameters. If weed prevention, monitoring and treatment mitigation measures (as per the Appendix H) are effectively implemented
29	Civil Construction- access track, water bores, lease pads and camp construction	Natural Environment - Introduction and Spread of Weeds	Degradation of the existing environment – introduction of weeds **Description** • Weeds can have a range of deleterious impacts to the landscape ecosystem, such as altering fire regimes.	2	3	M	1	1	L	M		2	2	L	1	1	L	L	
30	Civil Construction- access track, water bores, lease pads and camp construction	Natural Environment - Introduction and Spread of Weeds	Harmful effects of certain weed species on livestock or native fauna **Description** • Some weed species are harmful to livestock and native fauna. The weeds could be poisonous or potentially compete with	1	1	L	1	3	L	L		1	1	L	1	1	L	L	

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				Environment and Community			Law, Regs and Civil Action			Risk		Environment and Community			Law, Regs and Civil Action			Risk	
				Consequen	Likelihood	Risk Level	Consequen	Likelihood	Risk Level			Consequen	Likelihood	Risk Level	Consequen	Likelihood	Risk Level		
			the pasture within the properties.								and staying on designated areas and existing access tracks. • The most appropriate and applicable cleaning procedure is visual inspection and dry removal. This will reveal vegetative material caught in the underbody, moving parts of machinery or any other part of the vehicle or machine and the materials located could be manually removed or removed with the assistance of compressed air. With this method, there is no requirement to be able to distinguish between weed and native species, as all vegetative matter will be removed. • If an outbreak of a declared weed occurs during exploration activities weed treatment is to be undertaken as soon as possible to control and eradicate the infestation, with treatment undertaken according to guidelines on the DEPWS website. The Northern Territory Weed Control Handbook (DENR, 2018) will also serve as a reference (DENR, 2018) (refer Appendix H). • All plant and machine operators to monitoring for weeds during civil construction, including routine checks at change in vegetation community. • All vehicles, plant and equipment to be checked and cleaned prior to demobilisation from exploration area to avoid the spread of weeds off the EP. • Ongoing monitoring of rehabilitated areas in accordance with the rehabilitation approach to ensure declared weed species become established interfering with the rehabilitation success (refer Section 9.0 and Appendix F), including photo monitoring. • A post-exploration weed control program is to be undertaken within the exploration area if NT *Weeds Management Act 2001* declared weed is identified.								the likelihood and consequence of weed impacts will be reduced.
FERAL ANIMAL AND PEST SPECIES																			
31	Civil Construction-access track, water bores, lease pads and camp construction	Natural Environment - Feral Animals and Other Pest Species	Introduction of feral animals and pest species - impacts to native fauna **Description** • Introduced predators can impact native such as reptiles, and ground-dwelling birds.	1	1	L	1	1	L	L	• No domestic animals are to be brought to site • All rubbish, including food packaging, is to be discarded into appropriate sealed waste container as soon as possible, to be transported off site and later disposed • Solid domestic waste storage areas will have lids and protective barriers installed that restrict access to pest species	1	1	L	1	1	L	L	**Eng** • Ensure waste is managed correctly to prevent attracting pest fauna. • Rehabilitation efforts post construction can be hindered by feral animal and pest species

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				Environment and Community			Law, Regs and Civil Action			Risk		Environment and Community			Law, Regs and Civil Action			Risk	
				Consequen	Likelihood	Risk Level	Consequen	Likelihood	Risk Level			Consequen	Likelihood	Risk Level	Consequen	Likelihood	Risk Level		
			• Pest species could be attracted to the camp site, potentially increasing their abundance in the landscape.								• Waste is to be removed from site as soon as reasonably practicable.								accessing the lease areas. **Adm**: • Monitoring and Auditing (refer Section 8.5 and Section 8.6), including Photo Monitoring. • Records of observed presence, with identification of pest if possible, will be maintained within Sweetpea's GIS and if required provided to DEPWS. If waste is managed and disposed of in an appropriate manner, as specified in the Section 7.5 Waste Management Plan (WMP) the risk profile of feral animal impacts to native fauna will remain low.
32	Civil Construction- access track, water bores, lease pads and camp construction	Natural Environment - Feral Animals and Other Pest Species	Introduction of diseases associated with feral and pest species may impact upon existing habitats, vegetation, native fauna and livestock. **Description** • Feral cats and dogs spread diseases that affect livestock and wildlife. Diseases can cause abortions in livestock which reduces farmers' productivity and create scar tissue in livestock meat which reduces farmers' incomes.	1	1	L	1	1	L	L		1	1	L	1	1	L	L	
33	Civil Construction- access track, water bores, lease pads and camp construction	Natural Environment - Feral Animals and Other Pest Species	Damage of vegetation or natural habitat through feral animal activity **Description** • Hard-hoofed feral animals such as camels, horses and donkeys have a major effect on native vegetation by damaging soil and overgrazing on native herbs, grasses, shrubs and trees.	1	1	L	1	1	L	L		1	1	L	1	1	L	L	
34	Civil Construction- access track, water bores, lease pads and camp construction	Natural Environment - Feral Animals and Other Pest Species	Feral animal nuisance around campsites and domestic waste material **Description** • Feral animals can be attracted to campsites by the smell of food and rubbish. They may find and scatter rubbish and hang around the camp.	1	1	L	1	1	L	L		1	1	L	1	1	L	L	

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				Environment and Community			Law, Regs and Civil Action			Risk		Environment and Community			Law, Regs and Civil Action			Risk		
				Consequen	Likelihood	Risk Level	Consequen	Likelihood	Risk Level			Consequen	Likelihood	Risk Level	Consequen	Likelihood	Risk Level			
LAND – BUSHFIRE																				
35	Civil Construction- access track, water bores, lease pads and camp construction	Bushfire	The civil construction activities may increase the risk of accidental bushfires and change the fire regime **Description** • Increased incidence and intensity of bushfires can lead to vegetation degradation and habitat modification. • Bullwaddy and Lancewood communities are fire sensitive. Inappropriate fire regimes may result in a community succession from Bullwaddy through Lancewood to a Eucalypt dominated open woodland (PWCNT, 2005).	1	1	L				L	• A Bushfire Management Plan (BMP) (Appendix I) has been developed that includes the following information: • Analysis of baseline fire information (at least 10 years) • Analysis of impacts of the proposed activities on the existing fire management regime • Coordination with the landholder and other land users and consistency with the landholder's fire management obligations and strategies • No hot works are permitted on total fire ban days without written approval from a fire control officer or fire warden • Implementation of the interest holder's appropriate fire mitigation measures such as: -Monitoring of seasonal conditions and fuel loads -Maintenance of fire access trails and fire breaks around infrastructure -Controlled burns -Communication system for monitoring bushfire alerts in the area • Annual fire mapping to monitor changes to fire frequency in the relevant area • Monitor the NAFI website and adhere to total fire ban days. Updates provided at daily toolbox meetings. • Fire extinguishers fitted to all vehicles • All personnel and contractors will be informed about the key features of the BMP as part of their induction • Clean out vehicle engine bay regularly, with special attention paid on red alert days, to prevent grass igniting on the hot vehicle components • Smoking only allowed in designated smoking areas. • Mobilise water cart to be on site during construction activities. The Bushfire Management Plan and the specific controls incorporated into the plan have considered previous industry experience for similar activities in the Beetaloo Basin (Imperial Energy Incident Report available on DEPWS Recordable incident report website).	1	1	L	1	1	L	L	**Eli** • Hot works not permitted on total Fire Ban Days. • Civil construction activities in grassed areas will managed to reduce the build-up of fuel within the vehicle's engine bays. • Regular inspections of vehicle's engine bay and remove any build-up of vegetated matter. **Sub** • Not applicable. **Eng** • 4 m fire access trail around camp site and lease pad. • Monitor NAFI to identify any severe, extreme and catastrophic Fire Danger Index (FDI) days and assess risk of conducting activities on such days and if additional controls are required to conduct the day's activities. • Water cart to be within **100 m of civil construction activities.** **Adm** • Bushfire Management Plan (Appendix I), including engaging with Bushfires NT and pastoral leaseholders in the area. • Bushfire Management Plan to note location of culturally significant sites that may require additional protection in event of fire. • Site environmental inductions, including trained on emergency response procedure (Appendix M) in event of fire.
36	Civil Construction- access track, water bores, lease pads and camp construction	Bush Fire	The civil construction activities may increase the risk of accidental bushfires and change the fire regime.	3	2	M				M		3	1	L	1	1	L	L		
37	Civil Construction- access track, water bores, lease pads and camp construction	Bush Fire	The civil construction activities may increase the risk of accidental bushfires and change the fire regime **Description** • Fire could cause damage to culturally significant sites.	1	1	L				L		1	1	L	1	1	L	L		

Risk #	Activity Description	Aspect	Impact	Inherent Risk Assessment							Mitigation Measures (Note preliminary mitigation summary, full mitigation required are presented in Section 7.0 of the EMP and associated Appendices))	Residual Risk Assessment							ALARP Discussion (Hierarchy of Controls)
				Environment and Community			Law, Regs and Civil Action			Risk		Environment and Community			Law, Regs and Civil Action			Risk	
				Consequen	Likelihood	Risk Level	Consequen	Likelihood	Risk Level			Consequen	Likelihood	Risk Level	Consequen	Likelihood	Risk Level		
																			Monitoring and Auditing • Monitoring and Auditing (refer Section 8.5 and Section 8.6). **PPE** • Fire extinguishers to be fitted to all vehicles. • Water cart to be available at all times during civil construction
Cultural Heritage and Sacred Sites																			
38	Civil Construction- access track, water bores, lease pads and camp construction	Social Environment - Cultural Heritage and Sacred Sites	Damage to or loss of culturally significant artefacts, areas or species **Description** • Personnel are more likely to cause damage if they remain unaware of culturally significant artefacts, areas or species that occur within the project area.	2	2	L	2	2	L	L	• AAPA clearance certificates, consultation with Northern land Council and Indigenous Traditional Owners and an archaeology and heritage survey identified the culturally sensitive areas and artefacts that need to be avoided by the project. Personnel will be made aware of culturally sensitive areas and artefacts within the project area as part of their site inductions. • Sweetpea will engage two Cultural Monitors, facilitated by the NLC, on location for the duration of the civil construction activities to ensure activities are conducted to avoid areas of cultural significance. • A Code of Conduct will be developed and implemented as part of site inductions for all personnel. This code will aim to prevent anti-social behaviour, such as a zero-alcohol tolerance for those working on site, using a vehicle, or travelling to or from work, that may impact local residents • Daily toolbox meetings will occur before work begins for the day, allowing the platform to provide updates on works and any cultural or heritage updates. • This is good corporate policy and has many advantages including: • Maintaining good relationships with local people • Assisting in averting possible conflict with local people • Ensuring appropriate behaviours outside of work hours.	1	1	L	1	1	L	L	**Eli** • Avoid areas of cultural heritage and significance (i.e. Restricted Work Areas detailed in AAPA certificate). **Adm** • Cultural Heritage Finds Protocol (Appendix D). • Two cultural monitors, facilitated by the NLC, to be on location during civil construction. • Site inductions are to ensure that all personnel are aware of cultural awareness obligations. • Monitoring and Auditing (refer Section 8.5and Section 8.6). Non-Indigenous workers unfamiliar with the Aboriginal traditions, lifestyle, customs and cultural values will be more likely to cause damage to culturally significant artefacts, areas or species. Implementation of the Code of Conduct will reduce the likelihood of culturally insensitive behaviour.
39	Civil Construction- access track, water bores, lease pads and camp construction	Social Environment - Cultural Heritage and Sacred Sites	Inappropriate access to sacred sites or culturally significant places. **Description** • Personnel are more likely to cause damage if they remain unaware of culturally significant artefacts, areas or	2	1	L	3	1	L	L		1	1	L	1	1	L	L	**Hierarchy of controls as per Risk Reference 38.** The civil construction and water bore activities do not occur within, or close to, sacred sites making it highly unlikely that these areas will be impacted. A number of RWA have conditions that need to be met which the project will adhere to.

Risk #	Activity Description	Aspect	Impact	Inherent Risk Assessment							Mitigation Measures (Note preliminary mitigation summary, full mitigation required are presented in Section 7.0 of the EMP and associated Appendices))	Residual Risk Assessment							ALARP Discussion (Hierarchy of Controls)
				Environment and Community			Law, Regs and Civil Action			Risk		Environment and Community			Law, Regs and Civil Action			Risk	
				Consequen	Likelihood	Risk Level	Consequen	Likelihood	Risk Level			Consequen	Likelihood	Risk Level	Consequen	Likelihood	Risk Level		
			species that occur within the project area.																Site inductions will aim to make personnel aware of their responsibilities regarding RWAs and cultural heritage in general. This will reduce the extent of impacts to cultural heritage within the project area.
PEOPLE AND COMMUNITY																			
40	All Activities	People and Community	Restrict access to area and/or interfere with pastoral operations and Traditional Owners activities during exploration activity.	2	3	M	2	3	M	M	• Site inductions are to ensure that all personnel are aware of and understand social constraints of working with in the permit area, including conditions specified in the Land Access Agreement with the host pastoral leaseholder. • All workers will be required to attend cultural awareness training and Sweetpea's code of conduct. • Work instruction to be issued to all contractors relating to access constraints (Work Instruction – Access). • NLC is consulted through the ministerial office and agreements in place. • Consult with other relevant land users and public interest groups, such as pastoral leaseholders, Aboriginal communities, natural resource managers, conservation groups, tourism operators and other affected parties, to exchange information and facilitate good working relationships as required. • Seek advice from the NLC on appropriate persons to fulfil the role of Aboriginal Liaison Officer, who can speak for certain areas and on behalf of certain groups. • Provide a Work Program for each year's proposed activities to the NLC and other regulatory bodies, which includes site-specific environmental and cultural issues, likely impacts and their mitigation (conducted August 2020 and schedule early 2021). • Prior to commencement onsite, communicate with pastoral leaseholders for access permission. Provide detail of the time and dates proposed to be on site, and the location, in advance of works commencing according to the regulations, including detailed maps showing pastoral infrastructure (i.e. bore runners/paddock maps). • LACA to be in place with each station prior to commencement of the regulated activity in the permit area.	2	2	L	2	2	L	L	**Adm** • Land Access Agreements • Native Title Exploration Agreement • Site inductions are to ensure that all personnel are aware of and understand social constraints of working with in the permit area, including conditions specified in the Land Access Agreement with the host pastoral leaseholder, as well as Cultural constraints (refer Section 7.12). • Daily engagement with station manager and station personnel during activities to monitor potential disturbances to cattle and jointly arrive at reasonable solutions to mitigate any observed effects. • Monitoring and Auditing (refer Section 8.5and Section 8.6).
41	All Activities	People and Community	Lack of consultation with stakeholders resulting in adverse community perception.	3	3	M	-	-	-	M		3	1	L	-	-	-	L	
42	All Activities	People and Community	Increase traffic on public roads due to exploration activities.	2	2	L	-	-	-	L		2	1	L	-	-	-	L	
43	All Activities	People and Community	Facilitation of unwanted access to lease area through the creation and improvement or use of access tracks.	1	1	L	-	-	-	L		1	1	L	-	-	-	L	

Risk #	Activity Description	Aspect	Impact	Inherent Risk Assessment							Mitigation Measures (Note preliminary mitigation summary, full mitigation required are presented in Section 7.0 of the EMP and associated Appendices))	Residual Risk Assessment							ALARP Discussion (Hierarchy of Controls)
				Environment and Community			Law, Regs and Civil Action			Risk		Environment and Community			Law, Regs and Civil Action			Risk	
				Consequen	Likelihood	Risk Level	Consequen	Likelihood	Risk Level			Consequen	Likelihood	Risk Level	Consequen	Likelihood	Risk Level		
											• Routine engagement with station manager and station personnel during activities to monitor potential disturbances to cattle and jointly arrive at reasonable solutions to mitigate any observed effects. • Local businesses to be assessed and utilised where possible to deliver the exploration program. • A community contact number will be provided in communications correspondence. • On completion of exploration activities rehabilitation will commence in accordance with the Rehabilitation Plan and monitoring instigated to ensure successful restoration of the activity areas (Section 9.0). • Engage with pastoral leaseholders on the rehabilitation areas to determine potential interaction with pastoral operations with the rehabilitation success.							

Appendix F

Lease Pad, Gravel Pit and Accommodation Camp Rehabilitation Plans

Appendix F Lease Pad, Gravel Pit and Accommodation Camp Rehabilitation Plans

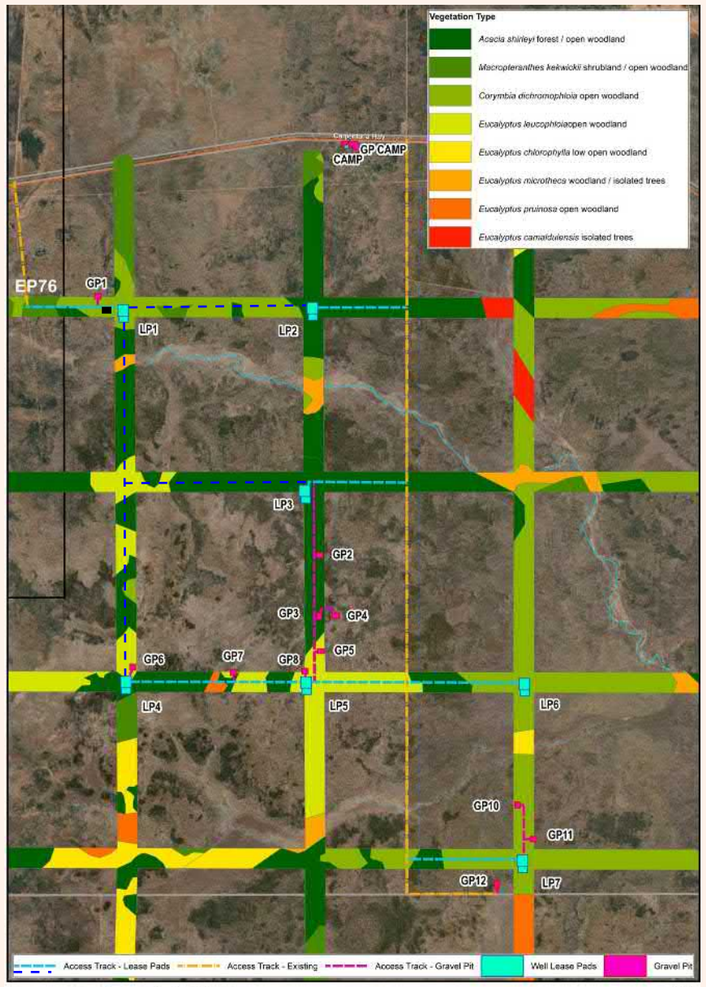
Civil Construction Lease Pads— EP136

Rehabilitation Plan 2022/2025

Located: Tanumbirini Station

Location of EP136— Civil Construction Area, Tanumbirini Station	
Property land uses	Gas exploration and cattle grazing

Post Activity Rehabilitation Aim and Objectives	
Site management aim	The aim is to rehabilitate any part of the land affected by the Regulated Petroleum Activity to a safe condition consistent with industry standards and in consultation with Landholder.
Rehabilitation objectives	The rehabilitation objective is to provide a stable land form, which supports a resilient self-sustaining vegetation community that can withstand impacts including fire and cattle grazing and is safe to humans and wildlife, whilst utilising appropriate site infrastructure for ongoing pastoral activities (i.e. access tracks, water bores, fencing and laydown areas).



This Site Specific Rehabilitation Plan has been prepared for Sweetpea to remediate and rehabilitate following completion of the planned civil construction and water bore activities. This Plan should be read in conjunction with the Overarching *Environmental Management Plan and Emergency Response Plans* for Sweetpea's operations in the Beetaloo Basin.—Appendix F

Rehabilitation Officer	Contact Details	Name
	[redacted]	[redacted]

Site Environmental Summary

Vegetation community	Survey sites	Descriptions	Canopy cover (%)	Ground cover (%)
Corymbia dichromophloia open woodland	LP1, LP3alt, LP5new, LP7	*Corymbia dichromophloia* +-*Erythrophleum chlorostachys* mid-high open woodland with +-*Terminalia canescens* mid-storey over *Triodia bitextura* hummock grassland or *Chrysopogon sp*. and *Schizachyrium fragile* tussock grassland	5-20	5-30
Acacia shirleyi open forest	LP2, LP4, LP6	*Acacia shirleyi* open woodland with *Macropteranthes kekwickii* mid-storey over *Chrysopogon fallax* (mixed) tussock grassland	50-80	5

Rehabilitation Strategy

Parameters	Methods	Objective
Vegetation	• Implement progressive rehabilitation within 12 months upon completion of petroleum activities. • Implement rehabilitation of lease pads upon cessation of use. • Disturbed areas to be allowed to naturally regenerate or revegetate on completion of Regulated Activity. • All compacted areas to be ripped and scarified to promote regeneration of vegetation, this may require assistance through spread of native seed stock. Where possible, native seed stock would be supplied by local Indigenous suppliers.	• Establish vegetation to be consistent to adjacent vegetation (species richness, cover and structure), unless agreement with landowner and Regulator for alternative use. • The type of ground cover applied to completed earthworks to be compatible with the anticipated long-term land use, environmental risk, and site rehabilitation measures.
Ground cover	• Previously removed vegetation and topsoil will be uniformly respread over disturbed area to assist with rehabilitation process through agencies of increased infiltration and return of seed-bearing topsoil, as well as reducing erosion. • If required, additional native seed mix from the area could be respread to speed up rehabilitation process.	
Landform stability	• All windrows are to be removed as soon as practicable.	

Rehabilitation Risks

Key Risks	Controls
Drought — impacting the establishment of rehabilitated vegetation	• Time rehabilitation actions to coincide with the beginning of the wet season, to ensure access to the site and maximise the establishment period of vegetation over the wet season • Re-spread topsoil across the site to utilise the local seed bank • Ongoing monitoring to identify if further seed inputs are required • Collection of seed from the local area to ensure seed stock is suited to the climatic conditions of the site.
Fire—impacting revegetation	• Establish a mix of perennial and annual grass species • Establish a mix of re-sprouter (eg. *Eucalypt spp*. and *Corymbia spp.*) and re-seeder species (eg. *Acacia spp*.) • Ongoing monitoring to determine fire impacts on revegetation. • Ongoing monitoring to determine if further seed inputs are required
Grazing —impacting revegetation	• Establish a mix of perennial and annual grass species • Re-spread timber with top soil • Ongoing monitoring to determine grazing impacts on revegetation. • Ongoing monitoring to determine if further seed inputs are required • Ongoing monitoring to determine if fencing is required
Exposed Ground — leading to an increase in weed establishment and/or erosion	• Remove windrows and topsoils • Respread of topsoil and vegetated matter across the site • Annual weed surveys of rehabilitated area once rehabilitation is established • Control of any weed incursions

Final Success Criteria

Canopy Cover (%)	• A minimum of 10-20% canopy cover for open woodland community. • It is noted that Eucalypt woodlands will recover faster than the Lancewood/Bullwaddy community, however should have signs of regrowth following rehabilitation and within 12-18 months after rainfall.
Ground Cover (%)	• Minimum 20% ground cover using locally available material including reserved topsoil/ cleared vegetation before the onset of the first wet season . • A minimum of 20% ground foliage cover and 30% diversity to be achieved within the first 12 months and maintained for at least 3 years following rehabilitation. Success will be dependent on minimised cattle movements and rainfall.
Erosion	• Less than 5 % erosion should be evident after the first 12 months and no subsidence or erosion should be evident for at least 5 years after completion.
Weeds	• No establishment of weed species declared under the Northern Territory Weeds Management Act.
Hazardous materials and waste	• All hazardous material and waste removed from site upon completion of works to licensed landfill facilities or recycling facilities.
Safety for humans and wildlife	• Rehabilitation of disturbance areas should be similar in landform to the surrounding area. No steep slopes or barriers to remain on site that endanger either wildlife or humans • Water bores and exploration wells to be sealed and isolated • Removal of all surface facilities including fencing (star pickets/fencing wire) • Remediation and backfilling of all sumps/ponds.

Monitoring Program and Schedule

Rehabilitation Stage	Timing	Method	Measurable attributes
Preliminary Assessment	6 to 9 Months post rehabilitation, end of wet season survey (February to June).	• Establish 14 permanent 100m x 4m woody species transects (two per lease pad area, with photo monitoring point/s, include 2 analogue sites in nearby undisturbed vegetation community. • Collect 1 x 1 m ground cover quadrats every 10 m along transect. • Transects to be randomly selected with start and end marked with star picket.	Measurable attributes compared with analogue sites. • Indication of seed germination and plant establishment rates. • Vegetation cover (species and abundance). • Land condition (e.g. erosion canopy cover, ground cover, habitat quality). • Weed presence (species and density). • Disturbance (fire and feral animal/cattle) • Incidental observations from surrounding area.
Early Rehabilitation	Years 1, 2 and 3 post rehabilitation, end of wet season survey (February to June).	• Monitoring to be undertaken using permanent transects. • Collect data as per preliminary methods. • Compare results from previous assessment to determine if require additional management inputs (i.e. seeding, stabilisation). • Review success criteria.	• Early assessment of rehabilitation will determine attributes of woody plants in each 100m x 4m transect. • Including assessment of species, Diameter at Breast Height (DBH) (>1.5cm) and height (>2m), in addition to parameters described within the preliminary assessment.
Long-Term Rehabilitation	Annually until final success criteria has been met, end of wet season survey (February to June).	• Monitoring to be undertaken using permanent transects. • Collect data as per preliminary methods. • Compare results from previous assessment to determine if require additional management inputs (i.e. seeding, stabilisation). • Review success criteria.	• Long-term assessment will determine establishment, recruitment and growth rate attributes of plant species, in addition to parameters described during Early Rehabilitation stage.

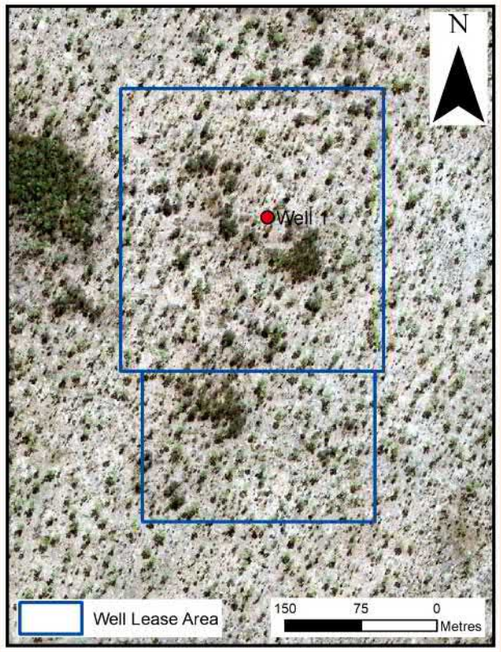
Civil Construction Lease Pads— EP136

Rehabilitation Plan 2022/2025

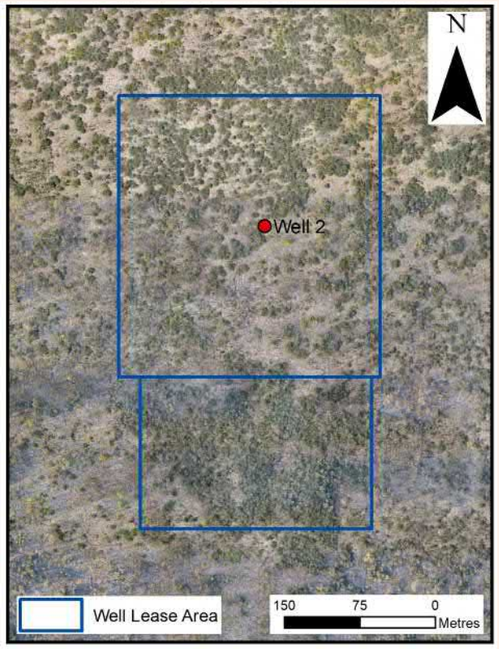
Located: Tanumbirini Station

Pre-Disturbance Imagery of each Proposed Construction Lease Pad Area

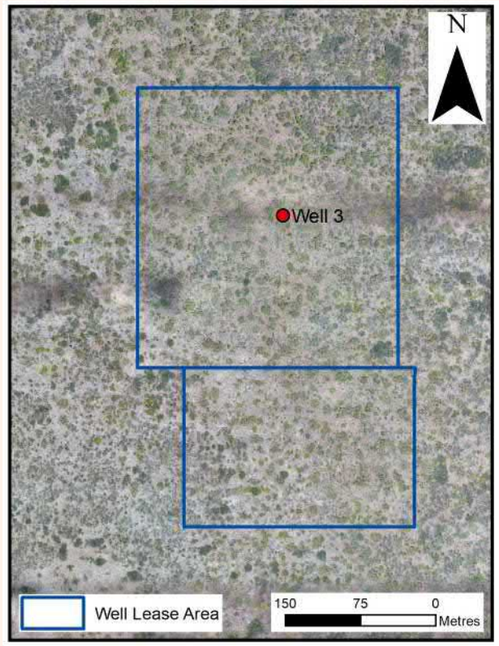
Well Lease Area 1
(Imagery: HiResSat, 0.75m Pixels, August 2019)



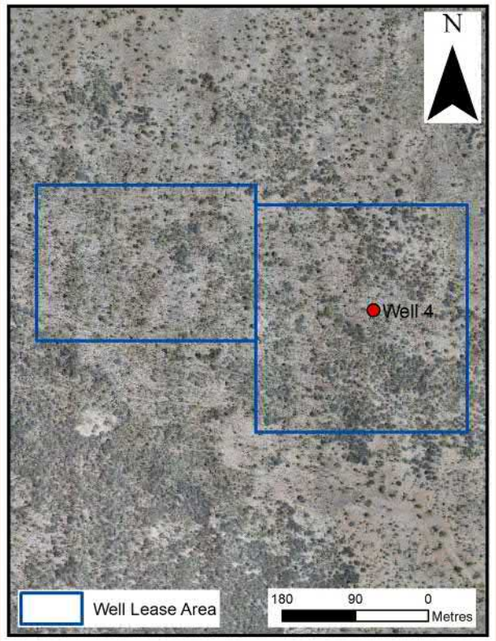
Well Lease Area 2
(Imagery: Drone Captured, 2.75cm Pixels, Nov 2020)



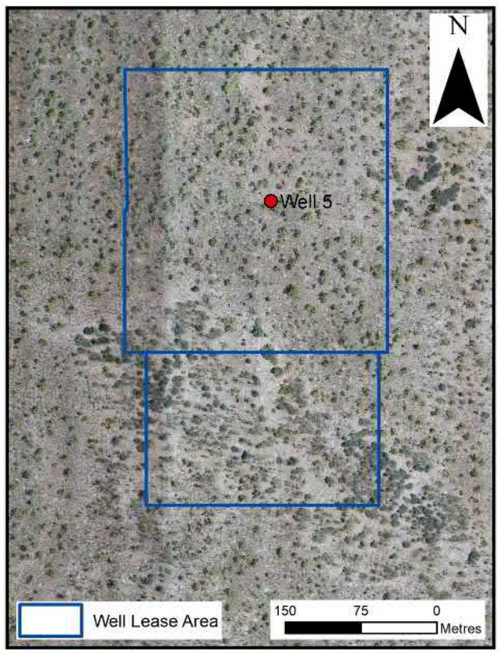
Well Lease Area 3
(Imagery: Drone Captured, 2.75cm Pixels, Nov 2020)



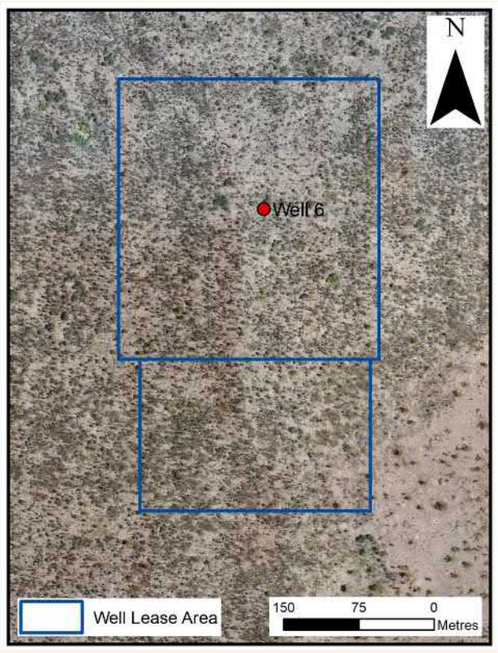
Well Lease Area 4
(Imagery: Drone Captured, 2.75cm Pixels, Nov 2020)



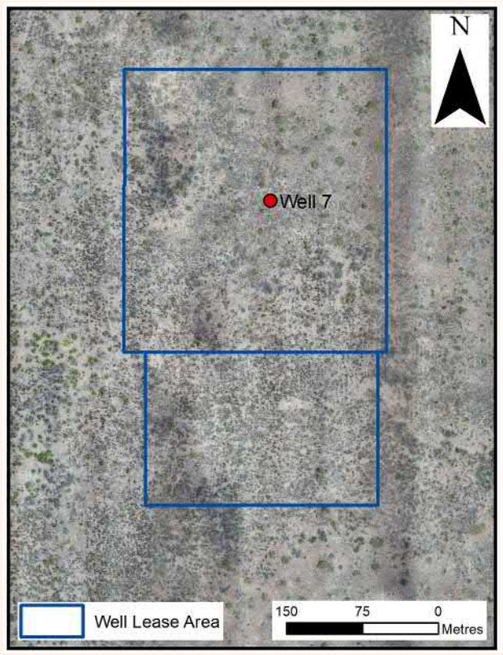
Well Lease Area 5
(Imagery: Drone Captured, 2.75cm Pixels, Nov 2020)



Well Lease Area 6
(Imagery: Drone Captured, 2.75cm Pixels, Nov 2020)



Well Lease Area 7
(Imagery: Drone Captured, 2.75cm Pixels, Nov 2020)



This Site Specific Rehabilitation Plan has been prepared for Sweetpea to remediate and rehabilitate following completion of the planned civil construction and water bore activities. This Plan should be read in conjunction with the Overarching *Environmental Management Plan and Emergency Response Plans* for Sweetpea's operations in the Beetaloo Basin.—Appendix L

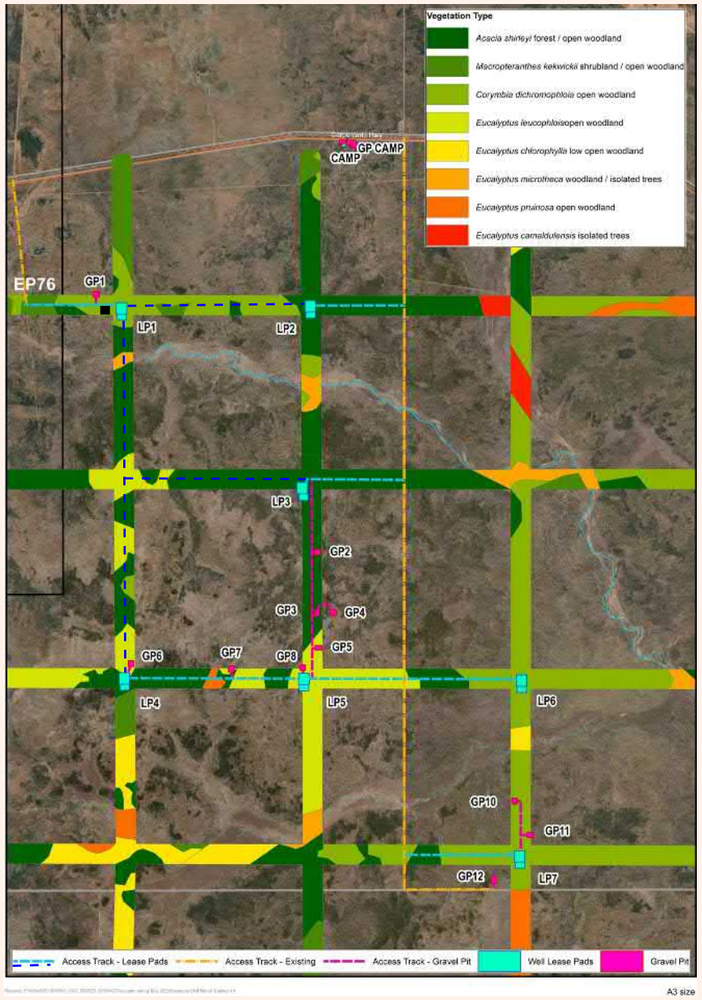
Civil Construction Gravel Pits — EP136

Rehabilitation Plan 2022/2025

Located: Tanumbirini Station

Location of EP136— Civil Construction Area, Tanumbirini Station	
Property land uses	Gas exploration and cattle grazing

Post Activity Rehabilitation Aim and Objectives	
Site management aim	The aim is to rehabilitate any part of the land affected by the Regulated Petroleum Activity to a safe condition consistent with industry standards and in consultation with Landholder.
Rehabilitation objectives	The rehabilitation objective is to provide a stable land form, which supports a resilient self-sustaining vegetation community that can withstand impacts including fire and cattle grazing and is safe to humans and wildlife, whilst utilising appropriate site infrastructure for ongoing pastoral activities (i.e. access tracks, water bores, fencing and laydown areas).



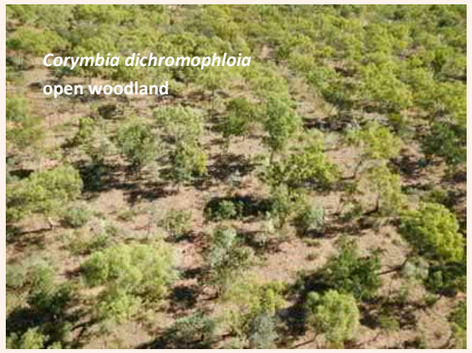
A3 size

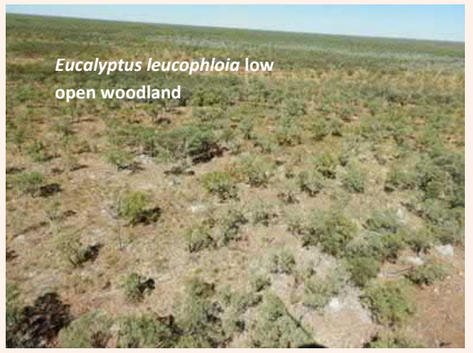
This Site Specific Rehabilitation Plan has been prepared for Sweetpea to remediate and rehabilitate following completion of the planned civil construction and water bore activities. This Plan should be read in conjunction with the Overarching *Environmental Management Plan and Emergency Response Plans* for Sweetpea's operations in the Beetaloo Basin.—Appendix L

Rehabilitation Officer	Contact Details	Name
	[redacted]	[redacted]

Site Environmental Summary

Vegetation community	Survey sites	Descriptions	Canopy cover (%)	Ground cover (%)
Corymbia dichromophloia open woodland	GP4, GP10	*Corymbia dichromophloia* +-*Erythrophleum chlorostachys* mid-high open woodland with +-*Terminalia canescens* mid-storey over *Triodia bitextura* hummock grassland or *Chrysopogon sp*. and *Schizachyrium fragile* tussock grassland	5-20	5-30
Eucalyptus leucophloia low open woodland	GP7, GP6, GP7, G12	*Eucalyptus leucophloia* and *Erythrophleum chlorostachys* mid-high open woodland over *Eulalia aurea* and *Sorghum timorense* tussock grassland	5-20	5-40
Corymbia dichromophloia and *Eucalyptus leucophloia* open woodland	GP1, GP2, GP3, GP5, GP8, GP11	*Corymbia dichromophloia* and *Eucalyptus leucophloia* mid high open woodland, over *Acacia wickhamii* low open shrubland and *Triodia bitextura* mid high open tussock grassland	5-20	5-30





Rehabilitation Strategy

Parameters	Methods	Objective
Vegetation	• Implement progressive rehabilitation in the first wet season following completion of gravel pit activities. • Implement rehabilitation of gravel pits upon cessation of use. • Disturbed areas to be allowed to naturally regenerate or revegetate on completion of Regulated Activity. • All compacted areas to be ripped and scarified to promote regeneration of vegetation, this may require assistance through spread of native seed stock. Where possible, native seed stock would be supplied by local Indigenous suppliers.	• Establish vegetation to be consistent to adjacent vegetation (species richness, cover and structure), unless agreement with landowner and Regulator for alternative use. • The type of ground cover applied to completed earthworks to be compatible with the anticipated long-term land use, environmental risk, and site rehabilitation measures.
Ground cover	• Previously removed vegetation and topsoil will be uniformly respread over disturbed area to assist with rehabilitation process through agencies of increased infiltration and return of seed-bearing topsoil, as well as reducing erosion. • If required, additional native seed mix from the area could be respread to speed up rehabilitation process.	
Landform stability	• All windrows are to be removed as soon as practicable.	

Rehabilitation Risks

Key Risks	Controls
Drought — impacting the establishment of rehabilitated vegetation	• Time rehabilitation actions to coincide with the beginning of the wet season, to ensure access to the site and maximise the establishment period of vegetation over the wet season • Re-spread topsoil across the site to utilise the local seed bank • Ongoing monitoring to identify if further seed inputs are required • Collection of seed from the local area to ensure seed stock is suited to the climatic conditions of the site.
Fire—impacting revegetation	• Establish a mix of perennial and annual grass species • Establish a mix of re-sprouter (eg. *Eucalypt spp*. and *Corymbia spp.*) and re-seeder species (eg. *Acacia spp*.) • Ongoing monitoring to determine fire impacts on revegetation. • Ongoing monitoring to determine if further seed inputs are required
Grazing —impacting revegetation	• Establish a mix of perennial and annual grass species • Re-spread timber with top soil • Ongoing monitoring to determine grazing impacts on revegetation. • Ongoing monitoring to determine if further seed inputs are required • Ongoing monitoring to determine if fencing is required
Exposed Ground — leading to an increase in weed establishment and/or erosion	• Remove windrows and topsoils • Respread of topsoil and vegetated matter across the site • Annual weed surveys of rehabilitated area once rehabilitation is established • Control of any weed incursions

Final Success Criteria

Canopy Cover (%)	• A minimum of 10-20% canopy cover for open woodland community. • It is noted that Eucalypt woodlands will recover faster than the Lancewood/Bullwaddy community, however should have signs of regrowth following rehabilitation and within 12-18 months after rainfall.
Ground Cover (%)	• Minimum 20% ground cover using locally available material including reserved topsoil/ cleared vegetation before the onset of the first wet season. • A minimum of 20% ground foliage cover and 30% diversity to be achieved within the first 12 months and maintained for at least 3 years following rehabilitation. Success will be dependent on minimised cattle movements and rainfall.
Erosion	• Less than 5 % erosion should be evident after the first 12 months and no subsidence or erosion should be evident for at least 5 years after completion.
Weeds	• No establishment of weed species declared under the Northern Territory Weeds Management Act.
Hazardous materials and waste	• All hazardous material and waste removed from site upon completion of works to licensed landfill facilities or recycling facilities.
Safety for humans and wildlife	• Rehabilitation of disturbance areas should be similar in landform to the surrounding area. No steep slopes or barriers to remain on site that endanger either wildlife or humans • Removal of all surface facilities including fencing (star pickets/fencing wire)

Monitoring Program and Schedule

Rehabilitation Stage	Timing	Method	Measurable attributes
Preliminary Assessment	6 to 9 Months post rehabilitation, end of wet season survey (February to June).	• Establish 11 permanent 100m x 4m woody species transects (one per gravel pit), with photo monitoring point/s, include 2 analogue sites in nearby undisturbed vegetation community. • Collect 1 x 1 m ground cover quadrats every 10 m along transect. • Transects to be randomly selected with start and end marked with star picket.	Measurable attributes compared with analogue sites. • Indication of seed germination and plant establishment rates. • Vegetation cover (species and abundance). • Land condition (e.g. erosion canopy cover, ground cover, habitat quality). • Weed presence (species and density). • Disturbance (fire and feral animal/cattle) • Incidental observations from surrounding area.
Early Rehabilitation	Years 1, 2 and 3 post rehabilitation, end of wet season survey (February to June).	• Monitoring to be undertaken using permanent transects. • Collect data as per preliminary methods. • Compare results from previous assessment to determine if require additional management inputs (i.e. seeding, stabilisation). • Review success criteria.	• Early assessment of rehabilitation will determine attributes of woody plants in each 100m x 4m transect. • Including assessment of species, Diameter at Breast Height (DBH) (>1.5cm) and height (>2m), in addition to parameters described within the preliminary assessment.
Long-Term Rehabilitation	Annually until final success criteria has been met, end of wet season survey (February to June).	• Monitoring to be undertaken using permanent transects. • Collect data as per preliminary methods. • Compare results from previous assessment to determine if require additional management inputs (i.e. seeding, stabilisation). • Review success criteria.	• Long-term assessment will determine establishment, recruitment and growth rate attributes of plant species, in addition to parameters described during Early Rehabilitation stage.

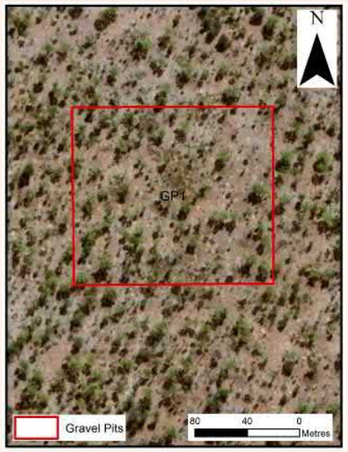
Civil Construction Gravel Pits — EP136

Rehabilitation Plan 2022/2025

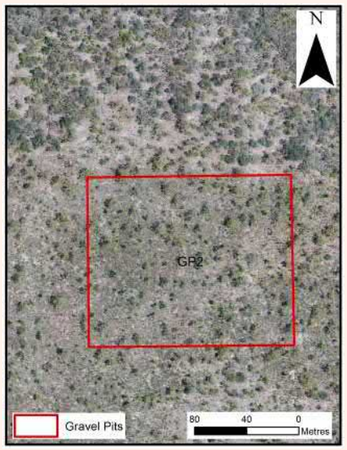
Located: Tanumbirini Station

Pre-Disturbance Imagery of each Proposed Gravel Pit Area and Accommodation Camp Area

Gravel Pit 1
(Imagery: HiResSat, 0.75m Pixels, Aug 2019)



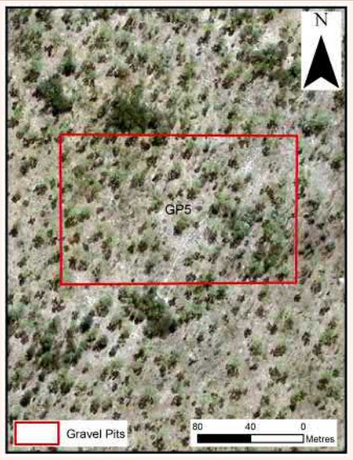
Gravel Pit 2
(Imagery: Drone Captured, 2.75cm Pixels, Nov 2020)



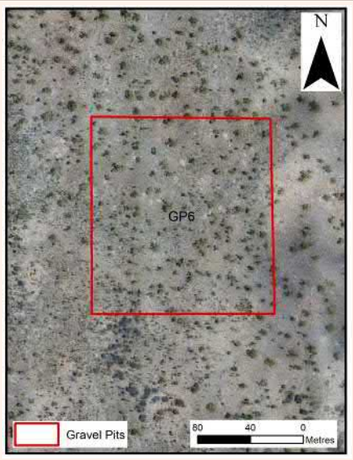
Gravel Pit 3
(Imagery: Drone Captured, 2.75cm Pixels, Nov 2020)

Gravel Pit 4
(Imagery: Drone Captured, 2.75cm Pixels, Nov 2020)

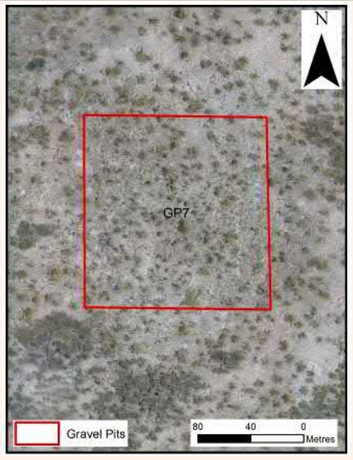
Gravel Pit 5
(Imagery: HiResSat, 0.75m Pixels, Aug 2019)



Gravel Pit 6
(Imagery: Drone Captured, 2.75cm Pixels, Nov 2020)



Gravel Pit 7
(Imagery: Drone Captured, 2.75cm Pixels, Nov 2020)



Gravel Pit 8
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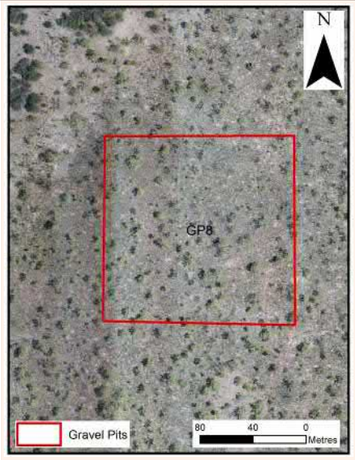
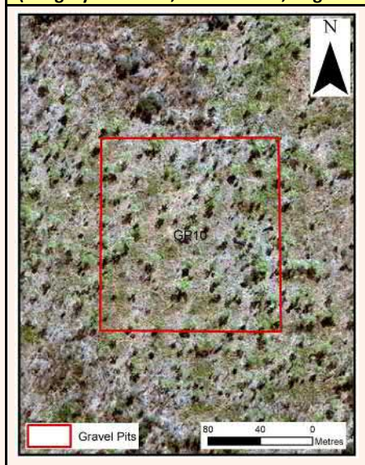


Gravel Pit 10
(Imagery: HiResSat, 0.75m Pixels, Aug 2019)



Gravel Pit 11
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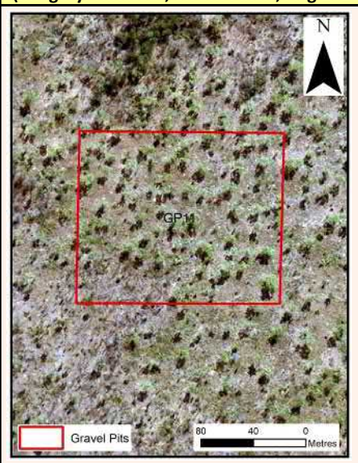
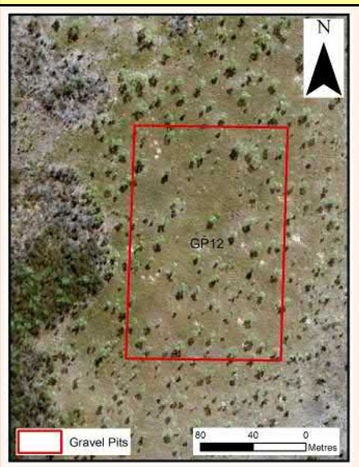


Gravel Pit 12
(Imagery: HiResSat, 0.75m Pixels, Aug 2019)



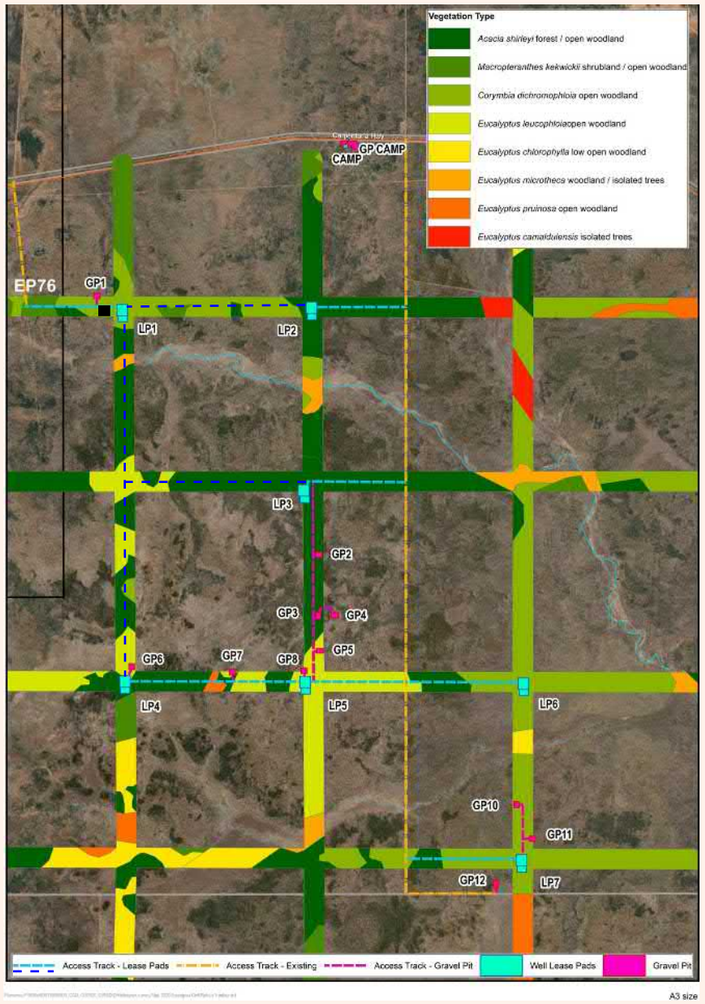
Civil Construction Access Tracks — EP136

Rehabilitation Plan 2022-2025

Located: Tanumbirini Station

Location of EP136—Civil Construction Area Tanumbirini Station	
Property land uses	Gas exploration and cattle grazing

Post Activity Rehabilitation Aim and Objectives	
Site management aim	The aim is to rehabilitate any part of the land affected by the Regulated Petroleum Activity to a safe condition consistent with industry standards and in consultation with Landholder. Existing tracks utilised for seismic surveys on Beetaloo Station are to be reinstated to a safe trafficable condition.
Rehabilitation objectives	The rehabilitation objective is to provide a stable land form, which supports a resilient self-sustaining vegetation community that can withstand impacts including fire and cattle grazing and is safe to humans and wildlife, whilst utilising appropriate site infrastructure for ongoing pastoral activities (i.e. access tracks, water bores, fencing and laydown areas).



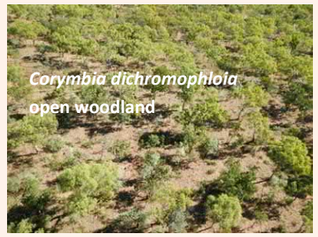
A3 size

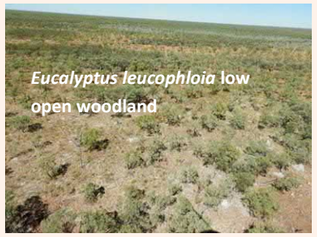
This Site Specific Rehabilitation Plan has been prepared for Sweetpea to remediate and rehabilitate following completion of the planned civil construction and water bore activities. This Plan should be read in conjunction with the Overarching *Environmental Management Plan and Emergency Response Plans* for Sweetpea's operations in the Beetaloo Basin.—Appendix L

Rehabilitation Officer	Contact Details	Name
	[redacted]	[redacted]

Site Environmental Summary

Vegetation Community	Survey sites	Descriptions	Canopy cover (%)	Ground cover (%)
Corymbia dichromophloia open woodland	LP1, LP3alt, LP5new, LP7, GP4, GP10,	*Corymbia dichromophloia* +-*Erythrophleum chlorostachys* mid-high open woodland with +-*Terminalia canescens* mid-storey over *Triodia bitextura* hummock grassland or *Chrysopogon sp*. and *Schizachyrium fragile* tussock grassland	5-20	5-30
Eucalyptus leucophloia low open woodland	GP7, GP6, GP7, G12	*Eucalyptus leucophloia* and *Erythrophleum chlorostachys* mid-high open woodland over *Eulalia aurea* and *Sorghum timorense* tussock grassland	5-20	5-40
Corymbia dichromophloia and *Eucalyptus leucophloia* open woodland	GP1, GP2, GP3, GP5, GP8, GP11	*Corymbia dichromophloia* and *Eucalyptus leucophloia* mid high open woodland, over *Acacia wickhamii* low open shrubland and *Triodia bitextura* mid high open tussock grassland	5-20	5-30
Acacia shirleyi open forest	LP2, LP4, LP6	*Acacia shirleyi* open woodland with *Macropteranthes kekwickii* mid-storey over *Chrysopogon fallax* (mixed) tussock grassland	50-80	5
Eucalyptus pruinosa open woodland	1, 4	Eucalyptus pruinosa low open woodland over *Dichanthium sp*. (mixed low open tussock grassland	5-20	5-10





Rehabilitation Strategy

Parameters	Methods	Objective
Vegetation	• Implement progressive rehabilitation of access track within 12 months upon completion of petroleum activities. • Disturbed areas to be allowed to naturally regenerate or revegetate on completion of Regulated Activity. • All compacted areas to be ripped and scarified to promote regeneration of vegetation, this may require assistance through spread of native seed stock. Where possible, native seed stock would be supplied by local Indigenous suppliers.	• Establish vegetation to be consistent to adjacent vegetation (species richness, cover and structure), unless agreement with landowner and Regulator for alternative use. • The type of ground cover applied to completed earthworks to be compatible with the anticipated long-term land use, environmental risk, and site rehabilitation measures.
Ground cover	• Previously removed vegetation and topsoil will be uniformly respread over disturbed area to assist with rehabilitation process through agencies of increased infiltration and return of seed-bearing topsoil, as well as reducing erosion. • If required, additional native seed mix from the area could be respread to speed up rehabilitation process.	
Landform stability	• All windrows are to be removed as soon as practicable.	

Rehabilitation Risks

Key Risks	Controls
Drought — impacting the establishment of rehabilitated vegetation	• Time rehabilitation actions to coincide with the beginning of the wet season, to ensure access to the site and maximise the establishment period of vegetation over the wet season • Re-spread topsoil across the site to utilise the local seed bank • Ongoing monitoring to identify if further seed inputs are required • Collection of seed from the local area to ensure seed stock is suited to the climatic conditions of the site.
Fire—impacting revegetation	• Establish a mix of perennial and annual grass species • Establish a mix of re-sprouter (eg. *Eucalypt spp*. and *Corymbia spp.*) and re-seeder species (eg. *Acacia spp*.) • Ongoing monitoring to determine fire impacts on revegetation. • Ongoing monitoring to determine if further seed inputs are required
Grazing —impacting revegetation	• Establish a mix of perennial and annual grass species • Re-spread timber with top soil • Ongoing monitoring to determine grazing impacts on revegetation. • Ongoing monitoring to determine if further seed inputs are required • Ongoing monitoring to determine if fencing is required
Exposed Ground — leading to an increase in weed establishment and/or erosion	• Remove windrows and topsoils • Respread of topsoil and vegetated matter across the site • Annual weed surveys of rehabilitated area once rehabilitation is established • Control of any weed incursions

Final Success Criteria

Canopy Cover (%)	• A minimum of 10-20% canopy cover for open woodland community. • It is noted that Eucalypt woodlands will recover faster than the Lancewood/Bullwaddy community, however should have signs of regrowth following rehabilitation and within 12-18 months after rainfall.
Ground Cover (%)	• Minimum 20% ground cover using locally available material including reserved topsoil/ cleared vegetation before the onset of the first wet season. • A minimum of 20% ground foliage cover and 30% diversity to be achieved within the first 12 months and maintained for at least 3 years following rehabilitation. Success will be dependent on minimised cattle movements and rainfall.
Creek Crossings	• All existing access track creek crossings will be maintained to the original condition.
Erosion	• Less than 5 % erosion should be evident after the first 12 months and no subsidence or erosion should be evident for at least 5 years after completion.
Weeds	• No establishment of weed species declared under the Northern Territory Weeds Management Act.
Hazardous materials and waste	• All hazardous material and waste removed from site upon completion of works to licensed landfill facilities or recycling facilities.
Safety for humans and wildlife	• Rehabilitation of disturbance areas should be similar in landform to the surrounding area. No steep slopes or barriers to remain on site that endanger either wildlife or humans • Removal of all surface facilities including fencing (star pickets/fencing wire)

Monitoring Program and Schedule

Rehabilitation Stage	Timing	Method	Measurable attributes
Preliminary Assessment	6 to 9 Months post rehabilitation, end of wet season survey (February to June).	• Establish 14 permanent 100m x 4m woody species transects (1 per 2 km of access track) with photo monitoring point/s, include 2 analogue sites in nearby undisturbed vegetation community. • Collect 1 x 1 m ground cover quadrats every 10 m along transect. • Transects to be randomly selected with start and end marked with star picket.	Measurable attributes compared with analogue sites. • Indication of seed germination and plant establishment rates. • Vegetation cover (species and abundance). • Land condition (e.g. erosion canopy cover, ground cover, habitat quality). • Weed presence (species and density). • Disturbance (fire and feral animal/cattle) • Incidental observations from surrounding area.
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Long-Term Rehabilitation	Annually until final success criteria has been met, end of wet season survey (February to June).	• Monitoring to be undertaken using permanent transects. • Collect data as per preliminary methods. • Compare results from previous assessment to determine if require additional management inputs (i.e. seeding, stabilisation). • Review success criteria.	• Long-term assessment will determine establishment, recruitment and growth rate attributes of plant species, in addition to parameters described during Early Rehabilitation stage.

Appendix G

EP136 Project Operations Health and Safety Management Plan

Appendix G EP136 Project Operations Health and Safety Management Plan

EP 136 Well Operations

HEALTH AND SAFETY MANAGEMENT PLAN

TAMBORAN RESOURCES INTEGRATED MANAGEMENT SYSTEM		
DOCUMENT TITLE:	EP 136 Project Operations Health and Safety Management Plan	
DOCUMENT NO:	SPP-HSE-PL-10	REVISION NO: B
DOCUMENT CUSTODIAN:	Project Manager	REVISION DATE: 16-12-20

Revision

Revision No.	Revised By	Revision Justification	Revision Date
A	Nick Merdith	Draft issued for review	16/11/2020
B	Nick Merdith	Issued for inclusion in Civils EMP pre-approval review	16/12/2020

Document Approval

APPROVALS	Responsibility	Signed
Approved	Ensure this document is consistent with the Project objectives, compliant with regulation and provides a clear overview of the management systems and processes under which the Project will be executed.	_____ Mark Jenkins Project Manager
CONCURRENCE	**Responsibility**	**Signed**
Accepted	As the ultimate owner of the Project and this Project Health, Safety and Environment Management Plan.	_____ Erik Vik VP Operations & Engineering

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- when there is a significant change to the applicable Legislation;
- when there is a significant change in the systems and processes under which operations are conducted;
- if it becomes technically out-dated;
- if it is unable to provide the level of assurance required to safeguard the safety and health of personnel including employees, contractors or visitors, or sound environmental practices;
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Site Manager	Tamboran (Sweetpea Petroleum)
General Manager	[HOLD – Lead Contractor]
Senior Site Supervisor	[HOLD – Lead Contractor]

Abbreviations and Definitions

Acronym/Word	Meaning
Activity	Each of the discrete operations of the Project • Water bore drilling • Civil works for construction of well pads, accommodation camp and access roads • Drilling • Hydraulic fracture stimulation • Well testing • Well completion and suspension
ALARP	As low as reasonably practicable. Broadly synonymous with “So Far As Is Reasonably Practicable”
EMP	Environment Management Plan
ERCL	Emergency Response Contact List
ERIP	Emergency Response Interface Plan
ERP	Emergency Response Plan (Lead Contractor document)
HAZID	Hazard identification [workshop]
HSMP	Health and Safety Management Plan (this document)
HSEMS	Health, Safety and Environment Management System
Lead Contractor	The contractor whose HSEMS will be in force at the Project Site for the relevant Activity
MAE	Major accident event
Project	The planning, preparation, execution and close out of exploration Activities for EP136 in the Beetaloo Sub-Basin

Acronym/Word	Meaning
Project Team	All personnel, whether TRL/SPP or their contractors and consultants, involved in the delivery of the Project.
Site	Location(s) at which the Project operations are being undertaken.
TRL	Tamboran Resources Limited (parent company of Sweetpea Petroleum)

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1. INTRODUCTION

1.1. Project Overview

Sweetpea Petroleum Pty Ltd (Sweetpea), a wholly owned subsidiary of Tamboran Resources Limited (TRL), holds acreage in the highly prospective Beetaloo / McArthur Basin which is located in the Northern Territory.

Sweetpea is the title holder for EP136 in the Beetaloo Sub-Basin and plans to conduct a series of exploration activities in the Permit. The northern section of EP136, and proposed area of exploration activities, is approximately 730 km by road southeast of Darwin. See Figure 1.

The Project includes the planning, preparation, execution and close out of the following Activities:

- Drilling groundwater monitoring bores
- Civil works for construction of well pads, accommodation camp and access roads
- Drilling
- Hydraulic fracture stimulation
- Well testing
- Well completion and suspension
- Well maintenance, inspection and monitoring

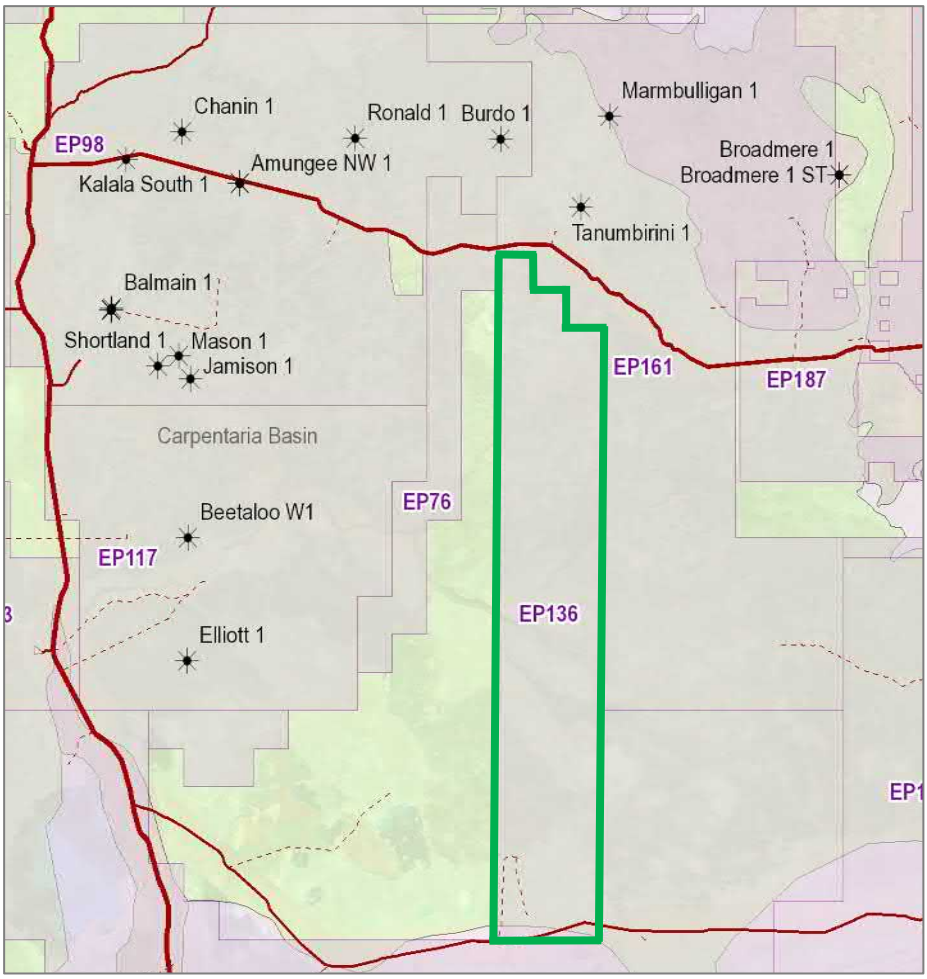

Figure 1. EP 136 Permit Area

1.2. Objectives

This Health and Safety Management Plan (HSMP) describes the Project specific implementation of TRL's HSE Management System (HSEMS).

1.3. Scope

This HSMP applies to all Project activities as described above.

1.4. Key HSE Documents

The key project HSE documents are:

- This HSMP
- Environment Management Plan (EMP) and associated Spill Management Plan for each respective Activity
- Emergency Response Interface Plan (ERIP) for each respective Activity / Lead Contractor
- Project HSE Management Plan for each respective Activity / Lead Contractor
- Project ERP for each respective Activity / Lead Contractor

2. TRL HSE MANAGEMENT SYSTEM

2.1. Elements

The HSEMS format is based on the requirements of AS/NZS ISO 45001:2018 *Occupational health and safety management systems – Requirements with guidance for use* and is built around 6 elements and 20 sub-elements (Figure 2).

Figure 2. HSEMS Elements

2.2. HSE Document Hierarchy

Policies are written by senior management a define the general direction and aims of the HSEMS.

The **HSEMS Manual** describes the scope of the HSEMS, the elements, and the intent, the performance requirements and supporting documentation for each element.

Standards describe the mandatory requirements that apply across all the Company's activities.

Procedures describe key processes and how they are applied. Procedures must be followed unless an alternative procedure is agreed to in a project specific plan.

Forms, registers, records and templates support the elements and procedures, including providing documented evidence of compliance.

Project specific plans describe the implementation of the HSEMS at a project level.

3. LIFE SAVING RULES

Sweetpea apply the IOGP Life Saving Rules (Figure 3) as non-negotiable conditions of work.

Work must not start unless the Rules can be followed.

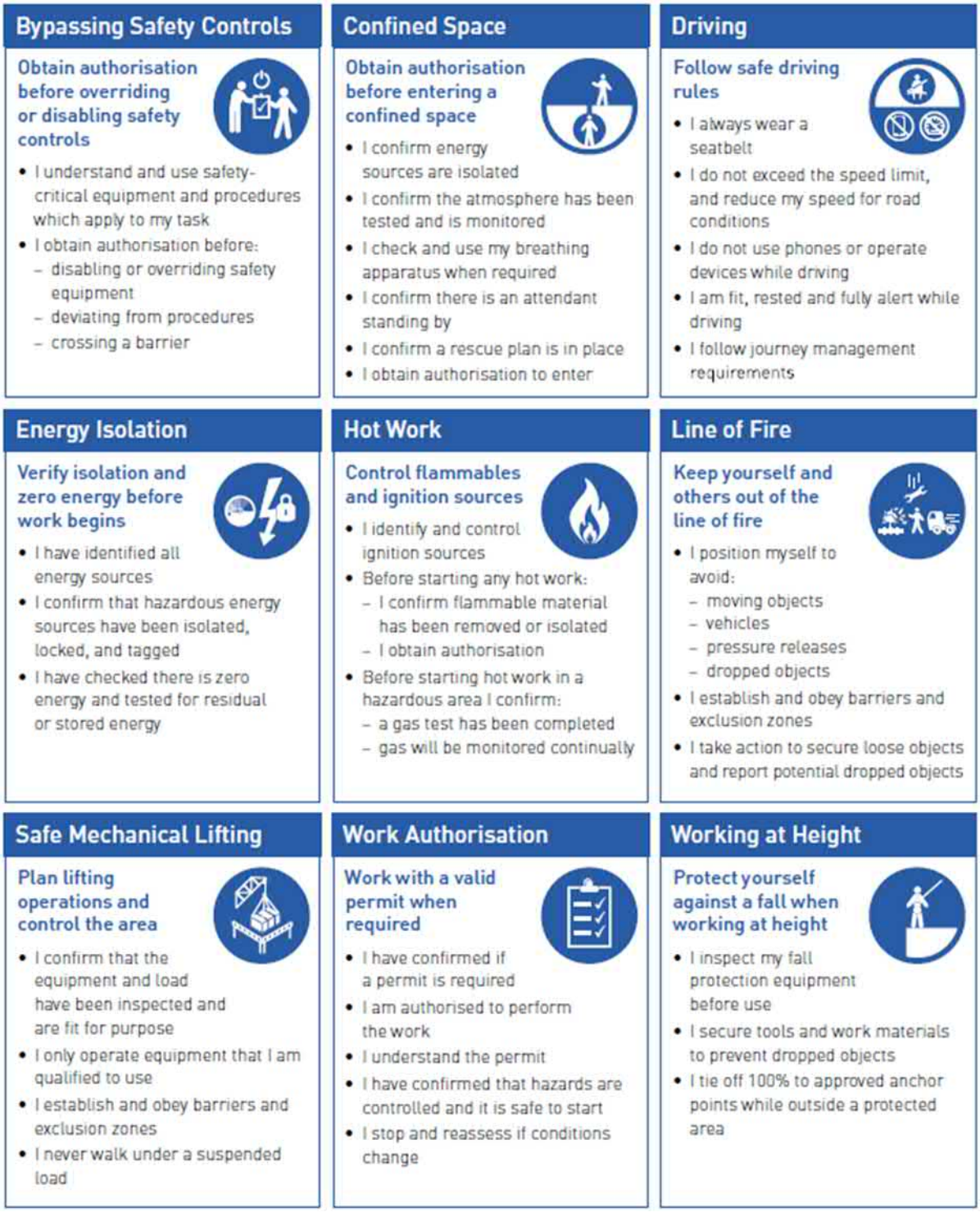

Figure 3. Life Saving Rules

4. STOP WORK AUTHORITY

All personnel have the authority to stop if they believe it is unsafe to proceed. The stop work will be reported to and recorded by the supervisor. Work can only resume when all involved parties have assessed the situation and identified appropriate controls to a level that is both acceptable and ALARP.

5. PROJECT HSE KEY PERFORMANCE INDICATORS

The Project has the following HSE objectives:

- Everybody returns home safe
- The impact to the environment of our activities is minimised
- Senior management demonstrate proactive HSE leadership and commitment which supports a strong safety culture
- All personnel, by means of their actions and attitudes, demonstrate safety leadership
- All HSE risks are reduced to as low as reasonably practicable and the effectiveness of controls is monitored
- Effective consultation and communication takes place with contractors and other interested parties
- Resources are available to ensure that work is carried out safely
- All incidents and near misses are reported

To achieve these objectives the following KPIs (Table1) are to be implemented.

Table 1. Project KPIs

Performance Indicator	Measure	Target
Personnel on Site to undergo Project and Site Inductions	Induction Records	100%
Corrective actions closed out by due date	Due date	90%
Incidents reported in timely manner and in accordance with Section 22 of this HSMP	Incident Reports	100%
Weekly Safety Meetings are held over course of Activity	Minutes of meetings held and attendance register	100%
Emergency Response Drills	Records of drills performed	100%
HSE Performance is tracked over course of Activity	Weekly HSE Scorecard issued to Project Team by HSE Advisor	100%

6. HSE ORGANISATION

The Project Organisation Chart (Figure 4) describes the HSE lines of communication within the project and with Lead Contractors.

HSE responsibilities of key project positions are described in Table 2.

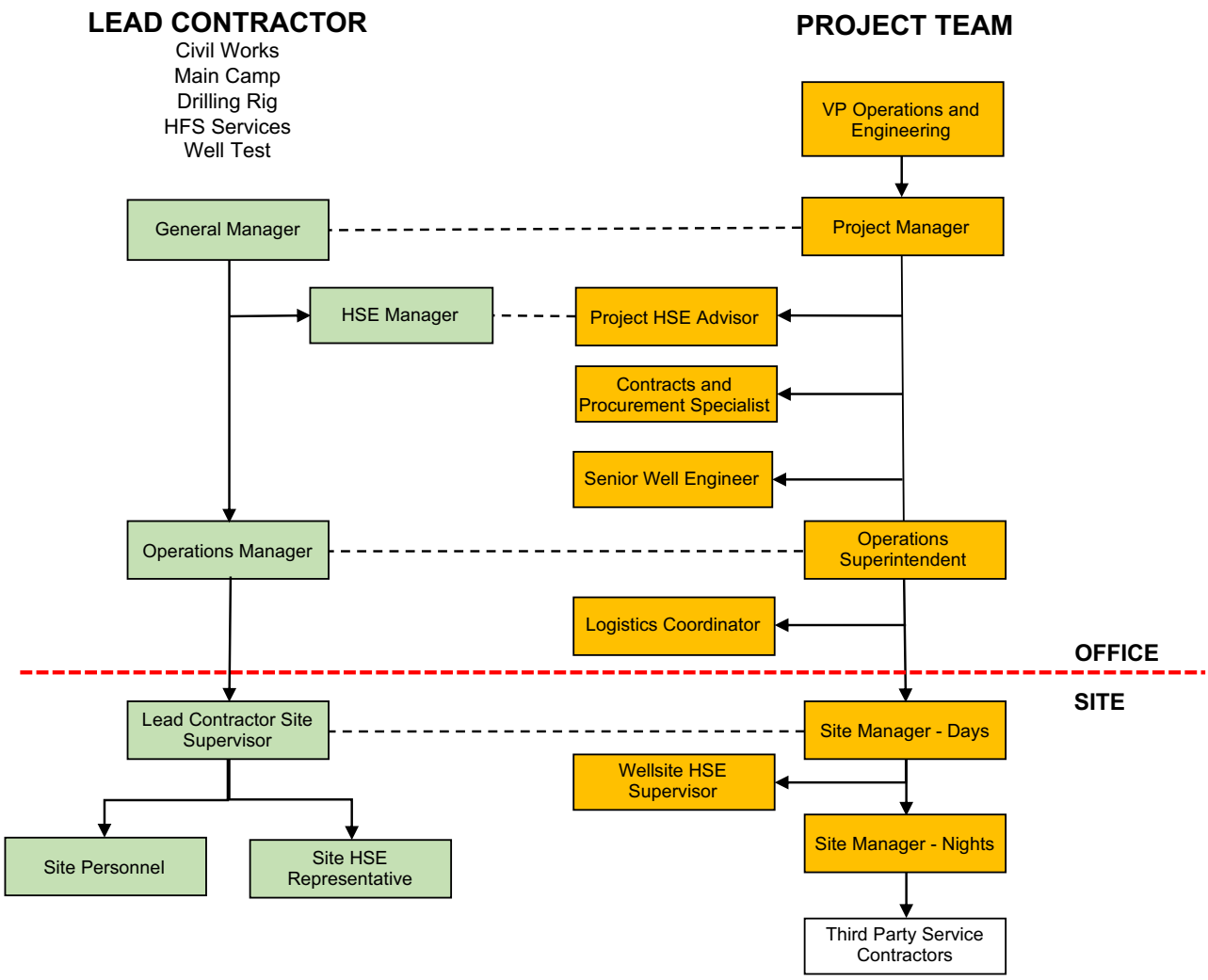

Figure 4. Project organisation chart.

(Some positions will not apply through all activity phases)

Table 2. HSE roles and responsibilities

Roles	HSE Responsibilities
Project Manager	• Demonstrate HSE leadership and support continual improvement in HSE performance. • Ensure appropriate HSE management systems are in place to meet regulatory requirements and TRL standards. • Complete a hazard identification and risk assessment for each Activity • Review all risks ranked as high • Ensure all actions identified to reduce MAE risks to ALARP are implemented. • Ensure the required regulatory approvals for HSE management are obtained prior to commencement of the Activity. • Approve Project Plans • Ensure adequate resources are available to manage the work in accordance with this HSMP • Contracting acceptable service providers • Planning and scheduling activities
Operations Superintendent	• Ensure the effective implementation of this HSMP and the EMP during the Activity • Ensure the conduct of effective emergency planning and preparedness at the site/s through drills and performance reviews • Monitor and assess HSE performance of contractors • Ensure that appropriate communications are in place between Sweetpea and local stakeholders, keeping them informed of Project issues and developments that may affect their activities
Project HSE Advisor	• Provide HSE support to the Project Manager and Project team members • Develop and maintain this HSMP • Develop and maintain the Emergency Response Interface Plan • Review contractor HSE acceptance criteria • Conduct HSE audits • Facilitate HAZID Workshop and maintain Hazard Register • Manage Project Inductions • Manage Corrective Action Register • Manage Commitments Register • Provide support for incident investigations as required • Monitor and report on HSE performance

Roles	HSE Responsibilities
Site Manager	• Monitor effective implementation of the well / activity specific management plans • Implement the requirements of the Well Management Plan • Maintain communications between site and the Project Team • Provide reports and daily updates on HSE performance • Ensure environmental procedures as described in the approved Environment Management Plan are applied through all aspects of the Activity • Support effective management of incidents on site and report all incidents to TRL management
Lead Contractor's Senior Site Supervisor	• Will be the person in charge (PIC) on site handover • Will act as the on-scene commander (OSC) during an emergency • Ensure all relevant aspects of the Lead Contractor's HSEMS are implemented at the Site • Ensure the requirements of this HSMP, the approved EMP and ERP are met on Site • Ensure a Site induction is provided to all personnel working on Site prior to commencing work • Provide daily reports and updates to TRL in accordance with reporting requirements
Wellsite HSE Supervisor	• Perform regular reviews / inspections to ensure compliance with Project HSE commitments • Maintain Project HSE information, including registers and statistics • Ensure compliance with the EMP • Participate in incident investigations as required • Prepare daily HSE report

7. OPERATIONAL CONTROL

7.1. Site Handover

Sweetpea will hand the site over to the Lead Contractor prior to the start of an Activity. Site handover is via formal acknowledgement by both parties and signing of the site handover form.

Following completion of the Activity, the site will be formally handed back to Sweetpea.

7.2. HSEMS in Force

The Lead Contractor's HSEMS will be in-force on site following site handover. The Lead Contractor will develop an Activity specific HSE Management Plan which will include a description of how they will meet the requirements of this plan.

7.3. Person in Charge

The Lead Contractor's senior supervisor is the person in charge (PIC) during normal operations and emergencies. This will be communicated at inductions and their name will be posted on site.

8. RISK MANAGEMENT

8.1. HAZID Workshops

A HAZID workshop will be conducted prior to operations for each Activity.

The HAZID workshop will be attended by representatives of the TRL/ Sweetpea Project Team, the Lead Contractor's management team, key third party contractors and members of the workforce. Records of attendance for each workshop will be maintained. Note that, due to COVID-19 travel restrictions, the HAZID may be conducted as an online virtual workshop.

The HAZID Workshop will be conducted in accordance with the TRL Risk Management Procedure.

8.2. Hazard Register

The output of the HAZID workshops will be recorded in the Hazard Register which will remain a live document throughout the project.

8.3. Risk Matrix

The Risk Matrix (Table 3) defines the consequence and likelihood categories, provides a qualitative risk ranking to guide management decisions and a means to prioritise ongoing risk management activities.

The likelihood categories are based on continuous similar operations conducted by Sweetpea / TRL.

The risk decision table (Table 4) describes the action required based on the level of assessed risk.

Table 3. Risk Matrix

						LIKELIHOOD				
						Highly Unlikely	**Unlikely**	**Possible**	**Likely**	**Highly likely**
						May occur in extreme cases	Has occurred a few times in the industry	Has occurred many times in the industry but not in the company	Has occurred a few times in the company	Has occurred frequently in the company
		Health & Safety	**Environment**	**Reputation / Socioeconomic**	**Equipment/Operations**	1000+ years	100+ years	10+ years	years	Months[1]
CONSEQUENCES	**Negligible**	Minor health or injury effect requiring first aid	Localised[2] temporary[3] change to one or more ecosystems or individual species' / local populations. Alteration / disturbance within the limits of natural variability.	Little internal or external attention	Minor equipment damage or operational delay					
	Minor	Medical treatment or restricted duties	Widespread[4] temporary change to one or more ecosystems or individual species' / local populations. Localised short-term[5] impact to one or more listed[6] ecosystems or species' populations.	Workforce concern. Minor internal disruption. Limited community impact or interest. Reportable to Regulatory Authorities.	Damage to equipment requiring minor remedial repair. Minor loss of function / production					
	Moderate	Lost time injury Reportable accident/ dangerous occurrence	Localised long-term[7] impact to one or more listed ecosystems or species' populations. Widespread short-term impact to one or more listed ecosystems or species' populations.	Internal disruption that could require outside help to manage. Local community discussion. Adverse local or financial publicity.	Localised damage to equipment requiring extensive repair. Significant loss of function / production. Reportable well kick. Damaged safety critical equipment					
	Major	Single fatality Severe permanent disability	Widespread long-term impact to one or more listed ecosystems or species' populations. Recovery period measured in years decades.	Serious internal disruption adversely affecting ongoing business and requiring external help to manage. National media interest. Adverse shareholder and broker reaction – lawsuits possible	Damage to equipment resulting in operations / production shutdown. Significant production loss					
	Catastrophic	Multiple fatalities MAE	Regional scale[8] impact, Irreversible alteration to one or more listed ecosystems or species' population.	Very serious business disruption and impact on company operations. International public concern and adverse attention in international media, Adverse publicity and heavy selling pressure. Litigation almost certain.	Damage to equipment resulting in operations / production being suspended for significant period / terminated. Well blowout					

[1] Based on similar continuous activity

[2] Localised = "onsite" within the boundary of the facility

[3] Temporary = a number of days, recovery expected to be a standard activity and effective

[4] Widespread = "offsite" or an impact expected to occur outside of the immediate worksite

[5] Short-term = Months to <2 years

[6] Listed = A species or ecosystem specifically listed as a priority or threated species under state and commonwealth legislation

[7] Long-term = >2 years but is recoverable or expected to recover in the long term

[8] Regional scale = An impact that is expected for the full extent of an ecosystem or species range

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Table 4. Risk decision

Residual Risk Rank	Action
Extreme	Work cannot proceed under any circumstances
High	May only proceed after management review and with approval of General Manager It must be demonstrated that this level of risk is ALARP
Moderate	Work can progress where the risk is demonstrated as ALARP
Low	Generally managed through continual improvement

8.4. MAEs

Major Accident Events (MAEs) are events that may result in multiple fatalities or would otherwise be identified as having catastrophic consequences on the risk matrix, regardless of the assessed likelihood, and are identified at the HAZID stage. Although some MAEs are activity specific and will be dealt with at the HAZID stage, several MAEs apply across all Activities and are listed in Table 5.

Table 5. Major accident events

No.	MAE	Description	Controls (assumes standard mitigation controls such as ERP processes, 1st aid, RFDS)
MAE-01	Motor vehicle accident	An accident involving a light vehicle (car, ute or 4WDs) on public roads or access roads. Assumption is that vehicle is carrying passengers or accident involves other road users.	Daily pre-start BAC test JMP - rest breaks every 2 hours Daylight driving only Headlights on Drivers to hold current Australian driver's licence – no provisional licences No mobile phone use while driving Drive to conditions Pre-start visual checks Project vehicles serviced per manufacturer's guidelines Rental vehicles provided with completed checklist
MAE-02	Dropped load during transit causing vehicle accident	A load (equipment and/or freight) is lost on a public road resulting in an accident involving other road users.	Training in load restraint Australian Load Restraint Guide Frequent stops to check the load and ensure adequate load restraint taking road conditions into account Use fit for purpose restraint equipment

No.	MAE	Description	Controls (assumes standard mitigation controls such as ERP processes, 1st aid, RFDS)
MAE-03	Bushfire - people	A bushfire traps personnel on site or on road.	Bushfire Management Plan Fire break including 40 m low fuel zone around site and camp area Radios/Sat phones in vehicles Smoke detectors in rooms (camp / offices) Bushfire alerts and warnings monitored Limit fuel sources through good housekeeping and waste management Induction training includes actions if caught in vehicle in bushfire Shelter in place if no safe route out Fire extinguishers and mobile fire cart for localised fire-fighting on site
MAE-04	Bushfire – environment	An operation associated with the project provides an ignition source for a bushfire.	Bushfire Management Plan Hot works are not permitted on total fire ban days without written approval from a fire control officer Fire break including 40 m low fuel zone around site and camp area Limit fuel sources through good housekeeping and waste management Designated smoking areas Driving through long dry grass is to be avoided Vehicles and equipment are fitted with spark arrestors Fire extinguishers to be fitted to all project vehicles and mobile plant Tested and tagged equipment Electrical register Smoke detectors in rooms (camp / offices) Fire extinguishers and mobile fire cart for localised fire-fighting on site Fire management planning meeting with neighbouring properties prior to commencing exploration activities

No.	MAE	Description	Controls (assumes standard mitigation controls such as ERP processes, 1st aid, RFDS)
MAE-05	Gas release from pipeline and subsequent explosion and fire	McArthur River Mine (MRM) [gas] Pipeline, managed by ODS Pipelines, follows the south side of the Carpentaria Hwy. Project traffic must pass over the pipeline to enter the site. Damage to pipeline may lead to gas release	Survey shows location of pipeline 25 mm steel plate at truck crossings No parking or laydown in pipeline easement Camp and office buildings must be 300 m from pipeline
MAE-06	Camp fire		*To be updated following HAZID*
MAE-07	Loss of well control		*To be updated following HAZID*

8.5. ALARP Assessment

Each MAE is assessed further to ensure appropriate controls are in place to reduce the risk to ALARP based on Risk Related Decision Making Framework – OGUK Guidance on Risk Related Decision Making (Figure 5).

The ALARP assessment will be generally based on good practice according to the following project context:

- Type of activity
  - Well understood
  - Nothing new or unusual
  - Good practice is well defined
- Risk and uncertainty
  - Risk are well understood
  - Uncertainty is minimal
- Stakeholder influence
  - No conflict with company values
  - No significant media interest

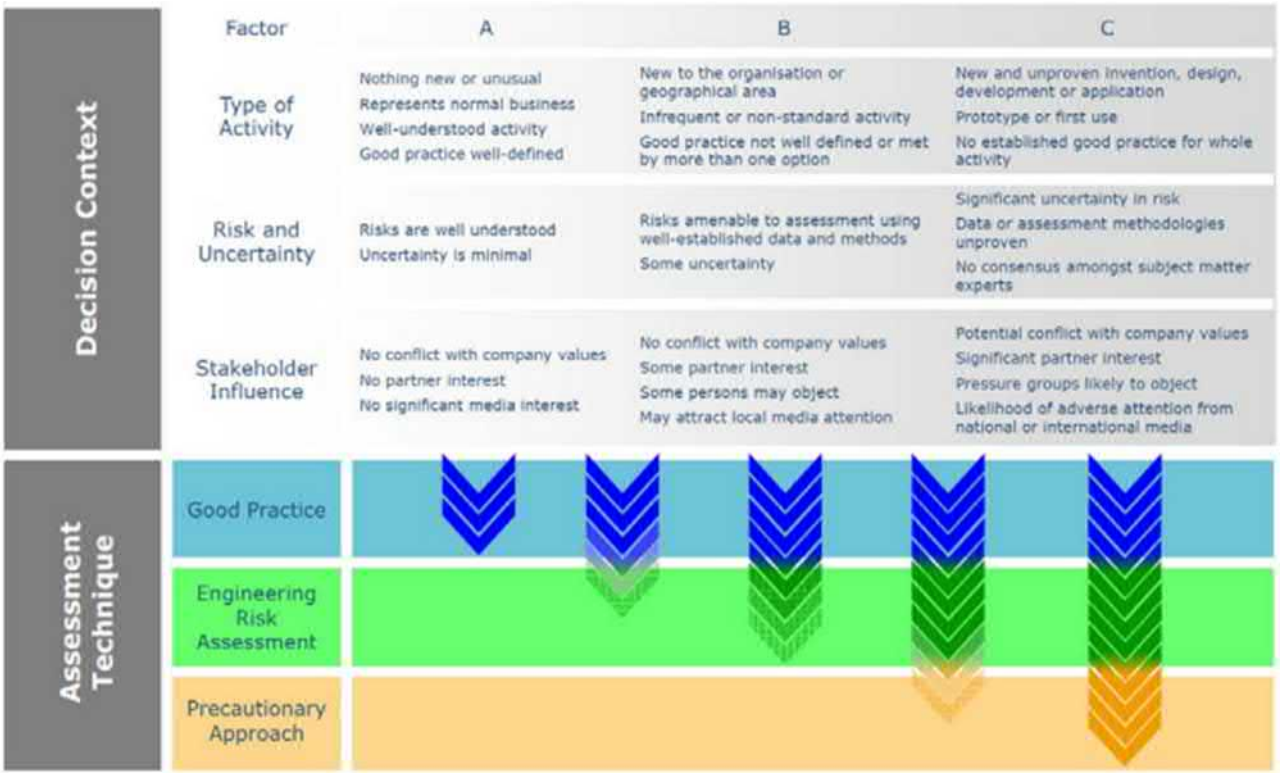

Figure 5. Risk Related Decision Making Framework (OGUK, 2014)

9. MANAGEMENT OF CHANGE

Changes to regulatory approved programs, key contractors or key Project Team personnel, or temporary changes to a commitment made under a permissioning document will be managed under the TRL Management of Change Procedure.

For changes to site equipment or procedures the Lead Contractor's management of change procedure applies.

In both cases the result of the MoC must be shared with the other party.

10. CONTRACTOR HSE MANAGEMENT

The TRL Contractor HSE Management Procedure describes the process for selecting and managing contractors.

As a key part of implementing the contractor management process, each contractor's HSEMS will be subject to documented review or pre-operational audit via the Contractor HSE Capability Assessment Questionnaire.

Contractors will submit an Activity specific HSEMP, unless granted an exemption by the Project Manager, describing the key aspects or how HSE will be managed for the contractor's scope of work.

11. CONSULTATION AND COMMUNICATION

Consultation on HSE issues and communication of HSE information is essential to the safe execution of the project. The following will be used to ensure effective consultation and communication:

- HAZID Workshop – attendance by project team and representatives of contractor management and workforce
- DWOP, TWO workshops
- Pre-start / pre-spud meetings on site
- After action reviews
- Project and site inductions
- Management visits
- Morning calls during well activities (eg. drilling, HFS and well testing) – HSE issues will be the first agenda item
- Pre-tour and tool-box meeting
- JSAs
- Weekly HSE Meetings
- Safety Committee (where applicable)
- Safety noticeboard

12. TRAINING AND COMPETENCY

All Project Team members and contractors will be trained and competent to the level required to carry out tasks in accordance with their HSE responsibilities and to expected standards of performance.

Contractors must provide a copy or their training matrix and records of training to Sweetpea on request. Training records must be available on site for review.

13. INDUCTION

13.1. Project Induction

All project personnel will receive a project induction which will include:

- Project outline
- Project HSE expectations
- Life Saving Rules
- Major HSE risks
- Stop work authority
- Fitness for work
- Journey management
- Summary of Environment Management Plan and commitments

13.2. Site Induction

The Lead Contractor will be responsible for providing a site induction for all personnel and visitors. This induction will include:

- Site rules including key safety and environmental procedures
- Site specific hazards/risks
- Incident and hazard reporting
- Facilities and amenities
- Emergency assembly point and emergency response procedures

The site induction will include a signed acknowledgment that the individual has been made aware of the site safety, environmental and emergency procedures and that they must comply with these procedures.

13.3. Induction Records

Records will be maintained for 5 years of all attendees at both project and site inductions.

14. FITNESS FOR WORK

14.1. Medical Fitness

All personnel working on site must be fit to work in a remote site where hospital care maybe several hours away. Personnel must hold a current OGUK Medical Certificate or equivalent “fitness-to-work” certification relevant to their role and scope of work.

All prescription medication should be reported to the site medic. Prescription or over the counter medication that might adversely impact work performance must be reported the individual’s supervisor.

14.2. EpiPen

Individuals who carry an EpiPen must notify their supervisor and the site medic, and ensure they bring back-up EpiPens to site.

14.3. Fatigue

To minimise the effects of fatigue the following minimum standards will apply during the project:

- Site based personnel usually work a 12-hour shift. In exceptional circumstances, personnel may be asked to work in excess of 12 hours but not for more than 3 consecutive days.
- The absolute maximum hours that can be worked is 16 hours in a day.
- A least 8 hours of rest must be provided between shifts.

14.4. Drugs and Alcohol

Sweetpea has a zero tolerance of personnel either using or being under the influence of alcohol and illicit drugs at work. All persons should be aware that random or with cause drug and alcohol testing may be occur (see Appendix 3).

Drug and alcohol procedures will be implemented by the Lead Contractor on site.

15. HEALTH AND WELLBEING

It is important that a healthy workplace is maintained. This includes providing nutritious food options, making sure the workforce remains well hydrated and understands the dangers of heat stress, ensuring there are appropriate rest and recreation facilities, and controlling health hazards so that the risk is ALARP.

Everyone on site will be encouraged to check-in on work mates and speak to somebody if they need help.

16. JOURNEY MANAGEMENT

A Journey Management Plan (JMP) will be required for travel by light vehicles (cars, utes and 4WDs) outside of the permit area. Where an individual's employer does not have a JMP procedure, the TRL JMP will be used.

In addition to the JMP the following controls will apply:

- All road travel, other than commercial transport, must be completed during daylight hours.
- A rest break of at least 15 minutes must be taken for every 2 hours of continuous driving.
- Satellite phones will be carried for all travel under a JMP.

17. COVID-19

The Lead Contractor will have a COVID-19 Management Plan in place for the Activity. This Plan will comply with the Northern Territory Government COVID-19 guidance on interstate arrivals and quarantine and the travel restrictions from hotspots.

18. HAZARDOUS SUBSTANCES

Hazardous substances will be stored and handled on site in accordance with the Code of Practice – Managing risk of hazardous chemicals in the workplace.

All hazardous substances must be supplied with an SDS which will be readily available to workers.

A register of hazardous substance will be maintained on site.

When handling hazardous substances PPE will be in accordance with the SDS.

Where there is a spill risk, substances must be stored in a bunded area, on a bunded pallet or in a self-bunded/double skinned container. The capacity of the bunding must be 110% of the largest container or 25% of the total stored, whichever is the greatest (AS 1940:2017 The storage and handling of flammable and combustible liquids).

ERPs and Spill Management Plans will take into account the hazardous substance inventory on site.

19. WASTE MANAGEMENT

A detailed Waste Management Plan is included in the Environment Management Plan.

Grey water and treated sewage effluent will be disposed of through an approved irrigation system on site. All other waste will be appropriately segregated, collected by a licensed waste contractor and disposed of at a licensed disposal centre. No incineration of wastes will be carried out on site.

20. SPILL MANAGEMENT

A detailed Spill Management Plan is included in the Environment Management Plan.

All spills must be reported.

On discovering a spill, if it is safe to do so:

1. Control the spill at the source
2. Contain the spill
3. Clean-up using the appropriate recovery method and PPE

21. AUDIT AND INSPECTIONS

A project audit and inspection plan will be developed prior to the commencement of the Activity.

22. INCIDENT REPORTING AND INVESTIGATION

22.1. Notification

The incident notification process is described in Table 6. To ensure timely notification all incidents of an actual/potential level of minor/moderate must be reported to the Site Manager as soon as possible. The Site Manager is responsible for notifications from site to the Operations Superintendent who in turn will notify the Project Manager for onwards communication.

Table 6. Incident notification based on consequence level

<table>
<tr><th colspan="2">Consequences</th><th colspan="3">Notification</th></tr>
<tr><th>Actual</th><th>Potential</th><th>To who</th><th>Timeframe</th><th>Method</th></tr>
<tr><td>Negligible</td><td>Minor</td><td>-</td><td>-</td><td>Recorded on HSE Scorecard</td></tr>
<tr><td rowspan="2">Minor</td><td rowspan="2">Moderate</td><td>Site Manager</td><td>ASAP</td><td>Verbally
Recorded on Daily Report</td></tr>
<tr><td>Operations Superintendent</td><td>By end of shift</td><td>Verbally or email</td></tr>
<tr><td rowspan="2">Moderate</td><td rowspan="2">Major</td><td>Operations Superintendent</td><td>ASAP</td><td>Verbally</td></tr>
<tr><td>Regulator</td><td colspan="2">See Table 7</td></tr>
<tr><td>Major</td><td>Catastrophic</td><td>Project Manager</td><td>ASAP</td><td>Verbally</td></tr>
<tr><td>Catastrophic</td><td></td><td>VP Operations</td><td>ASAP</td><td>Verbally</td></tr>
<tr><td colspan="5">Note: In the case of an emergency situation see the relevant activity ERIP.</td></tr>
</table>

22.2. Regulatory Reporting

The following regulatory reporting requirements are described in detail in Table 7:

- Notifiable safety incidents will be reported to NT WorkSafe by the Lead Contractor.
- As well as the requirement above, significant safety incidents, emergencies, high potential incidents and significant damage are to be reported to the Department of Primary Industry and Resources by Sweetpea.
- Reportable environmental incidents are reported to the Department of Environment, Parks and Water Resources by Sweetpea.

Table 7. Reportable incidents

Notifiable Incidents - NT WorkSafe	

• Death
• Serious injury or illness
  ○ Immediate treatment as an in-patient in a hospital
  ○ Immediate treatment for the amputation of any part of the body
  ○ Immediate treatment for a serious head injury
  ○ Immediate treatment for a serious eye injury
  ○ Immediate treatment for a serious burn
  ○ Immediate treatment for the separation of skin from an underlying tissue (such as de-gloving or scalping)
  ○ Immediate treatment for a spinal injury
  ○ Immediate treatment for the loss of a bodily function
  ○ Immediate treatment for serious lacerations
  ○ Medical treatment within 48 hours of exposure to a substance
• Dangerous incidents
  ○ an uncontrolled escape, spillage or leakage of a substance
  ○ an uncontrolled implosion, explosion or fire
  ○ an uncontrolled escape of gas or steam
  ○ an uncontrolled escape of a pressurised substance
  ○ electric shock:
  ▪ examples of electrical shock that **are not** notifiable
  - shock due to static electricity
  - 'extra low voltage' shock (i.e. arising from electrical equipment less than or equal to 50V AC and less than or equal to 120V DC)
  - defibrillators are used deliberately to shock a person for first aid or medical reasons
  ▪ examples of electrical shocks that **are** notifiable
  - minor shock resulting from direct contact with exposed live electrical parts (other than 'extra low
	The **Lead Contractor** will notify NT WorkSafe immediately after becoming aware of a 'notifiable incident'
	
	1800 019 115
	or
	ntworksafe@nt.gov.au
	
	Complete the Incident Notification Form
	
	An incident site must not be disturbed, other than the immediate response to assist injured people, recover a body or make the area safe, until an inspector arrives at the site or directs otherwise (whichever is earlier)

voltage') including shock from capacitive discharge ○ the fall or release from a height of any plant, substance or thing ○ the collapse, overturning, failure or malfunction of, or damage to, any plant that is required to be design or item registered under the Work Health and Safety Regulations, for example a collapsing crane ○ the collapse or partial collapse of a structure ○ the collapse or failure of an excavation or of any shoring supporting an excavation	
For further details see https://worksafe.nt.gov.au/forms-and-resources/bulletins/work-health-and-safety-incident-notification	
Safety and System Integrity Reporting - Department of Primary Industry and Resources	
• Death and serious injury • Serious damage other than environmental harm - >$50,000 • Potentially hazardous event • An event occurs which is not in the normal or ordinary course of a particular operation and which is professionally considered to have been likely to cause injury to a person or serious damage to property • Damage to property occurs which is not serious damage to property but which results in a significant loss of structural integrity or load bearing capacity in the property damaged or results in some other significant unsafe condition • Any Emergency	Sweatpea to notify Petroleum Operations 1300 935 250 DPIRPetroleumOperations@nt.gov.au A report in writing giving full particulars and all related circumstances shall be transmitted to the Minister as soon as practicable after the occurrence
For further details see *Schedule of Onshore Petroleum Exploration and Production Requirements* This notification is in addition to, and does not take precedence over, reports required by NT WorkSafe.	
Environmental reporting - Department of Environment, Parks and Water Resources	
Reportable incident - an incident, arising from a regulated activity, that has caused or has the potential to cause material environmental harm or serious environmental harm	**Sweetpea** to notify verbally or in writing within 2 hours of the interest holder becoming aware of the reportable incident. 1800 413 889 If notice is verbal, a written report is required within 24 hours. Initial report submitted in 3 days. Final report no later than 30 days after the clean up or rehabilitation completed.
Recordable incident – a breach of an Environmental Objective or Environmental Performance Standard as outlined in this EMP	Recordable incidents are reported within 15 days after the end of each 90-day reporting period
For detailed instruction see the approved Environment Management Plan	

22.3. Investigation

The level of the investigation and investigation team make-up will be determined by the actual and potential consequences of the incident (Table 8).

Table 8. Investigation levels based on consequence

Consequences		Investigation Level	Investigation
Actual	Potential		
Negligible	Minor	None	Not routinely investigated but may be, at management discretion, where the value outweighs the cost
Minor	Moderate	1	5 Why or similar Conducted by Lead Contractor
Moderate	Major	2	Formal investigation (Taproot, ICAM or similar) Conducted by Lead Contractor, may have Sweetpea input
Major/ Catastrophic	Catastrophic	3	Formal investigation (Taproot, ICAM or similar) Conducted by Lead Contractor with active Sweetpea participation Must have trained and experienced investigation facilitator Should include a team member with an understanding of human and organisational factors Sweetpea may conduct independent investigation

23. CORRECTIVE ACTION REGISTER

A project Corrective Action Register (CAR) will be maintained to record and track actions arising from:

- HAZID Workshops
- HSE Audits
- Sweetpea led investigations
- Non-Conformance Reports

24. EMERGENCY RESPONSE

The site-based emergency response will be under the control of the PIC applying the Lead Contractors Emergency Response Plan.

Sweetpea will develop an Emergency Response Interface Plan (ERIP) for each Activity. The ERIP identifies:

- The interfaces between the Activity Lead Contractor's Site Emergency Response Plan and Sweetpea's emergency response systems
- The operation of the Sweetpea office-based Emergency Management Team

A Project Emergency Response Contact List (ERCL) will be developed and maintained through each Activity. The ERCL will be distributed to key Site and office based Sweetpea, Lead Contractor and third party contractor personnel and will be updated as required to ensure a comprehensive and readily available contact listing is available for an emergency response situation.

25. BUSHFIRE MANAGEMENT

A copy of the Bushfire Management Plan, which is included in the approved Environment Management Plan, will be posted on site.

26. HSE PERFORMANCE MONITORING

A HSE Scorecard will be developed for each Activity. This will record both lead and lagging indicators.

27. HSE RECORDS

HSE records, including inductions, audits and inspections, log books and daily reports will be retained for at least 5 years.

28. PROJECT REVIEW AND LESSONS LEARNED

Following the completion of the well a lessons learned workshop will be held and any learning captured in the lesson learned register.

APPENDIX A – TRL HEALTH AND SAFETY POLICY

tamboran
RESOURCES

Health and Safety Policy

Tamboran Resources is committed to a high standard of health and safety performance for our employees, contractors, service providers, visitors, and affected communities involved in, or impacted by, our operations and work activities. To achieve this Tamboran Resources will eliminate hazards in the workplace, or if that is not reasonably practicable, minimise the risks so far as is reasonably practicable to provide a safe and healthy workplace.

To meet these commitments Tamboran Resources will:

- Create, implement, and maintain a Health, Safety and Environment Management System.
- Ensure continuous improvement of the Health, Safety and Environment Management System through the auditing process, learning from incidents and consultation with our employees.
- Seek every reasonable means and required resources to provide a safe work environment for all workers.
- Use practices and procedures that meet or exceed relevant health and safety statutory and regulatory requirements as well as recognized industry standards.
- Encourage the active participation and support of its employees in promoting and implementing an effective safety program.
- Commit management and supervisory personnel to have a direct responsibility for ensuring that these objectives are met.
- Create a culture of work where it is understood that no task is too important that time cannot be taken to ensure the task is performed safely.
- Require all contractors and service providers to have and manage their health and safety with standards and practices in-line with this Policy.

The implementation and effectiveness of this Health and Safety Policy is the responsibility of all Tamboran Resources employees.

Tamboran Resources senior leadership are accountable for ensuring this Health and Safety Policy is reviewed at least every two years and implemented accordingly.

Policy authorised by

CEO
[Date]

Joel Riddle
Managing Director
07 / 17 / 2020

APPENDIX B – TRL ENVIRONMENTAL POLICY

tamboran
RESOURCES

Environmental Policy

Tamboran Resources is committed to developing resources in an environmentally responsible manner and shall conduct all activities and operations in a manner consistent with the principles of Ecologically Sustainable Development.

Activities shall be planned and implemented in a sustainable way to ensure impacts to the environment are either avoided or minimised to an acceptable level.

To meet these commitments Tamboran Resources will:

- Comply with applicable environmental legislation, industry standards, and its own policies.
- Make environmental considerations an integral part of its planning process.
- Seek and implement reasonable means to minimize water, fuel usage, and disturbance to soil, flora, and fauna.
- Promptly provide relevant information to all stakeholders affected by its operations and to be responsive and sensitive to legitimate stakeholder concerns.
- Identify and mitigate the adverse impacts of its operations on the environment in keeping with good environmental and business practices.
- Respond to environmental emergencies in a prompt and efficient manner.
- Ensure that its employees, contractors, service providers, and site visitors are fully informed of their responsibilities to comply with Tamboran Resources environmental management plans to protect the environment while performing their duties.

The implementation and effectiveness of this Policy is the responsibility of all Tamboran Resources employees.

Tamboran Resources senior leadership are accountable for ensuring this Policy is reviewed at least every two years and implemented accordingly.

Policy authorised by

CEO

[Date] Joel Riddle
Managing Director

07 / 17 / 2020

APPENDIX C – TRL DRUG AND ALCOHOL POLICY

tamboran
RESOURCES

Drug and Alcohol Policy

Tamboran Resources is committed to maintaining a safe and healthy work environment for all workers and the public at large. Alcohol and drug abuse is recognized by the Company as a safety, health, and security problem. All workers and management are expected to maintain a safe work environment that is free of illegal drugs and alcohol.

Tamboran Resources recognizes that persons working under the influence of drugs or alcohol present a risk to the safety of themselves and other workers.

This policy applies to all Tamboran Resources personnel, including employees, contractors, sub-contractors and visitors, at all sites under the control of Tamboran Resources.

The following are mandatory requirements:

- Personnel on Tamboran Resources operational worksites must have a zero blood alcohol concentration at all times.
- Personnel on all Tamboran Resources managed or controlled worksites must not commence or undertake work if they are under the influence of illicit or non-prescribed drugs.
- Controlled substances taken under the direction of a medical physician that may affect the person's ability to carry out their work safely must be reported to a supervisor. Where practicable, allowance for appropriate measures or restrictions are to be considered.
- Completion of a Tamboran Resources Site Induction is acknowledgement that Tamboran Resources or its contracted representative has the right to conduct unannounced general inspections, searches, and random or with cause tests for drugs and/or alcohol at operational worksites.
- Personnel and contractors will cooperate with application of the Drug and Alcohol Policy. Refusal, without an acceptable reason, will be a refusal to comply with a reasonable direction.
- Drug testing and acceptable concentration limits will be in accordance with AS/NZS 4308:2008
- Alcohol may be consumed at authorised functions and approved locations providing it is consumed responsibly.
- Authorised functions and approved locations must have provision for the responsible provision of alcohol.

The implementation and effectiveness of this Policy is the responsibility of all Tamboran Resources employees.

Tamboran Resources senior leadership are accountable for ensuring this Policy is reviewed at least every two years and implemented accordingly.

Policy authorised by

CEO

Joel Riddle
Managing Director
07 / 17 / 2020

Appendix H

Weed Management Plan

Appendix H Weed Management Plan

Civil Construction and Water Bore Environment Management Plan

Sweetpea Petroleum Pty Ltd

16-Dec-2021

Unique Identifier: SWP2-3

Weed Management Plan

EP136 - Beetaloo Sub-Basin, NT

Weed Management Plan

EP136 - Beetaloo Sub-Basin, NT

Client: Sweetpea Petroleum Pty Ltd

ABN: 42 074 750 879

Prepared by

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Cover Photo: Existing Access Track on Beetaloo Station, November 2019

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			Name/Position	Signature
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1	15-Jul-2020	Update from May 2020 Survey	Alana Court Associate Director - Environment	
2	04-Jan-2021	Update for Civil & Water Bore EMP submission	Alana Court Associate Director - Environment	
3	03-Mar-2021	Update for Civil & Water Bore EMP submission	Alana Court Associate Director - Environment	
4	22-April-2021	Final Civil and Water Bore EMP update based on DEPWS comments	Alana Court Associate Director - Environment	
5	16-Dec-2021	For Resubmission of C&WB EMP submission	Alana Court Associate Director - Environment	

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1.0 Introduction

1.1 Background

Weed control is a significant land management issue in the Northern Territory. This Weed Management Plan (WMP) forms a core component of Sweetpea's overarching environmental management strategy and supports the Civil Construction and Water Bore Environmental Management Plan (C&WB EMP).

The movement of rigs, vehicles, machinery and other materials to, from and within the exploration permit area may result in weeds being moved around the pastoral lease, into the lease from surrounding areas or interstate, depending on where the vehicles and materials are sourced from or returned to.

The focus of this WMP is therefore to ensure that infestations are eradicated, or at the very least that existing weed infestations are controlled such that no further weed species colonise the permit area as a result of Sweetpea's activities.

This document is based upon the *Weed Management Planning Guide - Onshore Shale Gas Development Projects* produced by the Department of Environment and Natural Resources (DENR, 2019).

1.2 Objectives

This Weed Management Plan (WMP) has been developed to ensure that the risk of weed introduction and spread, resulting from activities associated with Sweetpea and their contractor's exploration activities, are mitigated to protect the economic, community, industry and environmental interests of the Northern territory.

The plan provides an overview of:

- The project context (Section 1.3)
- Legal requirements in relation to weed management (Section 3.0)
- The appointment of a Dedicated Weed Officer (Section 3.0)
- Identified risks and proposed mitigation measures and management objectives (Section 5.1 and Section 5.3)
- The weed species that are considered likely or known to occur within the Permit Area (Section 4.3)
- Control options for species likely to occur within the Permit Area (Section 5.3)
- The monitoring, notification, recording and reporting requirements for the WMP (Section 6.0).

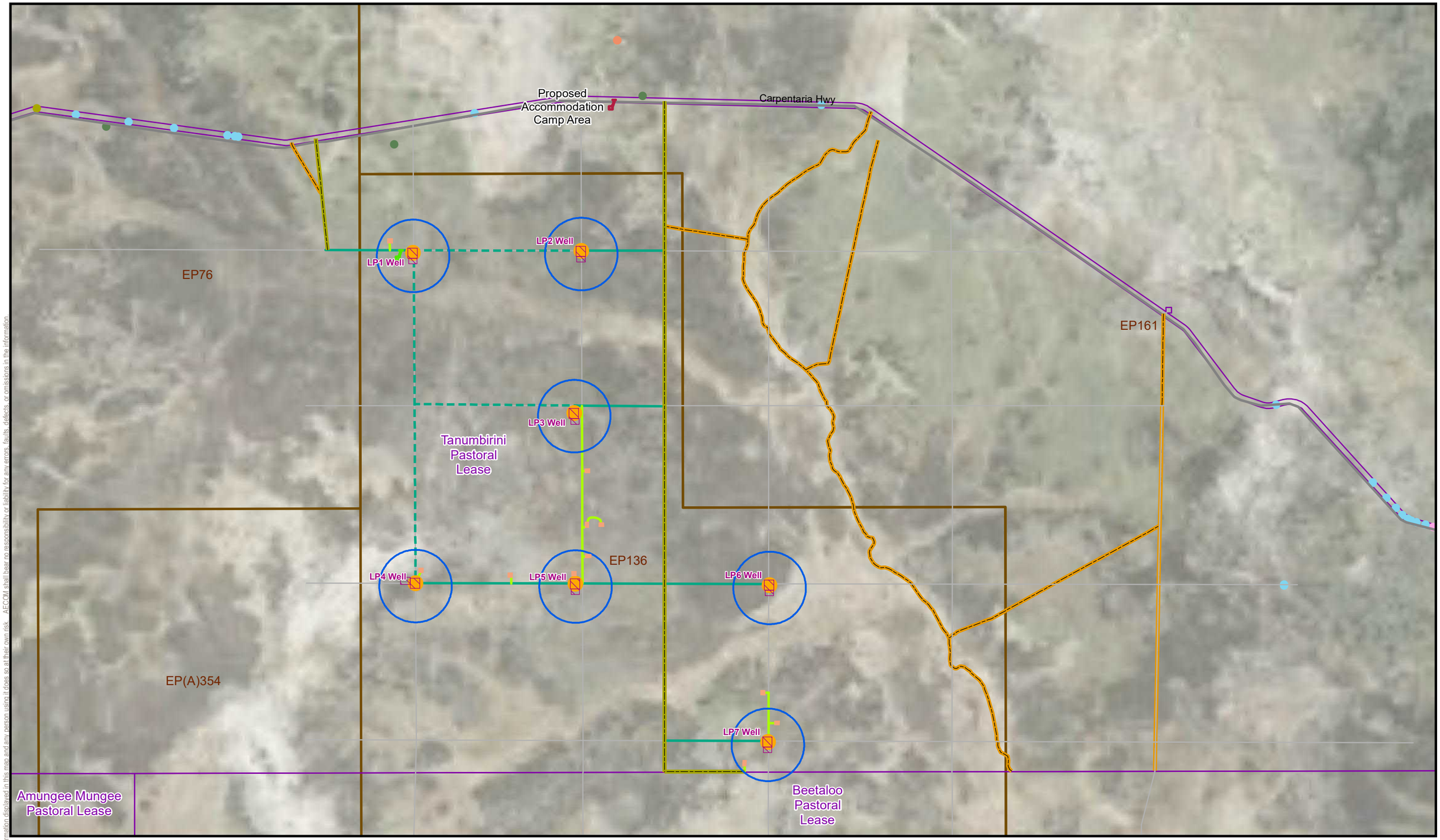
This plan is supported by Appendices that provide guidance on how to identify weed species in the field and collect the necessary data to support the monitoring and reporting requirements of this WMP.

1.3 Project Context

This plan covers civil construction, water bore drilling, rehabilitation and routine maintenance/monitoring activities undertaken by Sweetpea and their contractors within permit EP136 on Tanumbirini and Beetaloo Station. The primary activities subject to this WMP are:

- Access track construction, use and maintenance
- Camp construction and operation
- Civil construction activities
- Routine access, maintenance and monitoring of all exploration areas subject to this plan.

The location of the exploration activities is presented in Figure 1.



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- Well Site
- Gravel Pit Footprints
- Well Lease Area
- 1 km Bore Buffer
- EP136 Proposed Accommodation Camp Option
- Highway Proposed Accommodation Camp Option
- Native Title Register
- Petroleum Exploration Permit
- Existing Access Track
- Gravel Pit Access Track
- Western Access Option Access
- Eastern Access Option Access
- Seismic Lines - progressively rehabilitated
- Pastoral Track
- Highway

Weed Name

- Buffel grass
- Hyptis
- Lovegrass - amabilis
- Se[redacted]e
- Urochloa - Sabi grass

Data sources:
Imagery: Digital Globe
Permit, Cadastre, Places, Bores - NT Gov 2019.
Pastora Infrstructure - AECOM 2020

Sweetpea Petroleum Pty Ltd, Civil Construction & Water Bore EMP

Regional Weed data within the Civil Construction Program

PROJECT ID	60611666
CREATED BY	prachi.kulkarni1
LAST MODIFIED	16-Dec-2021
VERSION	1

A3 size

Figure 1

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2.0 Legislation

2.1.1 Northern Territory Petroleum (Environment) Regulations

Petroleum Act 2016, Petroleum (Environment) Regulations 2016 and Code of Practice for Petroleum Activities within the Northern Territory

The Petroleum Act 2016 provides legal framework within which persons are encouraged to undertake effective exploration for petroleum and to develop petroleum production so that the optimum value of the resource is returned to the Territory. It regulates the exploration for, and production of petroleum, including environmental protection measures which should be employed during exploration and production activities, including protection of parks and reserves and rehabilitation.

In addition, the Act is supported by the *Petroleum (Environment) Regulations 2016*.

The *Petroleum (Environment) Regulations 2016* requires that regulated activities are carried out in a manner consistent with the principles of ecologically sustainable development, and by which the environmental impacts and environmental risks of the activities are identified and reduced to an acceptable level.

The Code of Practice for Petroleum Activities in the Northern Territory is a mandatory code of practice for the petroleum industry to ensure that petroleum activities in the Northern Territory are managed according to minimum acceptable standards to ensure that risks to the environment can be managed to a level that is as low as reasonably practical (ALARP) and acceptable.

Under these regulations Sweetpea are required to submit an EMP prior to any petroleum exploration or production activity. EMPs must include:

- potential environmental risks or impacts (in this instance relating to the introduction and spread of weeds)
- appropriate environmental outcomes, environmental performance standards and measurement criteria
- appropriate implementation strategy and monitoring, recording and reporting arrangements and
- demonstrate that there has been an appropriate level of engagement with directly affected stakeholders in developing the plan.

This WMP is designed to support and implement the requirements of Sweetpea's Project Specific Environmental Management Plans.

2.1.2 *Weeds Management Act 2001* (NT)

The management of weeds in the Northern Territory is predominantly covered by the *Weeds Management Act 2001*. The Act allows for the declaration of weeds into classifications for the purposes of preventing a plant entering into, or managing the plant in, the Territory or a part of the Territory. The Act provides for statutory weed management plans, which prescribe management actions for high priority weeds. The Act also gives powers to authorised officers, including the power to order certain activities in relation to declared weeds (DENR, 2018).

Under the *Weeds Management Act 2001* a declared weed is a plant species which has been identified for control, eradication, or prevention of entry into all or part of the Northern Territory. A weed may be declared as:

- Class A - To be eradicated
- Class B - Growth and spread to be controlled
- Class C - Not to be introduced to the Territory

All Class A and Class B weeds are also considered Class C weeds.

There are currently statutory management plans for 10 high priority weed species in the Northern Territory.

The WMP must address weeds in accordance with their declaration status and the statutory requirements of any relevant weed management plans.

2.1.3 Regional Weeds Strategies

Regional Weeds Strategies (RWS) have been developed for specific areas of the NT, with the Tennant Creek RWS (2021-2026) and Katherine RWS (2021-2026) overlapping Sweetpea's exploration tenure. The aim of these regional strategies are to assist in prioritising weed management by:

- identifying the region's priority weeds and associated pathways of spread to inform management priorities
- identifying landscapes that may need prioritised protection from weed impacts like river corridors or sacred Aboriginal sites
- containing information on alert weeds that are not yet found in the region, but could become major issues if they establish

2.1.4 Environment Protection and Biodiversity Conservation (EPBC) Act

The objectives of the *Environment Protection and Biodiversity Conservation (EPBC) Act 1999* are, among other things:

- provide for the protection of the environment, especially those aspects of the environment that are matters of national environmental significance; and
- promote ecologically sustainable development through the conservation and ecologically sustainable use of natural resources; and
- promote the conservation of biodiversity; and
- promote a co-operative approach to the protection and management of the environment involving governments, the community, land holders and indigenous peoples; and
- assist in the co-operative implementation of Australia's international environmental responsibilities.

The EPBC Act provides for the identification and listing of key threatening processes. A threatening process is defined as a key threatening process if it threatens or may threaten the survival, abundance or evolutionary development of a native species or ecological community. Key threatening processes include invasive species, such as weeds, which have a major impact on Australia's environment, threatening our unique biodiversity and reducing overall species abundance and diversity (DEE, 2018).

2.1.5 Weeds of National significance

Thirty-two Weeds of National Significance (WONS) have been agreed by Australian Governments to be given priority for eradication based on their invasiveness, potential for spread and environmental, social and economic impact. A list of 20 weeds were endorsed in 1999 and a further 12 were added in 2012 (DE, 2019b).

Landowners and land managers are responsible for managing WONS, while State and Territory governments are responsible for their legislation and regulation. A strategic plan has been developed for all WONS that defines responsibilities and outlines strategies and actions to control weed species (DE, 2019b).

3.0 Dedicated Weed Officer

As per recommendation 8.3 of the Scientific Inquiry into Hydraulic Fracturing Stimulation there must be a dedicated Weed Officer for each gas field.

The Weed Officer must have relevant skills and experience and availability to successfully manage weed related issues for the project, including:

- Knowledge of the biology/ecology of local weeds.
- Knowledge of relevant weed management frameworks including Northern Territory legislation and plans, the EPBC Act.
- Understanding of existing weed management arrangements being undertaken by landholders.

The Weed Officer is responsible and accountable for delivery of all weed related requirements of the project in accordance with the WMP and the overarching Environmental Management Plan, including:

- Planning and execution of weed monitoring requirements, including baseline weed assessments and ongoing monitoring both during periods of gas related activities as well as during the target identification period of February to May.
- Facilitate training all workers (including contractors) in weed management requirements, with support from the Northern Territory Government Onshore Petroleum Weed Management Officer.
- Oversight of implementation of weed control mechanisms including but not limited to wash-downs and proactive weed control programs.
- Ensuring all reporting requirements are met.
- Act as the designated point of contact for and rapidly responding to any weed related complaints and incidents in accordance with the pre-determined strategies in this WMP and additional strategies as required developed in consultation with the Northern Territory Government Onshore Petroleum Weed Management Officer and affected landholders.
- Review and update of WMP's to remain effective in communication with relevant landholders and Northern Territory Government Onshore Petroleum Weed Management Officer in consideration of monitoring results and emerging weed issues for both gas and pastoral operations.

Sweetpea has appointed AECOM Australia Pty Ltd to ensure the activities meet with the planning and execution of this weed management plan. Primary contact is provided below:

Alana Court
Associate Director – Environment
[redacted]

AECOM
Level 3, 9 Cavenagh Street, Darwin, NT NT 0800
PO Box 3175 Darwin NT 0801
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4.0 Existing Environment

4.1 Bioregion

The exploration area is located within the Sturt Plateau Bioregion.

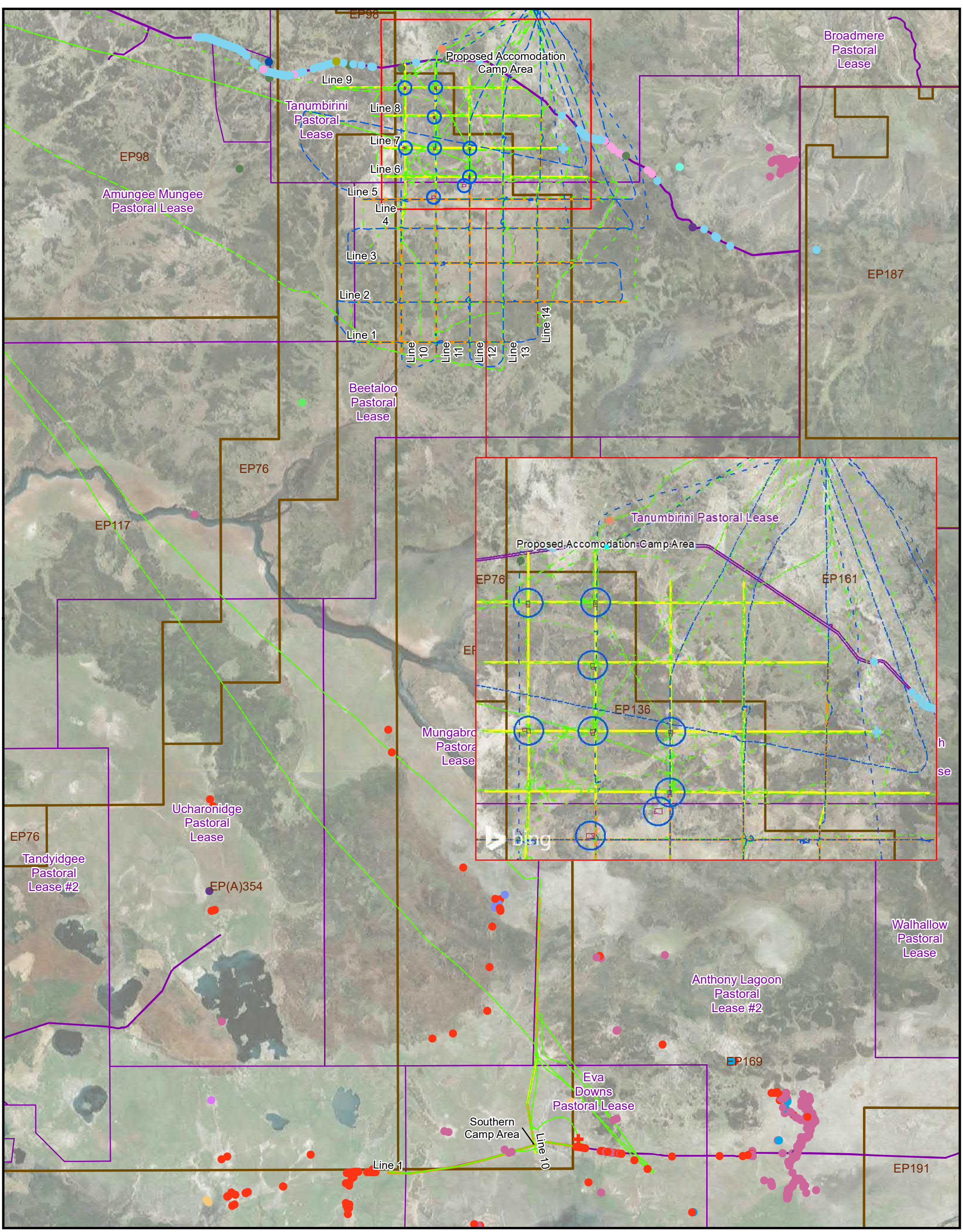
The Sturt Plateau Bioregion comprises undulating plains on sandstone, with predominantly neutral sandy red and yellow earth soils. Dominant vegetation is eucalypt woodland (dominated by variable-barked bloodwood *Eucalyptus dichromophloia*) with spinifex understorey, as well as extensive areas of Lancewood (*Acacia shirleyi*) - Bullwaddy (*Macropteranthes kekwickii*) vegetation association and associated fauna, including the Spectacled Hare-Wallaby (*Lagorchestes conspicillatus*).

4.2 Previous Surveys

AECOM has previously undertaken weed surveys in the Beetaloo Sub-basin approximately 80 – 100 km east and north-east of Sweetpea's exploration area. Surveys carried out in August 2018, indicated that weed abundance was low overall. *Hyptis suaveolens* (Hyptis), was identified along the access tracks. *Parkinsonia aculeata* (Parkinsonia) and *Calotropis procera* (Rubber Bush) have been previously identified. All of these weeds are listed as Class B under the NT *Weeds Management Act 2001*. Parkinsonia is also listed as a Weed of National Significance (WONS).

More recent weed surveys have been undertaken in November 2019 and May 2020 (refer Figure 2). These two surveys encompassed the exploration area. No weeds were encountered during the November 2019 field survey which covered the northern exploration area. The May 2020 survey focused on the exploration area and no weeds were recorded within the program footprint area. A patch of Hyptis was recorded within a creek line intersecting the eastern end of seismic line 7 in the seismic exploration area.

Gamba Grass (*Andropogon gayanus*) is known to be in the Beetaloo region and is used by some Pastoralists for wet season pasture. The pastoral properties using Gamba would be required to control the growth and spread to neighbouring areas (NTG, 2000). Gamba Grass has not been identified within the exploration area. Sweetpea are committed to preventing the spread of Gamba Grass into the project area from known Gamba locations. Should Gamba Grass be identified within the Sweetpea activity area it would need to be identified, recorded and treated in accordance with the Threat Abatement Advice released by the Commonwealth Government.



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Projection: GDA 1994 MGA Zone 53

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NT Weed Database

- Unknown
- Barnyard grass - colona
- Buffel grass
- Burr - Noogoora
- Gamba grass
- Hyptis
- Lovegrass - amabilis
- Merrimia - dissecta
- Mesquite
- Mission grass - annual
- Parkinsonia
- Prickly acacia
- Rubber bush
- Se[redacted]e
- Sida - Spiny head
- Stylo - caribbean
- Urochloa - Sabi grass

On-ground AECOM Weed Survey

- Hyptis
- Rubber bush
- November 2019 Weed Survey Tracks
- May 2020 Weed Survey Tracks

Seismic Lines

- Vegetation Clearing Required
- Existing Track/Gravel Road
- Proposed Accomodation Camp Area
- Petroleum Exploration Permit
- Well Lease Area
- 1 km Bore Buffer

Data sources:
Imagery: Bing (c)
Permit Area, Cadastre - NT Gov 2019.
Places, Vegetation - Aust Gov 2019

Sweetpea Petroleum Pty Ltd
Civil, Drilling and Stimulation EMP

Weed Survey Tracks

PROJECT ID	60611666
CREATED BY	prachi.kulkarni1
LAST MODIFIED	24-Nov-2021
VERSION	1

Figure 2

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4.3 Weeds potentially in Project Area

Database searches identified 15 weed species known or likely to occur within the proposed exploration area that are declared weeds under the NT *Weeds Management Act 2001*. Five of these weeds are Weeds of National Significance (WoNS). A further XX have been identified as either Category 1 (priority for eradication) or Category 2 (priority for control) under the Tennant Creek RWS. Declared weed species likely to occur within the project area are listed in Table 1.

Table 1 Weed species likely to occur within the proposed exploration area

Scientific Name	Common Name	Status
Alternanthera pungens	Khaki Weed	Class B
Andropogon gayanus	Gamba Grass	Class A/B (zoned) and WoNS
Azadirachta indica	Neem	Class B
Calotropis procera	Rubber Bush	Class B (zoned) / Cat 2 control
Cenchrus echinatus	Mossman River Grass	Class B
Datura ferox	Fierce Thornapple	Class A
Hyptis suaveolens	Hyptis	Class B
Parkinsonia aculeata	Parkinsonia	WoNS / Class B / Cat 2 control
Prosopis spp.	Mesquites	WoNS / Class A / Cat 1 eradication
Sida cordifolia	Flannel Weed	Class B
Sida rhombifolia	Paddy's Lucerne	Class B
Tamarix aphylla	Athel Pine	WoNS / Class A and B / Cat 2 control
Themeda quadrivalvis	Grader Grass	Class B
Vachellia nilotica (syn. *Acacia nilotica* ssp. *indica*)	Prickly Acacia	WoNS / Class A
Xanthium occidentale	Noogoora Burr	Class B

Grey Highlight – Weeds identified as having highest risk of occurring within the exploration area.

*Status: Cmwlth: WONS = Weed of National Significance; NT Weeds Management Act 2001: Class A = weed is to be eradicated, Class B = weed is to have its growth and spread controlled, Class C = weed is not to be introduced to the NT.

The weeds that were identified as having the highest potential to be encountered by the exploration activities include *Parkinsonia aculeata* (Parkinsonia), *Hyptis suaveolens* (Hyptis) and *Calotropis procera* (Rubber Bush). These are known to occur throughout the region and have been recorded within EP136 property boundary. A patch of Hyptis was recorded on the eastern end of line 7 during the May 2020 survey. Weeds database records also show that Hyptis likely occur along the Carpentaria Highway, in close proximity to the Proposed Accommodation Camp Area (see Figure 2).

It is noted that Parkinsonia is considered a Weed of National Significance (WoNS), which are weed species that are the focus of national management programs for restricting their spread and/or eradicating them from parts of Australia. Parkinsonia and Rubber Bush have also been identified as category 2 priory weeds for strategic control, under the Tennant Creek RWS. Map figures are provided below showing the location of category 1 - eradication (Figure 3) and category 2 - control (Figure 4) weeds identified in the Tennant Creek RWS. No priority weeds have been identified in the north west corner of EP 136 located within the Katherine RWS.

Parkinsonia, Hyptis and Rubber Bush will be the focus for weed control identified in this weed management plan. Should as result of ongoing surveys and activities in the exploration area identify any of the above or additional weeds, weed control measure would be updated for these weeds.

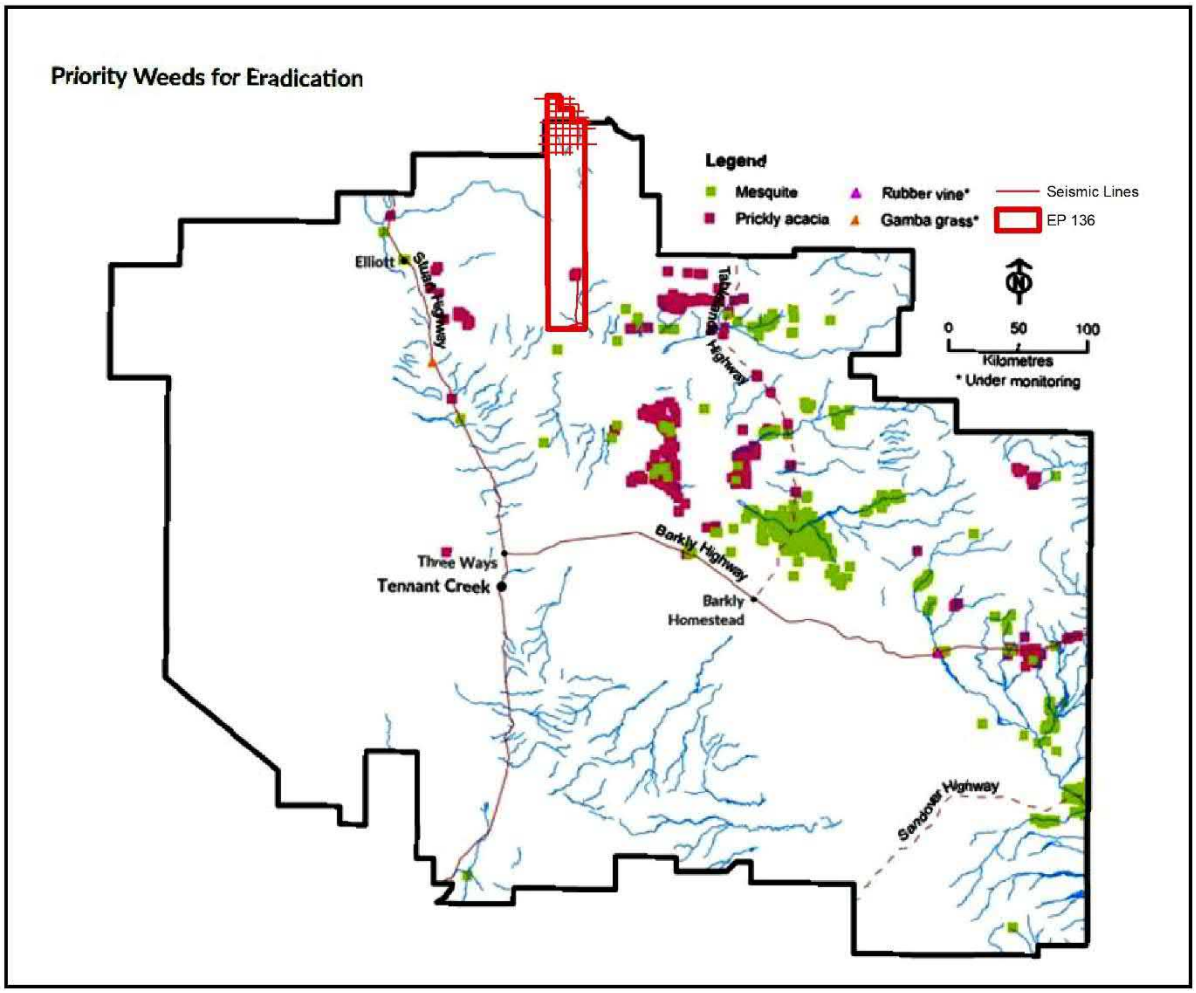

Figure 3 Tennant Creek Priority Weeds for Eradication - Category 1

Source - Tennant Creek Regional Weeds Strategy 2021-2026

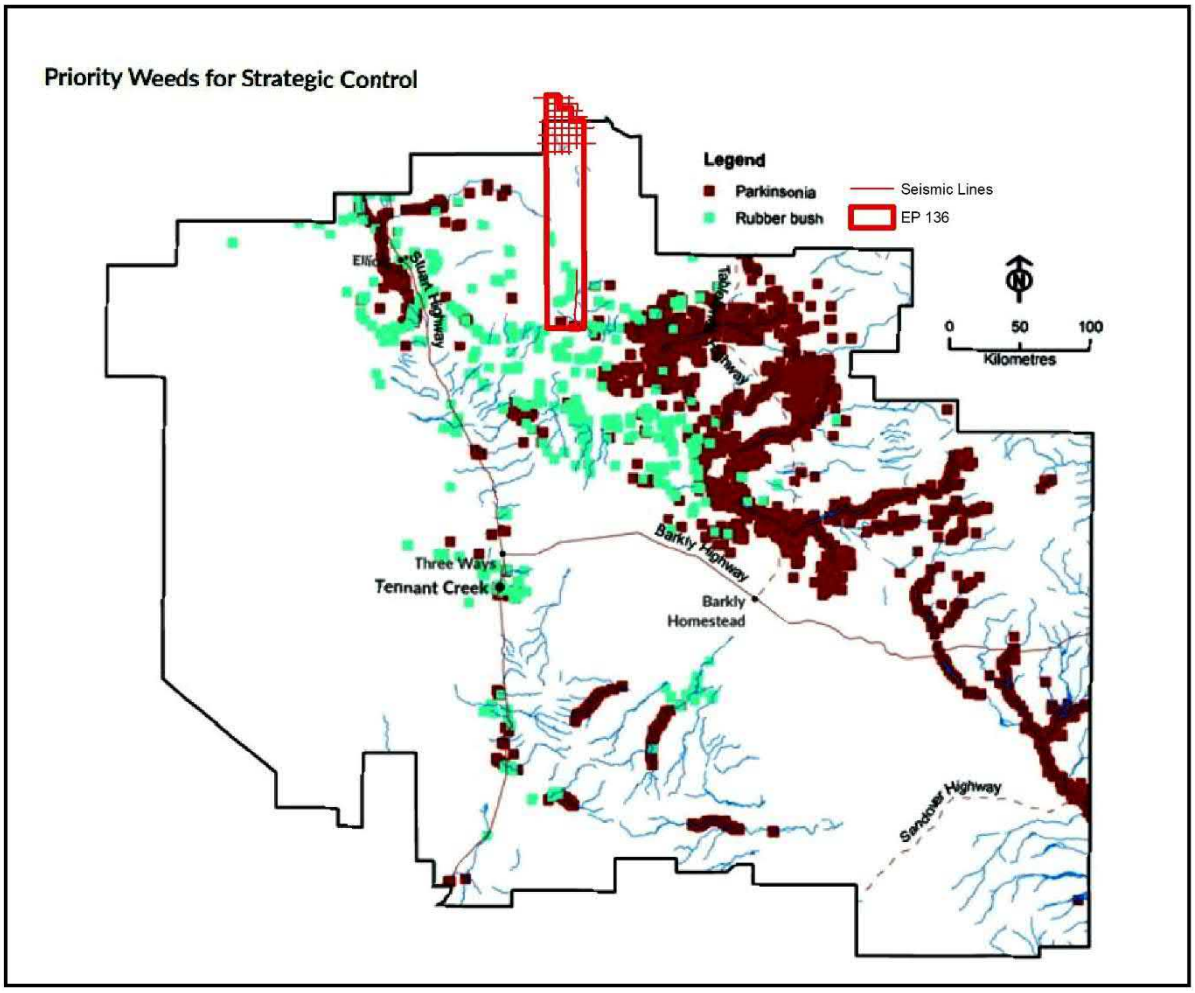

Figure 4 Tennant Creek Priority Weeds for Strategic Control - Category 2

Source - Tennant Creek Regional Weeds Strategy 2021-2026

5.0 Weed Management

5.1 Mitigation Methods (prevention)

The following mitigation methods will be implemented for the exploration program to prevent the introduction and spread of weeds in the project area:

- All equipment will have certified equipment wash-down completed prior to entry to the field. Wash-down would occur at Contractors deport or a commercial wash facility prior to mobilisation in a manner that prevents pollution of the surrounding environment.
- Machinery to be preferentially sourced locally, with machinery sourced from surrounding areas or Queensland being the 2nd and 3rd preferred option respectively.
- Weeds will be actively controlled in cleared/ hardstand areas.
- All materials will be inspected to ensure they are free of weeds prior to being transported to another site.
- All staff, including field staff, contractors and machinery operators, will be educated on hygiene protocols and weed identification as part of their site induction.

5.2 Monitoring

Sweetpea will implement an ongoing weed monitoring program to determine the extent of weed infestations occurring within the project area, and to inform the approach to weed control as it is required.

A baseline survey was completed in November 2019 and a follow up survey was undertaken in May 2020 following the wet season to confirm extent of weeds within the project area prior to plant and equipment being transported onto site. The initial baseline survey in November 2019 did not identify weeds. The May 2020 survey covered the exploration area and no weeds were recorded within the program area.

Weed monitoring will involve annual weed survey to be undertaken prior to each round of weed treatment. The survey will gather information in relation to weed species density, distribution and reproductive status. Results from the survey will be used to assess the effectiveness of the on-ground weed treatment and identify where improvements can be made for the following round of treatment.

As part of the 2021 Annual Weed Management Action Plan, Sweetpea will undertake weed survey and mapping of the areas that will be impacted by the exploration activities and where required undertake weed control. April – May is the preferred timing for any weed monitoring to occur on the permit area.

5.3 Weed Control

The success of weed control depends on the timing of treatment. Treatment should aim to control target weeds during their active growth stage and before viable seed formation. The ideal timing of weed control is as follows:

- Round 1: Pre exploration, late wet season - April. To control all germinations from the wet season and prevent weeds from becoming established and spreading
- Round 2: Post exploration, dry season – June. To control all germinations and any weeds that may have been missed in earlier control, and weeds that may have been introduced during the project.

5.3.1 Hyptis (*Hyptis suaveolens*)

Hyptis is a widespread weed in the Northern Territory, including the Gulf district. It readily colonises disturbed areas such as roadsides and overgrazed areas and will grow on most soil types (DENR, 2019).

The best time to treat Hyptis is from December to March.

Chemical control

Table 2 outlines the chemical control methods that have been recommended by the Weeds Branch of the Northern Territory Department of Environment and Natural Resources (DENR, 2019).

Table 2 Chemical treatment options for Hyptis

Chemical and Concentration	Rate	Notes
2, 4-D amine 625 g/L Various trade names	320ml / 100L	Seedling or adult (individuals or infestation): Foliar spray - apply when actively growing
Glyphosate 360 g/L Various trade names and formulations	15ml / 1L	Seedling or adult (individuals or infestation): Foliar spray - apply when actively growing

Non-chemical control

Table 3 outlines the various non-chemical control methods recommended by the NT Weeds Branch for Hyptis.

Table 3 Non-chemical control methods for Hyptis

Method	Notes
Hand pulling and grubbing	Weeds, including their roots, are physically pulled out of the ground by hand or using hand tools. This is an effective method of control for individual weeds and recent outbreaks that are yet to release seeds, but it is labour intensive.
Slashing	A brush-cutter, slasher or mower can be used to cut weeds off above the ground level. This is effective in suppressing flower and seed development.

5.3.2 Parkinsonia (*Parkinsonia aculeata*)

Parkinsonia is found in established thickets throughout semi-arid Australia. It has become well-established in the Barkly Tableland and Gulf regions and occurs in various densities across most of the NT (DENR, 2019).

The best time to treat Parkinsonia is from March to May.

Chemical control

Table 4 outlines the various chemical control methods that have been recommended by the NT Weeds Branch (DENR, 2019).

Table 4 Chemical treatment options for Parkinsonia

Chemical and Concentration	Rate	Notes
Aminopyralid 8g/L + Triclopyr 300g/L + Picloram 100g/L Grazon® Extra	350ml / 100L 3L / ha	**Seedling (individuals and infestation):** Foliar spray - avoid spraying if plants are stressed or bearing pods, uptake spraying oil required Foliar spray - plants up to 2m or two years old, Uptake Spraying Oil required
Triclopyr 240g/L + Picloram 120g/L Access®	1L / 60L (diesel) 1L / 60L (diesel)	**Seedling (individuals and infestation):** Basal bark < 5cm stem diameter Cut stump > 5cm stem diameter
Tebuthiuron 200 g/kg	1.5g / m^2	**Seedling (individuals and infestation):**

Chemical and Concentration	Rate	Notes
		Granulated herbicide - ground applied Do not use within 30m of desirable trees or apply to continuous area > 0.5 ha Do not use if fire is eminent Apply when there is soil moisture or prior to rain

Non-chemical control

Table 5 outlines the various non-chemical control methods recommended by the NT Weeds Branch for Parkinsonia.

Table 5 Non-chemical control options for Parkinsonia

Method	Notes
Hand pulling and grubbing	Weeds, including their roots, are physically pulled out of the ground by hand or using hand tools. This is an effective method of control for individual weeds and recent outbreaks that haven't released seeds yet, but it requires a lot of labour.
Blade ploughing	A blade plough is used to push over some woody shrubs and sever their roots underground.
Bulldozing	Bulldozers, chopper rollers or graders are used to clear large weed infestations. This leaves large areas of soil exposed so follow up control or revegetation should be considered.
Stick raking	A large blade with teeth attached to a bulldozer is used to clear large weed infestations. This leaves large areas of soil exposed so follow up control or revegetation should be considered.
Chaining	A large heavy chain is dragged across the ground by heavy machinery to push over and pull out large weeds. This method is useful for removing roots and providing access for burning. It works best at the end of the wet season when the ground is soft and roots are easier to pull from the soil, but has been successful in prickly acacia control where dense stands are dry or in drought.
Fire	Fire as a management technique is most effective when it is used together with other methods. It is useful for mass seedling control if there is a sufficient fuel load.
Revegetation	Re-planting native vegetation or desirable pasture or crop species creates competition for the weeds that are present and is especially useful when weeds have been removed as an established desirable plant will compete with the new weed seedlings as they emerge.

5.3.3 Rubber Bush (*Calotropis procera*)

Rubber bush poses a significant risk to grazing land in the NT. It has the potential to colonise large parts of the Barkly Tablelands, where it competes with native pastures (DENR, 2109).

The best time to treat Rubber Bush is from October to March

Chemical control

Table 6 outlines the various chemical control methods for Rubber Bush that have been recommended by the NT Weeds Branch (DENR, 2019).

Table 6 Chemical treatment options for Rubber Bush

Chemical and Concentration	Rate	Notes
Triclopyr 300g/L + Picloram 100g/L Conqueror® **+ Aminopyralid 8g/L** Grazon™ Extra	750ml / 100L (water) 500 - 750ml / 100L (water)	**Seedling (individuals or infestation):** Foliar spray. Check label for recommended adjuvant product. More effective on plants < 2m as thorough coverage on all leaves is required.
Triclopyr 240g/L + Picloram 120g/L Access™	1L / 60L (diesel) 1L / 60L (diesel) 1L / 60L (diesel)	**Adult (individual and infestation):** Basal bark < 5cm stem diameter. Spray all stems. Spray to point of runoff. Thin line up to 5cm stem diameter Cut stump > 5cm stem diameter
Tebuthiuron (200g/kg) Graslan - Pending registration. Please check with Weed Management Branch for status confirmation.	1.5 – 2g / m^2	**Seedling or adult:** Application to black clay soils in conjunction with seasonal rainfall. Spread granules according to density of the infestation.
Fluroxypyr (333 g/L) Starane™ Advanced	3L / 100L (diesel)	**Adult:** Cut stump method for plants up to 10cm diameter and 3m high.

6.0 Reporting

6.1 Notification to Government

The Northern Territory Government Onshore Petroleum Weed Management Officer at the Weed Management Branch of DEPWS should be notified within 48 hours of the discovery of a new weed species in the Project Area.

Initial notification may be verbal, with follow-up written notification provided within seven working days. The notification should include a preliminary species identification and location information. The Northern Territory Government Onshore Petroleum Weed Management Officer will advise what further action is required.

It is noted that some species spread rapidly so immediate action may be required to control spread. For example, as stated above Parthenium (*Parthenium hysterophorus*) is a Class A (to be eradicated) and Class C (not to be introduced) weed in the Northern Territory as well as being classified as a Weed of National Significance. Early detection is crucial in not allowing this species to spread in the Northern Territory (DPIR, 2016).

In addition, it is noted that under the *Weeds Management Act* that:

'The owner and occupier of land must… within 14 days after becoming aware of a declared weed that has not previously been, or known to have been, present on the land, notify an officer of the presence of the declared weed'.

All weed outbreak incidents will be reported in Sweetpea's incident reporting system and corrective action initiated.

6.2 Recording

Records of weed inspections will be maintained by Sweetpea and their contractors.

Data on weed distribution will be maintained within Sweetpea's program GIS database and provided to the Weeds Officer at DEPWS as part of the annual report on performance against the Weed Management Plan, or as requested.

Data will be collected as per the requirements of the Northern Territory Weed Data Collection Manual - Section One Technical Data Description (Weed Management Branch, 2015).

Data will be recorded using the guidelines provided in Appendix I1 using the data sheets provided.

The Northern Territory Weed ID Deck (Northern Territory Government, 2017) will be referenced to assist with identification of species that have been identified as likely or know to occur in the Permit Area.

Field data will be submitted directly to the Weed Management Branch in a shapefile format or as an Excel spreadsheet, including incidental identification of weeds and following completion of field surveys.

6.3 Reporting

All weed outbreak incidents will be reported in Sweetpea's incident reporting system and corrective action initiated.

A report on the performance against this Weed Management Plan will be submitted to DENR on an annual basis.

At a minimum, this should include:

a. Details of activities implemented to address weed spread and introduction risks (e.g. vehicle wash down/ blow down locations, examples of track construction from working from weed free areas into weed infested areas to reduce spread).

b. Details of survey and monitoring events, including dates, personnel, maps and track data.

c. Submission of all weed data collected.

d. Overview of weed control events and success rates (weed control should be captured in detail through the data collection process and submitted as a component of (a)).

7.0 References

AECOM Australia Pty Ltd. 2020. *Land Condition Assessment, Beetaloo & Tanumbirini EP136 – Beetaloo Sub-Basin, NT* prepared for Sweetpea Petroleum Pty Ltd.

Department of the Environment and Energy. 2018. *Key threatening processes under the EPBC Act*. <http://www.environment.gov.au/biodiversity/threatened/key-threatening-processes> accessed 9 September 2019.

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Department of Environment and Natural Resources (DENR) (NT). Weeds Management Act: Compliance Policy. <https://denr.nt.gov.au/__data/assets/pdf_file/0011/668387/weeds-management-policy-act.pdf>. Weeds Management Branch, Palmerston, NT.

Department of Primary Industry and Resources. 2016. *Parthenium found in the NT*. <https://dpir.nt.gov.au/news/2016/december/parthenium-found-in-the-nt> accessed 10 September 2019.

Northern Territory Government. 2000. Information Sheet Gamba Grass. <http://www.drytropics.org.au/weeds_gamba_control.htm> accessed 10 September 2020.

Northern Territory of Australia. 2017. *Northern Territory Weed ID Deck*.

Weed Management Branch, Northern Territory Government. 2015. *Northern Territory Weed Data Collection Manual - Section One Technical Data Description*. Department of Environment and Natural Resources, Palmerston, NT.

Regional Weeds Strategy - Katherine 2021-2026 < https://depws.nt.gov.au/__data/assets/pdf_file/0006/269286/Katherine-Regional-Weeds-Strategy-2021-2026.pdf> accessed 25 November 2021.

Regional Weeds Strategy - Tennant Creek 2021-2026 < https://depws.nt.gov.au/__data/assets/pdf_file/0006/258099/tennant-creek-regional-weeds-strategy.pdf> accessed 25 November 2021.

Appendix I1

Weed Data Collection Methodology

Appendix I1 Weed Data Collection Methodology

Field data collection for weed infestations

The following is a guide to efficiently evaluating and recording a weed site in the field.

Each record must identify the person or organisation taking the record, as well as the details explained below.

How to record weed area as a point record

1. Record the species.

When a weed is sighted, move to the area and confirm identification of the weed. If you cannot positively identify the weed record it as “Unknown weed” and take a sample or photograph, do not try to guess. If more than one weed species is present, then repeat the process with separate records for each species.

2. Assess the size of the weed patch.

Look across the area of weeds to the furthest weed plant and decide the diameter. Decide if the area is best fits in a circle of either 20, 50 or 100 metres. If it is a single plant or small patch you would choose 20 metres. The size 100 metres extends about as far as you can see on the ground, if the weeds extend out of sight you will need to make another point further on. You may place overlapping circle areas to reflect different densities.

3. Assess the density of weeds within the circle.

Decide how much of the area is covered by weeds. Assign a score from 2 to 5 based on the percentage table below. It will be useful (if possible) to move into the centre of the weed circle. Consider the whole circle size chosen in step 2 deciding on the density score. Area covered should be determined by a ‘projected canopy’ method.

Density categories

1 = Absent, no weeds of this species in this area.

2 = < 1%, Very few, not many weeds *e.g.*: single plant, perhaps with seedlings.

3 = 1 -10%, More than one or two isolated plants but not a lot *e.g.*: a few small plants.

4 = 11-50%, A lot, up to half the area covered *e.g.*: a tree, dense patches of weeds.

5 = > 50%, Dominant cover is weed, more than half covered *e.g.*: thickets, monocultures.

4. Record the location.

Take the GPS location (ideally) from the centre of the circle. If weed seeds may be spread or it is difficult to access the centre it is acceptable to take the reading from the location as close to the centre as practical.

5. Record the treatment.

Record the method you apply a treatment to the weeds, or record ‘No Treatment’.

Choose from the list of treatment methods

i.e.: No treatment, Unknown, Treated, Foliar spray etc.

How to record weed area as a line (polyline) record

1. Record the species.

When a weed is sighted, move to the area and confirm identification of the weed. If you cannot positively identify the weed record it as “Unknown weed” and take a sample or photograph, do not try to guess. If more than one weed species is present then repeat the process with separate records for each species.

2. Assess the ‘best fit’ width in metres of the linear weed area.

Look along the area of weeds to the furthest weed plant and decide a width that best sums up the width of the infestation from values of 5, 20, 50 or 100 metres. If the width is too variable you may need to make more than one line or consider recording as points or as a polygon.

3. Assess the density of weeds within the line.

For the area of the line, being from start to finish at the designated width, decide the area covered by weeds. Assign a score from 2 to 5 based on the percentage table below. Consider the whole line area when deciding on the density score. Area covered should be determined by a ‘projected canopy’ method.

Density categories

1 = Absent, no weeds of this species in this area.

2 = < 1%, Very few, not many weeds *e.g.*: single plant, perhaps with seedlings.

3 = 1 -10%, More than one or two isolated plants but not a lot *e.g.*: a few small plants.

4 = 11-50%, A lot, up to half the area covered *e.g.*: a tree, dense patches of weeds.

5 = > 50%, Dominant cover is weed, more than half covered *e.g.*: thickets, monocultures.

4. Record the location.

Start the GPS track, or line sketch from one end of the linear weed area. Walk or sketch a line as best fit through the middle of the linear weed area and finish at the end point.

5. Record the treatment.

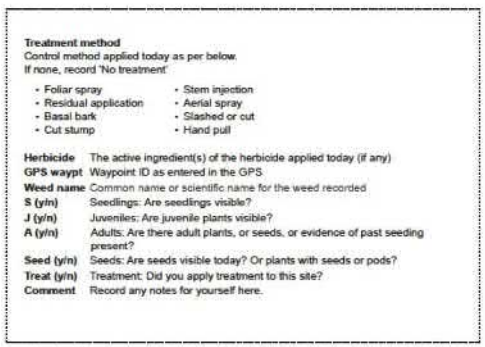
Record the method you apply a treatment to the weeds, or record ‘No Treatment’.

Choose from the list of treatment methods

i.e.: No treatment, Unknown, Treated, Foliar spray etc.

RECORDER:					PROJECT:							LOCALITY:		
ORG_NAME:					GPS NAME/MODEL:							RECORDING METHOD :		
SITE_ID	DATE_REC	LAT_G94	LONG_G94	WEED_NAME	SIZE_DIA_M	DENS_CAT	SEEDLINGS	JUVENILES	ADULTS	SEED_PRES	PAST_TREAT	TREATMENT	HERBICIDE	COMMENTS

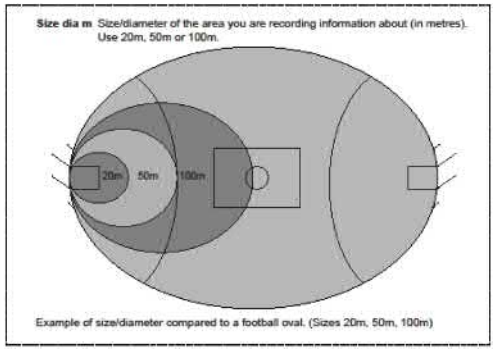
Notes:

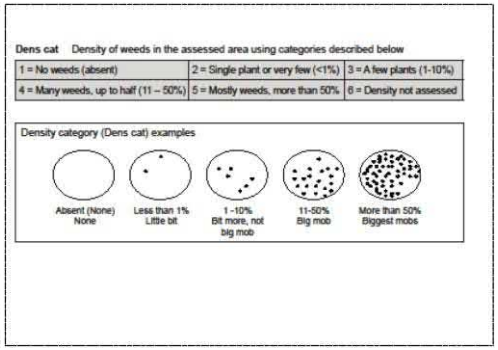


Treatment method
Control method applied today as per below.
If none, record 'No treatment'

- Foliar spray
- Residual application
- Basal bark
- Cut stump
- Stem injection
- Aerial spray
- Slashed or cut
- Hand pull

Herbicide The active ingredient(s) of the herbicide applied today (if any)
GPS waypt Waypoint ID as entered in the GPS
Weed name Common name or scientific name for the weed recorded
S (y/n) Seedlings: Are seedlings visible?
J (y/n) Juveniles: Are juvenile plants visible?
A (y/n) Adults: Are there adult plants, or seeds, or evidence of past seeding present?
Seed (y/n) Seeds: Are seeds visible today? Or plants with seeds or pods?
Treat (y/n) Treatment: Did you apply treatment to this site?
Comment Record any notes for yourself here.





(extracted from *Northern Territory Weed Data Collection Manual - Section One Technical Data Description.*

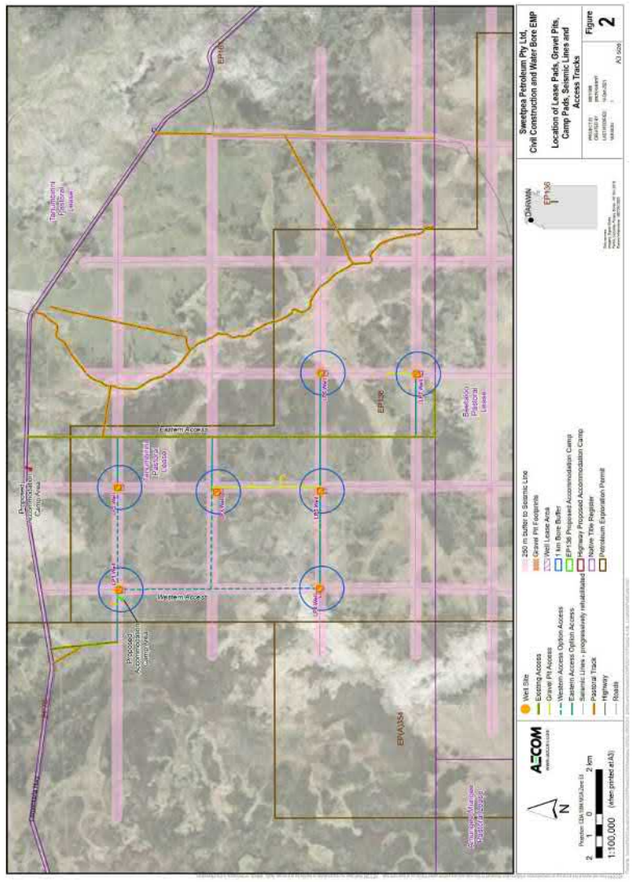
Appendix I

Bushfire Management Plans

Appendix I Bushfire Management Plans

Exploration Permit 136
Accommodation Camp
Bushfire Management Plan 2022/2025
Tanumbirini Station

Location of EP136—Civil Construction Area—Highway Camp Site Option	
Property land uses	Gas exploration and cattle grazing
Site fire management aim	To reduce the occurrence of, and minimise the impact of bushfires, thereby reducing the threat to life, property, cultural values and the environment.
Site fire management objectives	Mitigate the potential impact of unplanned fires on Sweetpea's people, assets and operations and neighbouring land uses.



Bushfire Officer	Contact Details	Name
	[redacted]	[redacted]

Properties	Contact Details	Name
Amungee Mungee Station	[redacted]	[redacted]
Tanumbirini Station	[redacted]	[redacted]
Beetaloo Station	[redacted]	[redacted]

Offsite Stakeholders	Contact Details	Name
National Response Centre	1800 076 251	24/7 contract line
Emergency	000 or 112 mobile	
Bushfire NT Katherine office (Savanna)	(08) 8973 8876	
Bushfire NT Alice Springs office (Barkly)	(08) 8952 3066	
NAFI North	https://www.firenorth.org.au/nafi3/	
Secure NT (Fire Bans)	https://securent.nt.gov.au/alerts	
Fire incident map	https://www.pfes.nt.gov.au/incidentmap/	

Sweetpea's Civil Construction Program Fire Management Zones—Bushfire Management Actions	
Well Pads and Tank Pads	• Remove all vegetation within the lease pad area and implement erosion and sediment control plan. • Treat emerging vegetation with herbicide. • Hot works are not permitted on total fire ban days without written approval from a fire control officer or fire warden.
Fire management break	• A 10 m wide cleared perimeter around well pads and tank pads • An additional 10 m wide bare earth fire break incorporating a 4 m wide fire access trail
Fire access trails	• Create and maintain 4 m wide access trail by grading or spraying
Asset Protection Zone (APZ)	• Site Manager to assess fuel load prior to camp establishment and again at end of wet season if infrastructure is still in place. • Establish a 20 m low fuel zone around well pads and lease pads. • Monitor for grassy weeds and control where appropriate. • If deemed necessary, conduct controlled burns where other controls are not effective and in consultation with neighbouring properties. • Ensure 4 m wide fire access trail around the perimeter of the asset protection zone is trafficable by fire fighting appliances.
Civil Construction Program	• Adequate fire protection equipment to be provided to prevent fires, the spread of fire, injury to personnel, and to ensure local bushfire and other fire regulations are observed. • Fire extinguishers to be fitted to all vehicles and key locations at camp.
Neighbouring Property Fire Management Zone	• Fire management planning meeting with neighbouring properties prior to commencing civil construction activities, and reviewed annually. • Neighbour to advise proponent of planned burns.

Fire Management Risks

- Ignitions (humans and lightening) on or off site resulting in harm to workers and loss of equipment.
- Fire scar mapping indicates the exploration area burns approximately every 3 to 5 years.
- Bullwaddy and Lancewood vegetation communities occur in areas across the permit and are fire sensitive. Hot fires have the ability to reduce habitat quality for both flora and fauna species which utilise these vegetation communities.
- Spread of high fuel load grassy weeds could increase fire intensity, e.g. gamba, grader and buffel grass, adjacent infrastructure areas and access tracks.

This Site Specific Bushfire Management Plan has been prepared for Sweetpea to manage the risk from bushfire within the planned civil construction area. This Plan should be read in conjunction with the Overarching *Environmental Management Plan and Emergency Response Plans* for Sweetpeas operations in the Beetaloo Basin—Appendix L.

APPENDIX I Bushfire Management Plan | Version 2 | December 2021

Bushfire Preparedness

Preparedness Planning

Mandatory for all Severe, Extreme and Catastrophic FDI days
The following must be reviewed daily. If fire alerts are active or presenting with a know risk (fire in the area), personnel must execute their contingency plans which need to encompass the following:

- ☐ Procedure on identifying and notifying of a bushfire.
- ☐ Critical equipment to be removed / isolated/ shut down.
- ☐ Safe evacuation routes from site and muster points.
- ☐ Communication methods:
  - ✓ Team channels and / or phone numbers
  - ✓ Area channels and/or phone numbers
- ☐ Closest 'Safe Havens' .

Monitoring

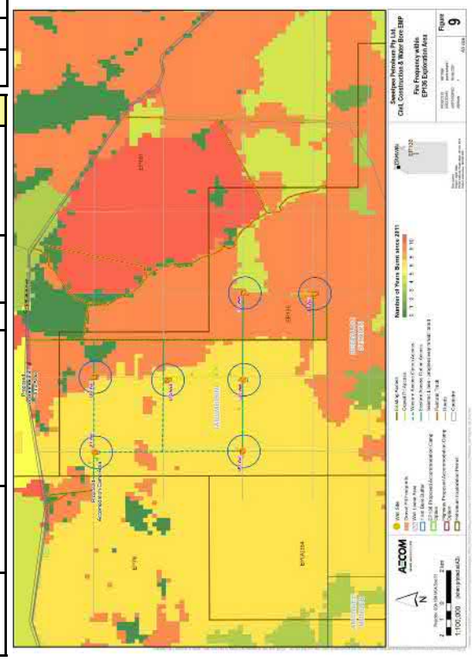
- ☐ Provide timely advice on changes in level of fire risk as available.
- ☐ Monitor team and area common channels for bushfire early warning.
- ☐ Update changes in work location.

Bushfire First Responder Checklist

The following sequence must be followed by the first person responding to a fire:

1. Danger – Remove yourself and others from danger is safe to do so.

2. Alarm – Raise the alarm either on common radio channel or other agreed process.



3. Gather Information –

- ☐ **Location** – Direction from known reference points, (e.g. roads and Sweetpea's infrastructure such as lease pad location).
- ☐ **Impacts (actual and potential)** – Life, property and the environment.
- ☐ **Fire Characteristics** – Grass or woodlands, flame height, fire front and direction of travel.
- ☐ **Weather** – Wind strength and direction.
- ☐ **Response in Progress** – What response is underway and by who (Sweetpea Contractors, Pastoralist or Emergency Services).
- ☐ **Response required** – Sweetpea Contractors and / or Pastoralist and / or Emergency Services.
- ☐ **Access** – Safe access and egress routes.

4. Notify Sweetpea – Fire Officer/Supervisor

5. Notify Pastoralists – Refer to Property Contacts.

6. Notify Emergency Services – Call "000" or "112" (for mobiles) if Sweetpea and Pastoralist unable to manage situation

7. Respond – If safe to do so in consultation with Pastoralists.

8. Handover – To the Pastoralist / Emergency Services on arrival.

Annual Works Calendar

Month	Bushfire Risk	Action	Month	Bushfire Risk	Action
Jan	Low	• No fire management activity	July	Medium	• Manage vegetation onsite including weeds • Manage fire break and fire access trail • Monitor NAFI • Liaise with neighbour regarding bushfires
Feb	Low	• No fire management activity	Aug	High	• Monitor NAFI and visual scan horizon for smoke • Liaise with neighbour regarding bushfires • Review the preparedness planning requirements
Mar	Low	• Weed survey • Planning meeting with neighbour • Annual fire mapping to monitor changes to fire frequency in the relevant area.	Sept	High	• Monitor NAFI and visual scan horizon for smoke • Liaise with neighbour regarding bushfires • Review the preparedness planning requirements
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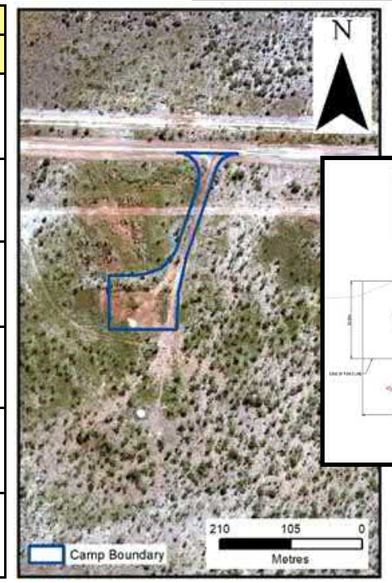
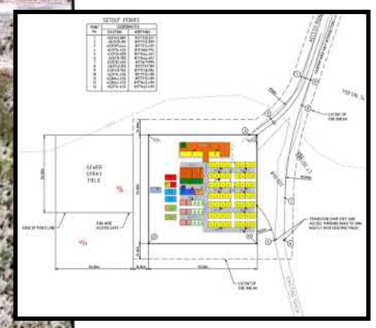
June	Medium	• Manage vegetation onsite including weeds • Manage fire break and fire access trail • Monitor NAFI • Liaise with neighbour regarding bushfires	Dec	Medium	• Manage vegetation onsite including weeds • Manage fire break and fire access trail • Monitor NAFI • Liaise with neighbour regarding bushfires





Exploration Permit 136
Accommodation Camp
Bushfire Management Plan 2022/2025
Tanumbirini Station

Location of EP136—Civil Construction Area—LP1 Camp Site Option	
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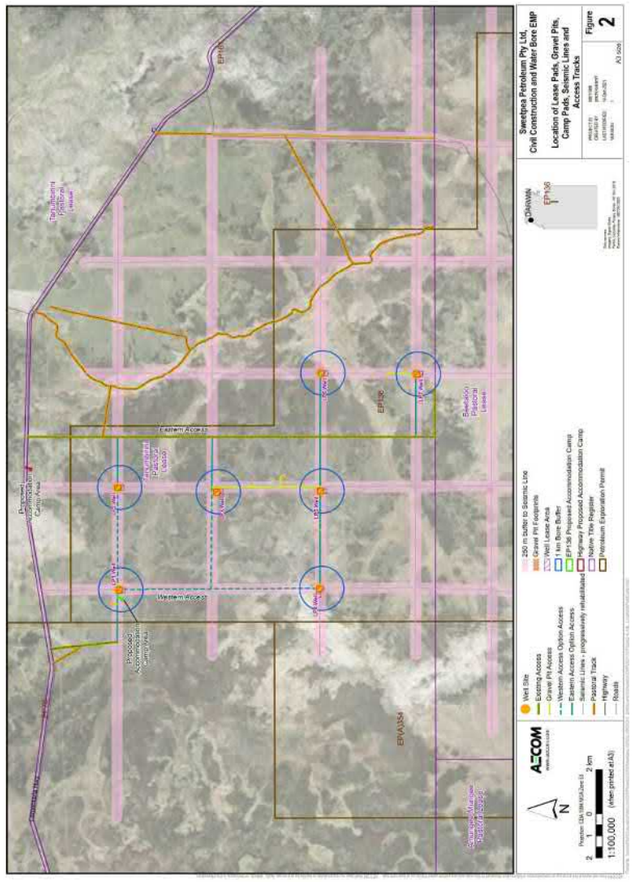

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APPENDIX I Bushfire Management Plan | Version 2 | December 2021

Bushfire Preparedness

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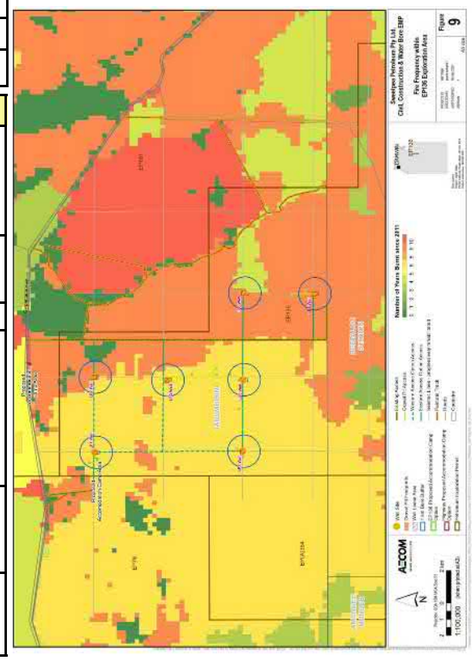

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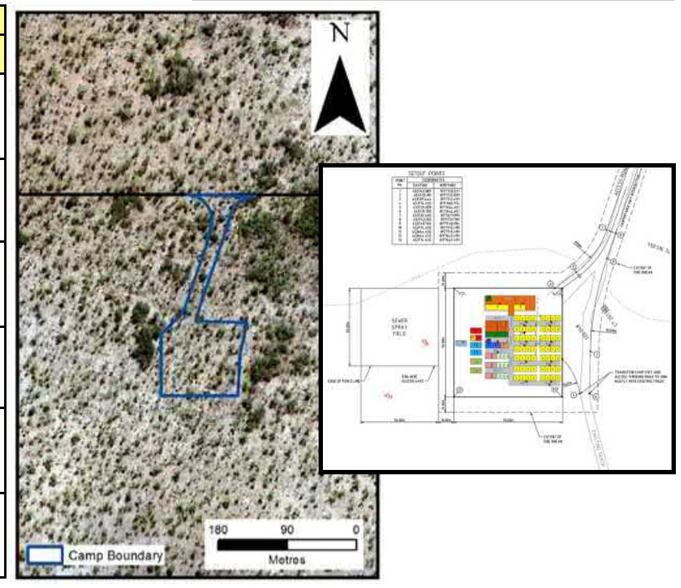
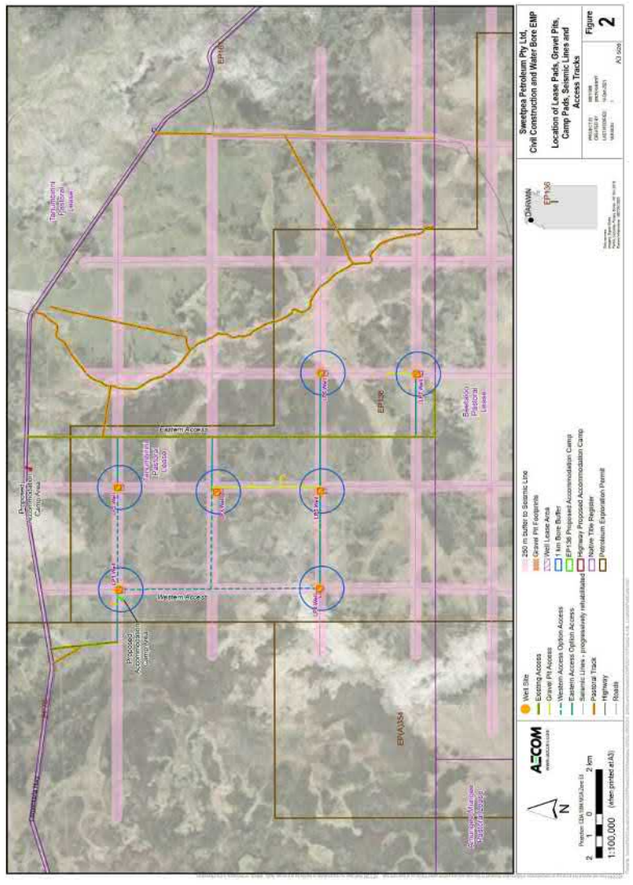


Exploration Permit 136

Bushfire Management Plan 2022/2025

Tanumbirini Station

Location of EP136—Civil Construction Area—Well Lease Pad 1	
Property land uses	Gas exploration and cattle grazing
Site fire management aim	To reduce the occurrence of, and minimise the impact of bushfires, thereby reducing the threat to life, property, cultural values and the environment.
Site fire management objectives	Mitigate the potential impact of unplanned fires on Sweetpea's people, assets and operations and neighbouring land uses.



Bushfire Officer	Contact Details	Name
	[redacted]	[redacted]

Properties	Contact Details	Name
Amungee Mungee Station	[redacted]	[redacted]
Tanumbirini Station	[redacted]	[redacted]
Beetaloo Station	[redacted]	[redacted]

Offsite Stakeholders	Contact Details	Name
National Response Centre	1800 076 251	24/7 contract line
Emergency	000 or 112 mobile	
Bushfire NT Katherine office (Savanna)	(08) 8973 8876	
Bushfire NT Alice Springs office (Barkly)	(08) 8952 3066	
NAFI North	https://www.firenorth.org.au/nafi3/	
Secure NT (Fire Bans)	https://securent.nt.gov.au/alerts	
Fire incident map	https://www.pfes.nt.gov.au/incidentmap/	

Sweetpea's Civil Construction Program Fire Management Zones—Bushfire Management Actions	
Well Pads and Tank Pads	• Remove all vegetation within the lease pad area and implement erosion and sediment control plan. • Treat emerging vegetation with herbicide. • Hot works are not permitted on total fire ban days without written approval from a fire control officer or fire warden.
Fire management break	• A 10 m wide cleared perimeter around well pads and tank pads • An additional 10 m wide bare earth fire break incorporating a 4 m wide fire access trail
Fire access trails	• Create and maintain 4 m wide access trail by grading or spraying
Asset Protection Zone (APZ)	• Site Manager to assess fuel load prior to camp establishment and again at end of wet season if infrastructure is still in place. • Establish a 20 m low fuel zone around well pads and lease pads. • Monitor for grassy weeds and control where appropriate. • If deemed necessary, conduct controlled burns where other controls are not effective and in consultation with neighbouring properties. • Ensure 4 m wide fire access trail around the perimeter of the asset protection zone is trafficable by fire fighting appliances.
Civil Construction Program	• Adequate fire protection equipment to be provided to prevent fires, the spread of fire, injury to personnel, and to ensure local bushfire and other fire regulations are observed. • Fire extinguishers to be fitted to all vehicles and key locations at camp.
Neighbouring Property Fire Management Zone	• Fire management planning meeting with neighbouring properties prior to commencing civil construction activities, and reviewed annually. • Neighbour to advise proponent of planned burns.

Fire Management Risks

- Ignitions (humans and lightening) on or off site resulting in harm to workers and loss of equipment.
- Fire scar mapping indicates the exploration area burns approximately every 3 to 5 years.
- Bullwaddy and Lancewood vegetation communities occur in areas across the permit and are fire sensitive. Hot fires have the ability to reduce habitat quality for both flora and fauna species which utilise these vegetation communities.
- Spread of high fuel load grassy weeds could increase fire intensity, e.g. gamba, grader and buffel grass, adjacent infrastructure areas and access tracks.

This Site Specific Bushfire Management Plan has been prepared for Sweetpea to manage the risk from bushfire within the planned civil construction area. This Plan should be read in conjunction with the Overarching *Environmental Management Plan and Emergency Response Plans* for Sweetpeas operations in the Beetaloo Basin—Appendix L.

Bushfire Preparedness

Preparedness Planning

Mandatory for all Severe, Extreme and Catastrophic FDI days
The following must be reviewed daily. If fire alerts are active or presenting with a know risk (fire in the area), personnel must execute their contingency plans which need to encompass the following:

- ☐ Procedure on identifying and notifying of a bushfire.
- ☐ Critical equipment to be removed / isolated/ shut down.
- ☐ Safe evacuation routes from site and muster points.
- ☐ Communication methods:
  - ✓ Team channels and / or phone numbers
  - ✓ Area channels and/or phone numbers
- ☐ Closest 'Safe Havens' .

Monitoring

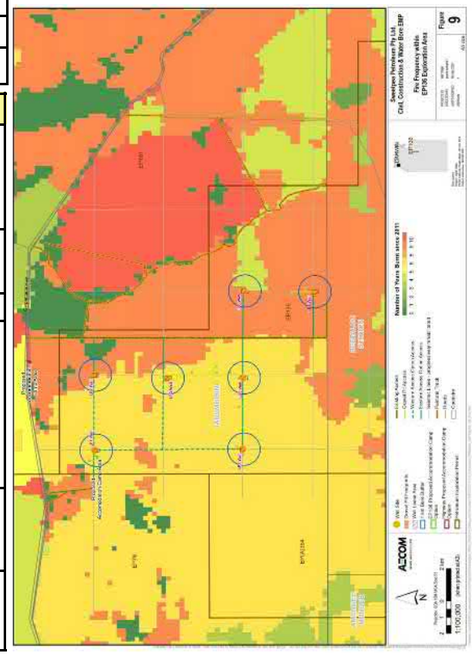
- ☐ Provide timely advice on changes in level of fire risk as available.
- ☐ Monitor team and area common channels for bushfire early warning.
- ☐ Update changes in work location.

Bushfire First Responder Checklist

The following sequence must be followed by the first person responding to a fire:

1. Danger – Remove yourself and others from danger is safe to do so.

2. Alarm – Raise the alarm either on common radio channel or other agreed process.



3. Gather Information –

- ☐ **Location** – Direction from known reference points, (e.g. roads and Sweetpea's infrastructure such as lease pad location).
- ☐ **Impacts (actual and potential)** – Life, property and the environment.
- ☐ **Fire Characteristics** – Grass or woodlands, flame height, fire front and direction of travel.
- ☐ **Weather** – Wind strength and direction.
- ☐ **Response in Progress** – What response is underway and by who (Sweetpea Contractors, Pastoralist or Emergency Services).
- ☐ **Response required** – Sweetpea Contractors and / or Pastoralist and / or Emergency Services.
- ☐ **Access** – Safe access and egress routes.

4. Notify Sweetpea – Fire Officer/Supervisor

5. Notify Pastoralists – Refer to Property Contacts.

6. Notify Emergency Services – Call "000" or "112" (for mobiles) if Sweetpea and Pastoralist unable to manage situation

7. Respond – If safe to do so in consultation with Pastoralists.

8. Handover – To the Pastoralist / Emergency Services on arrival.

Annual Works Calendar					
Month	**Bushfire Risk**	**Action**	**Month**	**Bushfire Risk**	**Action**
Jan	Low	• No fire management activity	July	Medium	• Manage vegetation onsite including weeds • Manage fire break and fire access trail • Monitor NAFI • Liaise with neighbour regarding bushfires
Feb	Low	• No fire management activity	Aug	High	• Monitor NAFI and visual scan horizon for smoke • Liaise with neighbour regarding bushfires • Review the preparedness planning requirements
Mar	Low	• Weed survey • Planning meeting with neighbour • Annual fire mapping to monitor changes to fire frequency in the relevant area.	Sept	High	• Monitor NAFI and visual scan horizon for smoke • Liaise with neighbour regarding bushfires • Review the preparedness planning requirements
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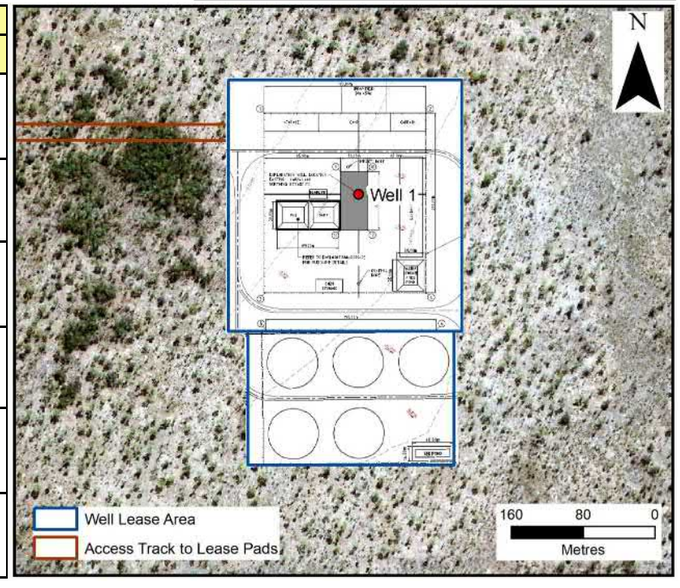
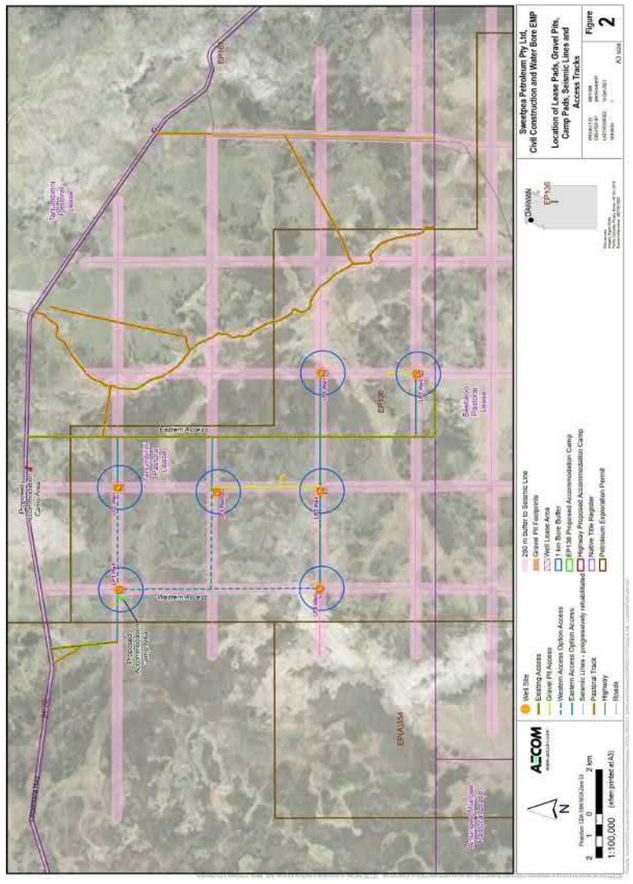


Exploration Permit 136

Bushfire Management Plan 2022/2025

Tanumbirini Station

Location of EP136—Civil Construction Area—Well Lease Pad 2	
Property land uses	Gas exploration and cattle grazing
Site fire management aim	To reduce the occurrence of, and minimise the impact of bushfires, thereby reducing the threat to life, property, cultural values and the environment.
Site fire management objectives	Mitigate the potential impact of unplanned fires on Sweetpea's people, assets and operations and neighbouring land uses.



Bushfire Officer	Contact Details	Name
	[redacted]	[redacted]

Properties	Contact Details	Name
Amungee Mungee Station	[redacted]	[redacted]
Tanumbirini Station	[redacted]	[redacted]
Beetaloo Station	[redacted]	[redacted]

Offsite Stakeholders	Contact Details	Name
National Response Centre	1800 076 251	24/7 contract line
Emergency	000 or 112 mobile	
Bushfire NT Katherine office (Savanna)	(08) 8973 8876	
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Secure NT (Fire Bans)	https://securent.nt.gov.au/alerts	
Fire incident map	https://www.pfes.nt.gov.au/incidentmap/	

Sweetpea's Civil Construction Program Fire Management Zones—Bushfire Management Actions	
Well Pads and Tank Pads	• Remove all vegetation within the lease pad area and implement erosion and sediment control plan. • Treat emerging vegetation with herbicide. • Hot works are not permitted on total fire ban days without written approval from a fire control officer or fire warden.
Fire management break	• A 10 m wide cleared perimeter around well pads and tank pads • An additional 10 m wide bare earth fire break incorporating a 4 m wide fire access trail
Fire access trails	• Create and maintain 4 m wide access trail by grading or spraying
Asset Protection Zone (APZ)	• Site Manager to assess fuel load prior to camp establishment and again at end of wet season if infrastructure is still in place. • Establish a 20 m low fuel zone around well pads and lease pads. • Monitor for grassy weeds and control where appropriate. • If deemed necessary, conduct controlled burns where other controls are not effective and in consultation with neighbouring properties. • Ensure 4 m wide fire access trail around the perimeter of the asset protection zone is trafficable by fire fighting appliances.
Civil Construction Program	• Adequate fire protection equipment to be provided to prevent fires, the spread of fire, injury to personnel, and to ensure local bushfire and other fire regulations are observed. • Fire extinguishers to be fitted to all vehicles and key locations at camp.
Neighbouring Property Fire Management Zone	• Fire management planning meeting with neighbouring properties prior to commencing civil construction activities, and reviewed annually. • Neighbour to advise proponent of planned burns.

Fire Management Risks

- Ignitions (humans and lightening) on or off site resulting in harm to workers and loss of equipment.
- Fire scar mapping indicates the exploration area burns approximately every 3 to 5 years.
- Bullwaddy and Lancewood vegetation communities occur in areas across the permit and are fire sensitive. Hot fires have the ability to reduce habitat quality for both flora and fauna species which utilise these vegetation communities.
- Spread of high fuel load grassy weeds could increase fire intensity, e.g. gamba, grader and buffel grass, adjacent infrastructure areas and access tracks.

This Site Specific Bushfire Management Plan has been prepared for Sweetpea to manage the risk from bushfire within the planned civil construction area. This Plan should be read in conjunction with the Overarching *Environmental Management Plan and Emergency Response Plans* for Sweetpeas operations in the Beetaloo Basin—Appendix L.

APPENDIX I Bushfire Management Plan | Version 2 | December 2021

Bushfire Preparedness

Preparedness Planning

Mandatory for all Severe, Extreme and Catastrophic FDI days
The following must be reviewed daily. If fire alerts are active or presenting with a know risk (fire in the area), personnel must execute their contingency plans which need to encompass the following:

- ☐ Procedure on identifying and notifying of a bushfire.
- ☐ Critical equipment to be removed / isolated/ shut down.
- ☐ Safe evacuation routes from site and muster points.
- ☐ Communication methods:
  - ✓ Team channels and / or phone numbers
  - ✓ Area channels and/or phone numbers
- ☐ Closest 'Safe Havens' .

Monitoring

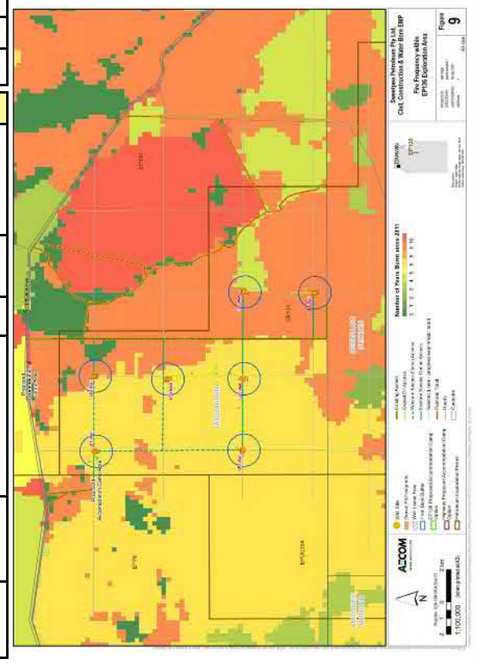
- ☐ Provide timely advice on changes in level of fire risk as available.
- ☐ Monitor team and area common channels for bushfire early warning.
- ☐ Update changes in work location.

Bushfire First Responder Checklist

The following sequence must be followed by the first person responding to a fire:

1. Danger – Remove yourself and others from danger is safe to do so.

2. Alarm – Raise the alarm either on common radio channel or other agreed process.



3. Gather Information –

- ☐ **Location** – Direction from known reference points, (e.g. roads and Sweetpea's infrastructure such as lease pad location).
- ☐ **Impacts (actual and potential)** – Life, property and the environment.
- ☐ **Fire Characteristics** – Grass or woodlands, flame height, fire front and direction of travel.
- ☐ **Weather** – Wind strength and direction.
- ☐ **Response in Progress** – What response is underway and by who (Sweetpea Contractors, Pastoralist or Emergency Services).
- ☐ **Response required** – Sweetpea Contractors and / or Pastoralist and / or Emergency Services.
- ☐ **Access** – Safe access and egress routes.

4. Notify Sweetpea – Fire Officer/Supervisor

5. Notify Pastoralists – Refer to Property Contacts.

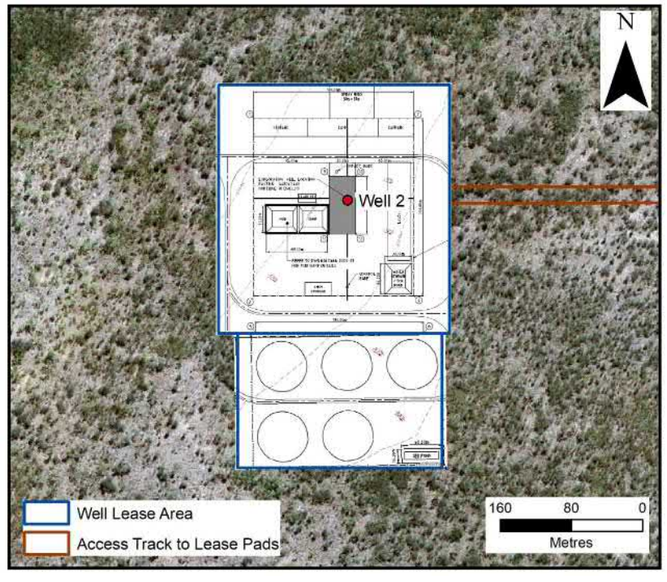
6. Notify Emergency Services – Call "000" or "112" (for mobiles) if Sweetpea and Pastoralist unable to manage situation

7. Respond – If safe to do so in consultation with Pastoralists.

8. Handover – To the Pastoralist / Emergency Services on arrival.

Annual Works Calendar

Month	Bushfire Risk	Action	Month	Bushfire Risk	Action
Jan	Low	• No fire management activity	July	Medium	• Manage vegetation onsite including weeds • Manage fire break and fire access trail • Monitor NAFI • Liaise with neighbour regarding bushfires
Feb	Low	• No fire management activity	Aug	High	• Monitor NAFI and visual scan horizon for smoke • Liaise with neighbour regarding bushfires • Review the preparedness planning requirements
Mar	Low	• Weed survey • Planning meeting with neighbour • Annual fire mapping to monitor changes to fire frequency in the relevant area.	Sept	High	• Monitor NAFI and visual scan horizon for smoke • Liaise with neighbour regarding bushfires • Review the preparedness planning requirements
Apr	Low	• No fire management activity	Oct	High	• Monitor NAFI and visual scan horizon for smoke • Liaise with neighbour regarding bushfires • Review the preparedness planning requirements
May	Medium	• Manage vegetation onsite including weeds • Manage fire break and fire access trail • Monitor NAFI • Liaise with neighbour regarding bushfires	Nov	High	• Monitor NAFI and visual scan horizon for smoke • Liaise with neighbour regarding bushfires • Review the preparedness planning requirements
June	Medium	• Manage vegetation onsite including weeds • Manage fire break and fire access trail • Monitor NAFI • Liaise with neighbour regarding bushfires	Dec	Medium	• Manage vegetation onsite including weeds • Manage fire break and fire access trail • Monitor NAFI • Liaise with neighbour regarding bushfires

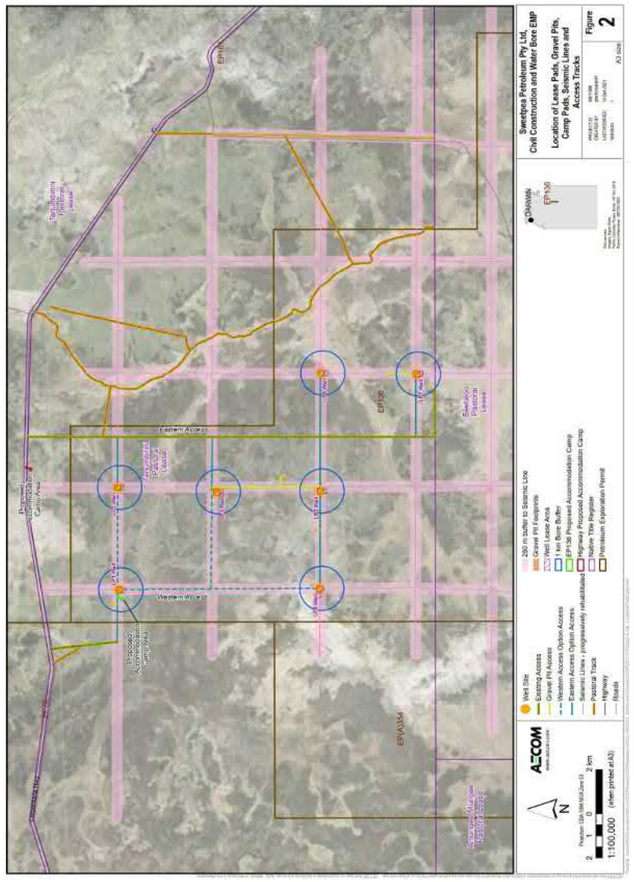


Exploration Permit 136

Bushfire Management Plan 2022/2025

Tanumbirini Station

Location of EP136—Civil Construction Area—Well Lease Pad 3	
Property land uses	Gas exploration and cattle grazing
Site fire management aim	To reduce the occurrence of, and minimise the impact of bushfires, thereby reducing the threat to life, property, cultural values and the environment.
Site fire management objectives	Mitigate the potential impact of unplanned fires on Sweetpea's people, assets and operations and neighbouring land uses.



Bushfire Officer	Contact Details	Name
	[redacted]	[redacted]

Properties	Contact Details	Name
Amungee Mungee Station	[redacted]	[redacted]
Tanumbirini Station	[redacted]	[redacted]
Beetaloo Station	[redacted]	[redacted]

Offsite Stakeholders	Contact Details	Name
National Response Centre	1800 076 251	24/7 contract line
Emergency	000 or 112 mobile	
Bushfire NT Katherine office (Savanna)	(08) 8973 8876	
Bushfire NT Alice Springs office (Barkly)	(08) 8952 3066	
NAFI North	https://www.firenorth.org.au/nafi3/	
Secure NT (Fire Bans)	https://securent.nt.gov.au/alerts	
Fire incident map	https://www.pfes.nt.gov.au/incidentmap/	

Sweetpea's Civil Construction Program Fire Management Zones—Bushfire Management Actions	
Well Pads and Tank Pads	• Remove all vegetation within the lease pad area and implement erosion and sediment control plan. • Treat emerging vegetation with herbicide. • Hot works are not permitted on total fire ban days without written approval from a fire control officer or fire warden.
Fire management break	• A 10 m wide cleared perimeter around well pads and tank pads • An additional 10 m wide bare earth fire break incorporating a 4 m wide fire access trail
Fire access trails	• Create and maintain 4 m wide access trail by grading or spraying
Asset Protection Zone (APZ)	• Site Manager to assess fuel load prior to camp establishment and again at end of wet season if infrastructure is still in place. • Establish a 20 m low fuel zone around well pads and lease pads. • Monitor for grassy weeds and control where appropriate. • If deemed necessary, conduct controlled burns where other controls are not effective and in consultation with neighbouring properties. • Ensure 4 m wide fire access trail around the perimeter of the asset protection zone is trafficable by fire fighting appliances.
Civil Construction Program	• Adequate fire protection equipment to be provided to prevent fires, the spread of fire, injury to personnel, and to ensure local bushfire and other fire regulations are observed. • Fire extinguishers to be fitted to all vehicles and key locations at camp.
Neighbouring Property Fire Management Zone	• Fire management planning meeting with neighbouring properties prior to commencing civil construction activities, and reviewed annually. • Neighbour to advise proponent of planned burns.

Fire Management Risks

- Ignitions (humans and lightening) on or off site resulting in harm to workers and loss of equipment.
- Fire scar mapping indicates the exploration area burns approximately every 3 to 5 years.
- Bullwaddy and Lancewood vegetation communities occur in areas across the permit and are fire sensitive. Hot fires have the ability to reduce habitat quality for both flora and fauna species which utilise these vegetation communities.
- Spread of high fuel load grassy weeds could increase fire intensity, e.g. gamba, grader and buffel grass, adjacent infrastructure areas and access tracks.

This Site Specific Bushfire Management Plan has been prepared for Sweetpea to manage the risk from bushfire within the planned civil construction area. This Plan should be read in conjunction with the Overarching *Environmental Management Plan and Emergency Response Plans* for Sweetpeas operations in the Beetaloo Basin—Appendix L.

APPENDIX I Bushfire Management Plan | Version 2 | December 2021

Bushfire Preparedness

Preparedness Planning

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- ☐ Procedure on identifying and notifying of a bushfire.
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- ☐ Communication methods:
  - ✓ Team channels and / or phone numbers
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Monitoring

- ☐ Provide timely advice on changes in level of fire risk as available.
- ☐ Monitor team and area common channels for bushfire early warning.
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Bushfire First Responder Checklist

The following sequence must be followed by the first person responding to a fire:

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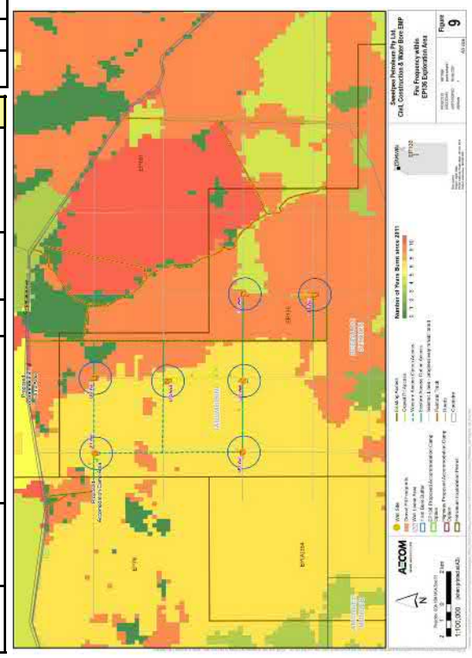

3. Gather Information –

- ☐ **Location** – Direction from known reference points, (e.g. roads and Sweetpea's infrastructure such as lease pad location).
- ☐ **Impacts (actual and potential)** – Life, property and the environment.
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Annual Works Calendar					
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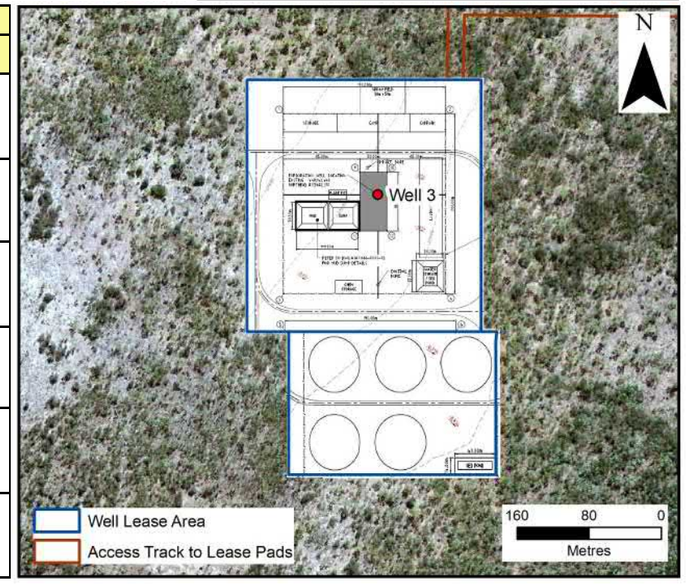

Exploration Permit 136

Bushfire Management Plan 2022/2025

Tanumbirini Station

Location of EP136—Civil Construction Area—Well Lease Pad 4	
Property land uses	Gas exploration and cattle grazing
Site fire management aim	To reduce the occurrence of, and minimise the impact of bushfires, thereby reducing the threat to life, property, cultural values and the environment.
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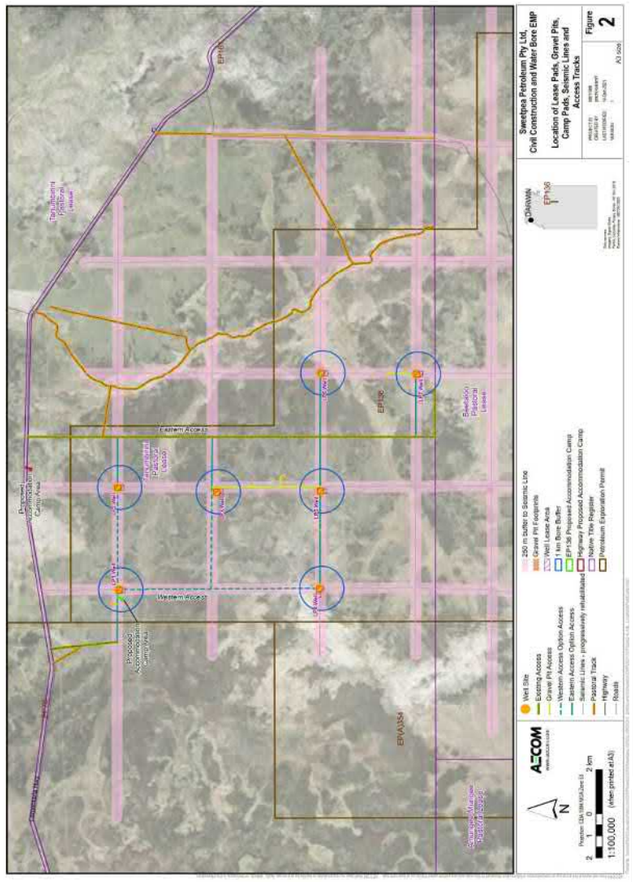

Bushfire Officer	Contact Details	Name
	[redacted]	[redacted]

Properties	Contact Details	Name
Amungee Mungee Station	[redacted]	[redacted]
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Sweetpea's Civil Construction Program Fire Management Zones—Bushfire Management Actions

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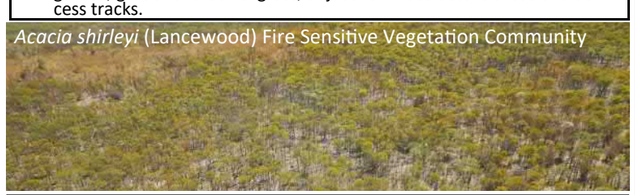

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APPENDIX I Bushfire Management Plan | Version 2 | December 2021

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Monitoring

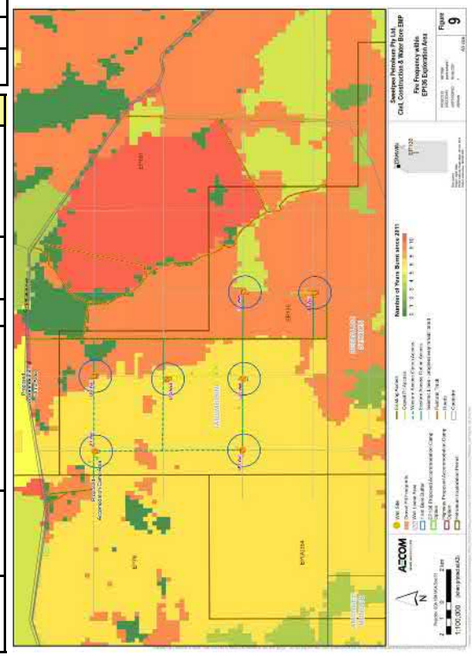
- ☐ Provide timely advice on changes in level of fire risk as available.
- ☐ Monitor team and area common channels for bushfire early warning.
- ☐ Update changes in work location.

Bushfire First Responder Checklist

The following sequence must be followed by the first person responding to a fire:

1. Danger – Remove yourself and others from danger is safe to do so.

2. Alarm – Raise the alarm either on common radio channel or other agreed process.



3. Gather Information –

- ☐ **Location** – Direction from known reference points, (e.g. roads and Sweetpea's infrastructure such as lease pad location).
- ☐ **Impacts (actual and potential)** – Life, property and the environment.
- ☐ **Fire Characteristics** – Grass or woodlands, flame height, fire front and direction of travel.
- ☐ **Weather** – Wind strength and direction.
- ☐ **Response in Progress** – What response is underway and by who (Sweetpea Contractors, Pastoralist or Emergency Services).
- ☐ **Response required** – Sweetpea Contractors and / or Pastoralist and / or Emergency Services.
- ☐ **Access** – Safe access and egress routes.

4. Notify Sweetpea – Fire Officer/Supervisor

5. Notify Pastoralists – Refer to Property Contacts.

6. Notify Emergency Services – Call "000" or "112" (for mobiles) if Sweetpea and Pastoralist unable to manage situation

7. Respond – If safe to do so in consultation with Pastoralists.

8. Handover – To the Pastoralist / Emergency Services on arrival.

Annual Works Calendar

Month	Bushfire Risk	Action	Month	Bushfire Risk	Action
Jan	Low	• No fire management activity	July	Medium	• Manage vegetation onsite including weeds • Manage fire break and fire access trail • Monitor NAFI • Liaise with neighbour regarding bushfires
Feb	Low	• No fire management activity	Aug	High	• Monitor NAFI and visual scan horizon for smoke • Liaise with neighbour regarding bushfires • Review the preparedness planning requirements
Mar	Low	• Weed survey • Planning meeting with neighbour • Annual fire mapping to monitor changes to fire frequency in the relevant area.	Sept	High	• Monitor NAFI and visual scan horizon for smoke • Liaise with neighbour regarding bushfires • Review the preparedness planning requirements
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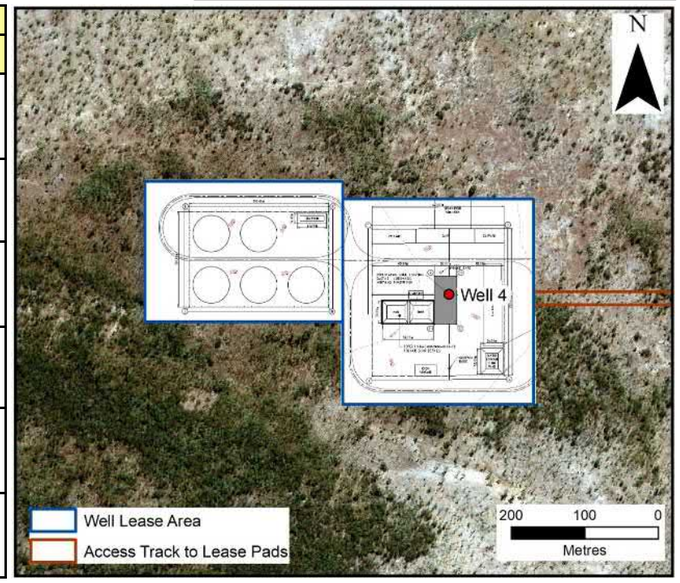
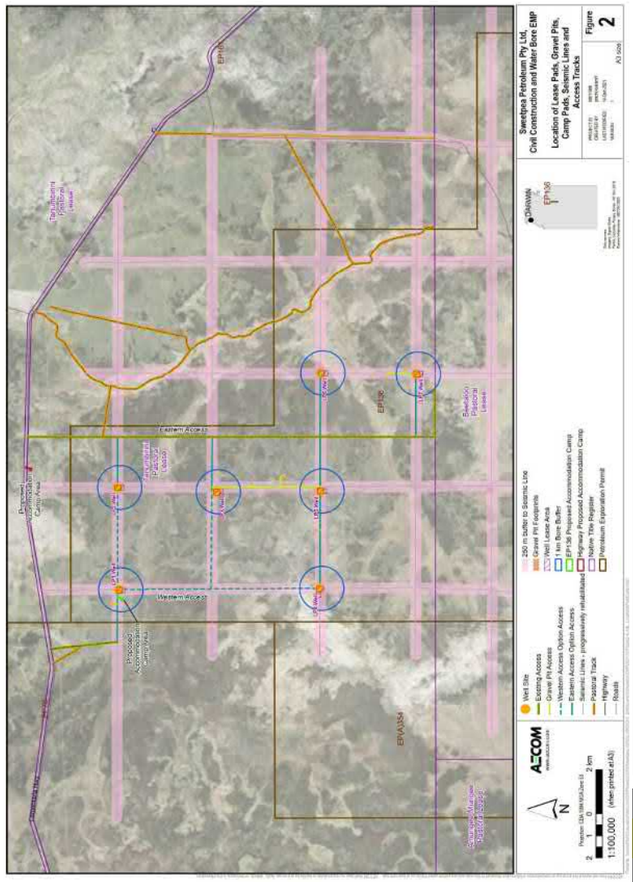


Exploration Permit 136

Bushfire Management Plan 2022/2025

Tanumbirini Station

Location of EP136—Civil Construction Area—Well Lease Pad 5	
Property land uses	Gas exploration and cattle grazing
Site fire management aim	To reduce the occurrence of, and minimise the impact of bushfires, thereby reducing the threat to life, property, cultural values and the environment.
Site fire management objectives	Mitigate the potential impact of unplanned fires on Sweetpea's people, assets and operations and neighbouring land uses.



Bushfire Officer	Contact Details	Name
	[redacted]	[redacted]

Properties	Contact Details	Name
Amungee Mungee Station	[redacted]	[redacted]
Tanumbirini Station	[redacted]	[redacted]
Beetaloo Station	[redacted]	[redacted]

Offsite Stakeholders	Contact Details	Name
National Response Centre	1800 076 251	24/7 contract line
Emergency	000 or 112 mobile	
Bushfire NT Katherine office (Savanna)	(08) 8973 8876	
Bushfire NT Alice Springs office (Barkly)	(08) 8952 3066	
NAFI North	https://www.firenorth.org.au/nafi3/	
Secure NT (Fire Bans)	https://securent.nt.gov.au/alerts	
Fire incident map	https://www.pfes.nt.gov.au/incidentmap/	

Sweetpea's Civil Construction Program Fire Management Zones—Bushfire Management Actions

Well Pads and Tank Pads	• Remove all vegetation within the lease pad area and implement erosion and sediment control plan. • Treat emerging vegetation with herbicide. • Hot works are not permitted on total fire ban days without written approval from a fire control officer or fire warden.
Fire management break	• A 10 m wide cleared perimeter around well pads and tank pads • An additional 10 m wide bare earth fire break incorporating a 4 m wide fire access trail
Fire access trails	• Create and maintain 4 m wide access trail by grading or spraying
Asset Protection Zone (APZ)	• Site Manager to assess fuel load prior to camp establishment and again at end of wet season if infrastructure is still in place. • Establish a 20 m low fuel zone around well pads and lease pads. • Monitor for grassy weeds and control where appropriate. • If deemed necessary, conduct controlled burns where other controls are not effective and in consultation with neighbouring properties. • Ensure 4 m wide fire access trail around the perimeter of the asset protection zone is trafficable by fire fighting appliances.
Civil Construction Program	• Adequate fire protection equipment to be provided to prevent fires, the spread of fire, injury to personnel, and to ensure local bushfire and other fire regulations are observed. • Fire extinguishers to be fitted to all vehicles and key locations at camp.
Neighbouring Property Fire Management Zone	• Fire management planning meeting with neighbouring properties prior to commencing civil construction activities, and reviewed annually. • Neighbour to advise proponent of planned burns.

Fire Management Risks

- Ignitions (humans and lightening) on or off site resulting in harm to workers and loss of equipment.
- Fire scar mapping indicates the exploration area burns approximately every 3 to 5 years.
- Bullwaddy and Lancewood vegetation communities occur in areas across the permit and are fire sensitive. Hot fires have the ability to reduce habitat quality for both flora and fauna species which utilise these vegetation communities.
- Spread of high fuel load grassy weeds could increase fire intensity, e.g. gamba, grader and buffel grass, adjacent infrastructure areas and access tracks.

This Site Specific Bushfire Management Plan has been prepared for Sweetpea to manage the risk from bushfire within the planned civil construction area. This Plan should be read in conjunction with the Overarching *Environmental Management Plan and Emergency Response Plans* for Sweetpeas operations in the Beetaloo Basin—Appendix L.

APPENDIX I Bushfire Management Plan | Version 2 | December 2021

Bushfire Preparedness

Preparedness Planning

Mandatory for all Severe, Extreme and Catastrophic FDI days
The following must be reviewed daily. If fire alerts are active or presenting with a know risk (fire in the area), personnel must execute their contingency plans which need to encompass the following:

- ☐ Procedure on identifying and notifying of a bushfire.
- ☐ Critical equipment to be removed / isolated/ shut down.
- ☐ Safe evacuation routes from site and muster points.
- ☐ Communication methods:
  - ✓ Team channels and / or phone numbers
  - ✓ Area channels and/or phone numbers
- ☐ Closest 'Safe Havens' .

Monitoring

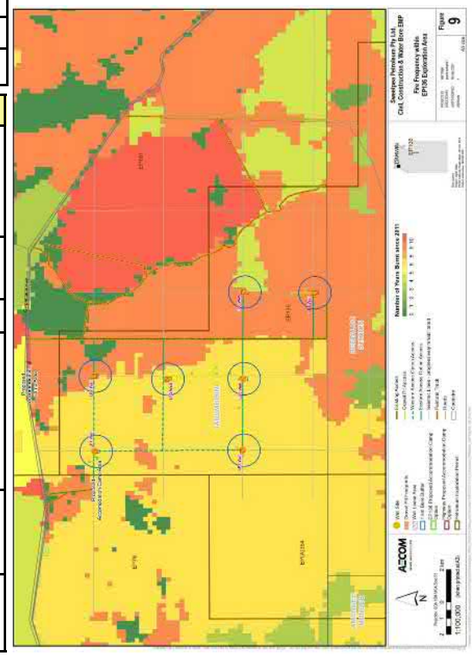
- ☐ Provide timely advice on changes in level of fire risk as available.
- ☐ Monitor team and area common channels for bushfire early warning.
- ☐ Update changes in work location.

Bushfire First Responder Checklist

The following sequence must be followed by the first person responding to a fire:

1. Danger – Remove yourself and others from danger is safe to do so.

2. Alarm – Raise the alarm either on common radio channel or other agreed process.



3. Gather Information –

- ☐ **Location** – Direction from known reference points, (e.g. roads and Sweetpea's infrastructure such as lease pad location).
- ☐ **Impacts (actual and potential)** – Life, property and the environment.
- ☐ **Fire Characteristics** – Grass or woodlands, flame height, fire front and direction of travel.
- ☐ **Weather** – Wind strength and direction.
- ☐ **Response in Progress** – What response is underway and by who (Sweetpea Contractors, Pastoralist or Emergency Services).
- ☐ **Response required** – Sweetpea Contractors and / or Pastoralist and / or Emergency Services.
- ☐ **Access** – Safe access and egress routes.

4. Notify Sweetpea – Fire Officer/Supervisor

5. Notify Pastoralists – Refer to Property Contacts.

6. Notify Emergency Services – Call "000" or "112" (for mobiles) if Sweetpea and Pastoralist unable to manage situation

7. Respond – If safe to do so in consultation with Pastoralists.

8. Handover – To the Pastoralist / Emergency Services on arrival.

Annual Works Calendar

Month	Bushfire Risk	Action	Month	Bushfire Risk	Action
Jan	Low	• No fire management activity	July	Medium	• Manage vegetation onsite including weeds • Manage fire break and fire access trail • Monitor NAFI • Liaise with neighbour regarding bushfires
Feb	Low	• No fire management activity	Aug	High	• Monitor NAFI and visual scan horizon for smoke • Liaise with neighbour regarding bushfires • Review the preparedness planning requirements
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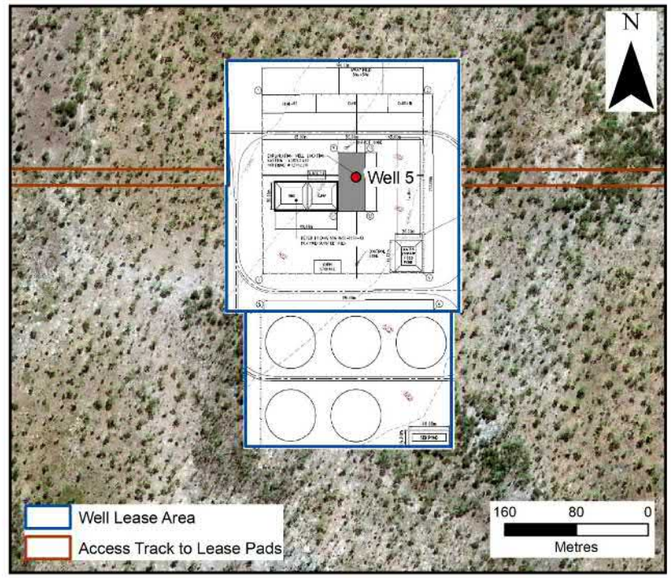
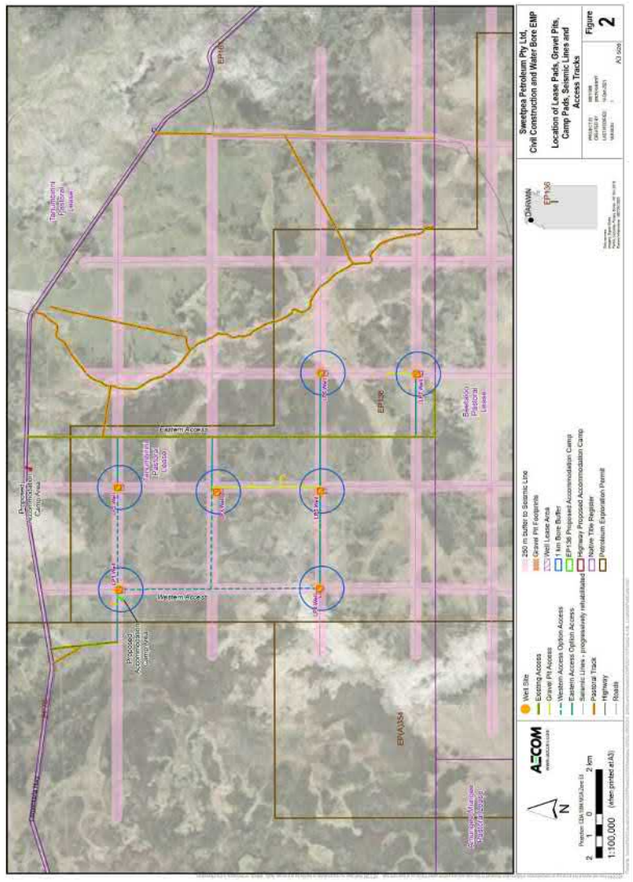


Exploration Permit 136

Bushfire Management Plan 2022/2025

Tanumbirini Station

Location of EP136—Civil Construction Area—Well Lease Pad 6	
Property land uses	Gas exploration and cattle grazing
Site fire management aim	To reduce the occurrence of, and minimise the impact of bushfires, thereby reducing the threat to life, property, cultural values and the environment.
Site fire management objectives	Mitigate the potential impact of unplanned fires on Sweetpea's people, assets and operations and neighbouring land uses.



Bushfire Officer	Contact Details	Name
	[redacted]	[redacted]

Properties	Contact Details	Name
Amungee Mungee Station	[redacted]	[redacted]
Tanumbirini Station	[redacted]	[redacted]
Beetaloo Station	[redacted]	[redacted]

Offsite Stakeholders	Contact Details	Name
National Response Centre	1800 076 251	24/7 contract line
Emergency	000 or 112 mobile	
Bushfire NT Katherine office (Savanna)	(08) 8973 8876	
Bushfire NT Alice Springs office (Barkly)	(08) 8952 3066	
NAFI North	https://www.firenorth.org.au/nafi3/	
Secure NT (Fire Bans)	https://securent.nt.gov.au/alerts	
Fire incident map	https://www.pfes.nt.gov.au/incidentmap/	

Sweetpea's Civil Construction Program Fire Management Zones—Bushfire Management Actions	
Well Pads and Tank Pads	• Remove all vegetation within the lease pad area and implement erosion and sediment control plan. • Treat emerging vegetation with herbicide. • Hot works are not permitted on total fire ban days without written approval from a fire control officer or fire warden.
Fire management break	• A 10 m wide cleared perimeter around well pads and tank pads • An additional 10 m wide bare earth fire break incorporating a 4 m wide fire access trail
Fire access trails	• Create and maintain 4 m wide access trail by grading or spraying
Asset Protection Zone (APZ)	• Site Manager to assess fuel load prior to camp establishment and again at end of wet season if infrastructure is still in place. • Establish a 20 m low fuel zone around well pads and lease pads. • Monitor for grassy weeds and control where appropriate. • If deemed necessary, conduct controlled burns where other controls are not effective and in consultation with neighbouring properties. • Ensure 4 m wide fire access trail around the perimeter of the asset protection zone is trafficable by fire fighting appliances.
Civil Construction Program	• Adequate fire protection equipment to be provided to prevent fires, the spread of fire, injury to personnel, and to ensure local bushfire and other fire regulations are observed. • Fire extinguishers to be fitted to all vehicles and key locations at camp.
Neighbouring Property Fire Management Zone	• Fire management planning meeting with neighbouring properties prior to commencing civil construction activities, and reviewed annually. • Neighbour to advise proponent of planned burns.

Bushfire Preparedness

Preparedness Planning

Mandatory for all Severe, Extreme and Catastrophic FDI days
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- ☐ Communication methods:
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Monitoring

- ☐ Provide timely advice on changes in level of fire risk as available.
- ☐ Monitor team and area common channels for bushfire early warning.
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Bushfire First Responder Checklist

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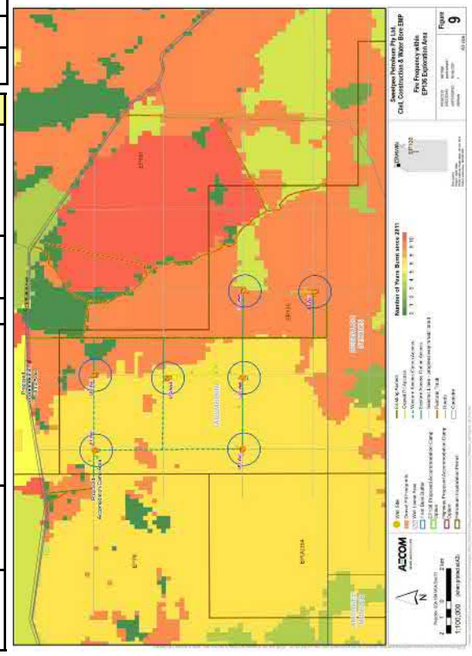

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Fire Management Risks

- Ignitions (humans and lightening) on or off site resulting in harm to workers and loss of equipment.
- Fire scar mapping indicates the exploration area burns approximately every 3 to 5 years.
- Bullwaddy and Lancewood vegetation communities occur in areas across the permit and are fire sensitive. Hot fires have the ability to reduce habitat quality for both flora and fauna species which utilise these vegetation communities.
- Spread of high fuel load grassy weeds could increase fire intensity, e.g. gamba, grader and buffel grass, adjacent infrastructure areas and access tracks.

This Site Specific Bushfire Management Plan has been prepared for Sweetpea to manage the risk from bushfire within the planned civil construction area. This Plan should be read in conjunction with the Overarching *Environmental Management Plan and Emergency Response Plans* for Sweetpeas operations in the Beetaloo Basin—Appendix L.

APPENDIX I Bushfire Management Plan | Version 2| December 2021

Annual Works Calendar

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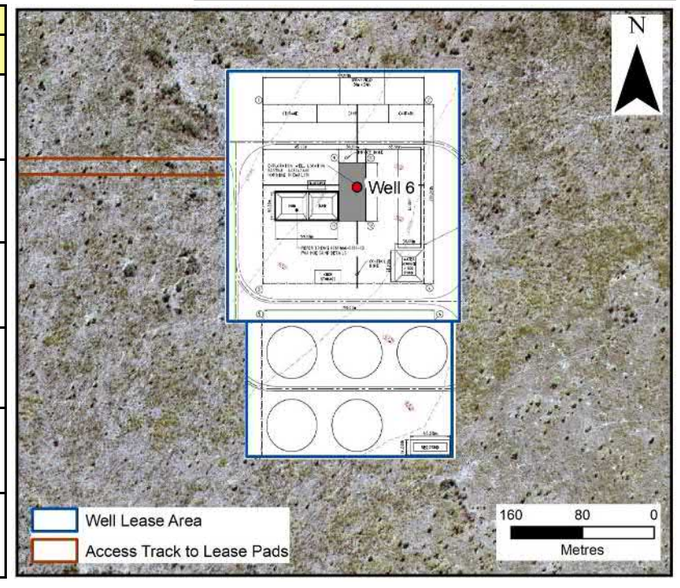

Exploration Permit 136

Bushfire Management Plan 2022/2025

Tanumbirini Station

Location of EP136—Civil Construction Area—Well Lease Pad 7	
Property land uses	Gas exploration and cattle grazing
Site fire management aim	To reduce the occurrence of, and minimise the impact of bushfires, thereby reducing the threat to life, property, cultural values and the environment.
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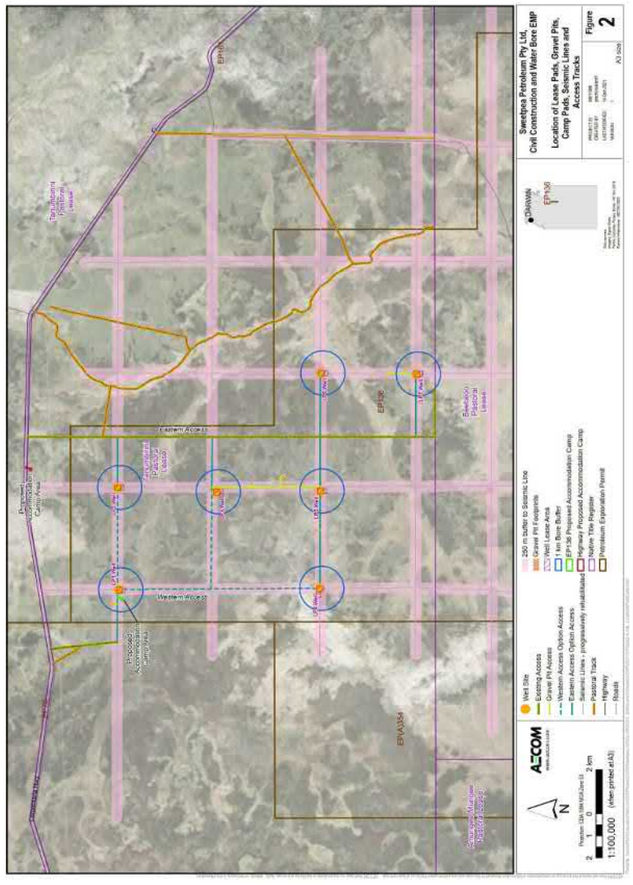

Bushfire Officer	Contact Details	Name
	[redacted]	[redacted]

Properties	Contact Details	Name
Amungee Mungee Station	[redacted]	[redacted]
Tanumbirini Station	[redacted]	[redacted]
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Sweetpea's Civil Construction Program Fire Management Zones—Bushfire Management Actions

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This Site Specific Bushfire Management Plan has been prepared for Sweetpea to manage the risk from bushfire within the planned civil construction area. This Plan should be read in conjunction with the Overarching *Environmental Management Plan and Emergency Response Plans* for Sweetpeas operations in the Beetaloo Basin—Appendix L.

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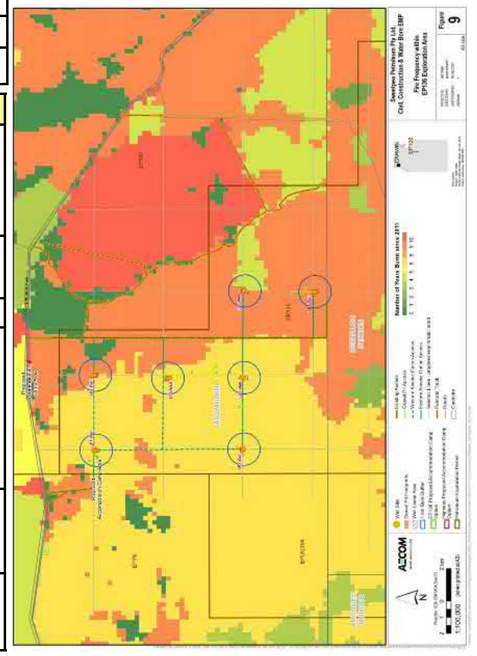

3. Gather Information –

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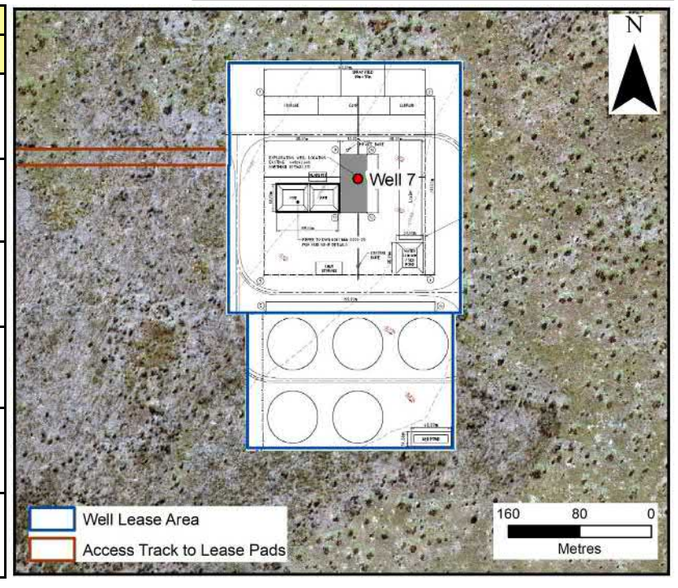
8. Handover – To the Pastoralist / Emergency Services on arrival.



Appendix J

Stakeholder Engagement

Appendix J Stakeholder Engagement

Stakeholder Contact Details						
Key Stakeholder	**Primary Contact**	**Position**	**Company**	**Phone**	**Mobile**	**email**
Pastoral Lease Holder						
Tanumbirini Station	[redacted]	Owner Representative	Rallen Australia	[redacted]	[redacted]	[redacted]
	[redacted]	Group Station Manager	Rallen Australia	[redacted]	[redacted]	[redacted]
	[redacted]	Legal Representation	[redacted]	[redacted]	[redacted]	[redacted]
Neighbouring Lease Holders						
Beetaloo Station	[redacted]	Station Manager	[redacted]	[redacted]	[redacted]	[redacted]
	[redacted]	Legal Representation	[redacted]	[redacted]	[redacted]	[redacted]
Traditional Owners						
Northern Land Council	[redacted]	Minerals and Energy	Northern Land Council	[redacted]	[redacted]	[redacted]
Neighbouring Permit Holders						
Origin	[redacted]	External Affairs Manager - Beetaloo Assets	Origin Energy	[redacted]	[redacted]	[redacted]
Santos	[redacted]	Manager - Onshore New Ventures	Santos Limited	[redacted]	[redacted]	[redacted]
Northern Territory Government Agencies						
Transport and Civil Services Division of Department of Infrastructure Planning and Logistics (DIPL)	[redacted]	Transport and Civil Services	NTG	[redacted]	[redacted]	[redacted]
Department of Industry, Tourism and Trade	[redacted]	Director of Petroleum Tenure Energy Division	NTG	[redacted]	[redacted]	[redacted]
Department of Environment, Parks and Water Security (DEPWS) Water Resource Division	[redacted]	Assistant Director - Petroleum & Mining / Water Resources Division	NTG	[redacted]	[redacted]	[redacted]
Department of Environment, Parks and Water Security (DEPWS) Weeds Branch	[redacted]	Onshore Petroleum Weed Management Officer	NTG	[redacted]	[redacted]	[redacted]
Aboriginal Areas Protection Authority	[redacted]	Assessment and Regulation Officer	NTG	[redacted]	[redacted]	[redacted]
Other						
OSD Pipelines	[redacted]	Pipeline Asset Services - Senior Business Support Officer	OSD Pipelines	[redacted]	[redacted]	[redacted]

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Summary of Sweetpea Petroleum Pty Ltd Stakeholder Engagement Log					
Date	**Company**	**Information Provided**	**Correspondence Type**	**Objections**	**Discussion/Assessment of Objections**
Tanumbirini Station Communication Log					
21/07/2019	Sweetpea Petroleum	Introductory Phone Call	Phone Call	-	Introductory phone call to Tanumbirini Station owners.
9/08/2019	Insight Investment Sweetpea	Sweetpea Petroleum Proposed Activity	Face-to-Face Meeting	-	Meeting with owner of Tanumbirini Station to discuss Work Program and timelines of Sweetpea activities, including baseline studies required to prepare EMPs.
9/08/2019	Insight Investment	-	Follow up email to Sweetpea	-	A thank you email sent from Tanumbirini Station owners.
12/08/2019	Sweetpea Petroleum	Additional information provided for background and context	Email response to Tanumbirini Station owner.	-	Sweetpea provided additional background and context into the EP136. Detailed outline of proposed works and proposed schedule. Site-based environmental and archaeological assessments for Seismic EMP (October 2019).
14/08/2019	Insight Investment	-	Email response to Sweetpea	-	Tanumbirini Station owner advised he would await formal application for access for baseline studies.
12/09/2019	Tanumbirini Station Sweetpea AECOM	Sweetpea Petroleum Proposed Activity	Face-to-Face Meeting	-	Sweetpea and their consultant attended Tanumbirini Station to provide overview of Sweetpea's planned exploration activities for next two years and intention of conducting seismic exploration in 2020.
13/09/2019	Sweetpea Petroleum	-	Follow up email to Tanumbirini Station Manager	-	Thankyou email to Tanumbirini Station Manager.
14/10/2019	Sweetpea Petroleum	Sweetpea Seismic Line Scouting Figure	Email and phone call to Tanumbirini Station Manager	No	Request to access Tanumbirini Station for seismic line scouting activities with a seismic contractor to assess ground conditions. Advised planned scouting for Saturday, 19th October 2019.
16/10/2019	Sweetpea Petroleum	Maps and NTG Guidelines for land access notices and agreements.	Email response to Tanumbirini Station Owner	No	Sweetpea provided to Tanumbirini Station advice about the NTG Stakeholder Guideline Land Access Agreements requirements, and advised that this email provided required 14 days notice that plan to undertake aerial reconnaissance surveys.
30/10/2019	Sweetpea Petroleum	Sweetpea helicopter baseline survey 4-8 November	Email to Tanumbirini Station Manager	-	Confirmation of the dates of the helicopter reconnaissance survey 4 November to 8 November. Request to stay at the Station for 5 persons, including pilot. Requested price to stay at Station.
1/11/2019	AECOM	Sweetpea helicopter baseline survey 4-8 November	Email to Tanumbirini Station Manager	-	Advised Tanumbirini Station Manager that will stay Hi-Way Inn and fly in and out each day. Requested confirmation that fuel drums for helicopter were stored at Tanumbirini Airstrip.
2/11/2019	Santos	Santos requirements for utilising their camp	Email to AECOM consultant	-	Santos representative confirmed that the AECOM field crew can stay at the Santos camp. Requested information to be provided for the field team. Information provided for accessing the camp.
4/11/2019	AECOM	Sweetpea helicopter baseline survey 4-8 November	Email to Tanumbirini Station Manager	No	Advised Station Manager of the AECOM team mobilising to Tanumbirini Station to commence the reconnaissance survey (background data to support the development of the EMP).
5/11/2019	AECOM	Sweetpea helicopter baseline survey 4-8 November	Email to Tanumbirini Station Manager	-	Email communication over duration of field program commencing morning of 5/11/2019 through to 7/11/2019. Alerted Station Manager start time and finish time.
21/02/2020	Sweetpea Petroleum	Sweetpea update	Email to Tanumbirini Station Owner	-	Request to Station Owner to meet in person to provide update on Sweetpea's activities on Tanumbirini Station.
26/02/2020	Sweetpea Petroleum Insight Investment	Sweetpea update	Face-to-Face Meeting	-	Met station owners. Advised that the Station is being sold.
3/03/2020	Sweetpea Petroleum	Maps and planned schedule for Sweetpea EP136 scouting and baseline surveys in March.	Email to Tanumbirini Station Manager	-	Provided notice of a seismic contractor scout visit to the proposed project area. Provide scout contact details. Notice of two other planned field visits in future. Request consent to use the airstrip at Tanumbirini Station for the helicopter and fixed-wing landings. Copy of Sweetpea draft Seismic EMP provided to Station Manager for comment.
3/03/2020	Insight Investment	Contact details for new owner	Email to Sweetpea and new Tanumbirini Station Owner (Rallen Australia)	-	Email from Tanumbirini Station Owner introducing Sweetpea to new Station Owner regarding sale of Tanumbirini Station. Settlement date planned mid-late March. Advised new owner of Sweetpea's planned reconnaissance survey for 16 March 2020.
4/03/2020	Sweetpea Petroleum	Sweetpea - EP136 Field Scouting Plan	Email to Tanumbirini Station Manager	-	Request acknowledgment of planned scouting by seismic contractor between 7-9 March 2020. Asked any station activities that need to be aware of. Noted survey is via vehicle and will be weed and seed certified.

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Summary of Sweetpea Petroleum Pty Ltd Stakeholder Engagement Log					
Date	**Company**	**Information Provided**	**Correspondence Type**	**Objections**	**Discussion/Assessment of Objections**
5/03/2020	Sweetpea Petroleum	Sweetpea - update on planned reconnaissance field work in March	Email to Tanumbirini Station Manager and cc'd Station Owner	-	Sweetpea provided update on planned reconnaissance field work.
13/03/2020	Sweetpea Petroleum	Email advice regarding planned scouting activities	Email to Tanumbirini Station Manager	No	Notified Tanumbirini Station Manager of further environmental baseline studies on EP136, and scouting potential drill pad sites and access roads.
16/03/2020	Sweetpea Petroleum	Reconnaissance work next week	Email response to Tanumbirini Station Manager	-	Requested advice on current conditions on the ground.
20/03/2020	AECOM	EP136 Field Scouting Saturday 21st March	Email to Tanumbirini Station Manager	No	Advising that field scouting of well pad locations and access roads on EP136 will occur on Saturday 21 March. Details of charter flight and contact details provides. Advised will call in evenings to check in.
30/03/2020	Ward Keller on behalf of Thames Pastoral Co.	Sweetpea - Notice of Sale - Tanumbirini - Matter: 20192748	Email to Sweetpea	-	Notice of Sale - Tanumbirini Station.
1/04/2020	Hunt&Hunt on behalf of new owner of Tanumbirini Station	Sweetpea - Notice of Sale - Tanumbirini - Matter: 20192748 (HH 190378)	Email to Sweetpea	-	Advised Sweetpea that their client (new owners of Tanumbirini Station) will liaise directly with Sweetpea in relation to planned reconnaissance field work on Tanumbirini Station. Provided updated contact details for new Owners.
27/04/2020	Sweetpea Petroleum	Tanumbirini Station - Sweetpea Petroleum Exploration Permit 136	Email to new owners of Tanumbirini Station	-	Sweetpea advised new Station Owner that Sweetpea Petroleum Pty Ltd is the registered holder of a 100% interest in EP136. Requested registered business address of new Station owner in order to send formal correspondence. Requested to meet.
8/05/2020	Sweetpea Petroleum	Sweetpea Introduction Pack for planned activities on EP136 on Tanumbirini Station	Email to new owners of Tanumbirini Station	-	Introduction and provision of formal letter regarding Sweetpea's exploration activities on Tanumbirini Station and provided summary of the impact of COVID-19 on activities. Advise of baseline studies w/o 18 May. Provided copy of EMP for consultation, review and feedback. Attachments included Full EMP and supporting documents.
9/05/2020	Sweetpea Petroleum	Sweetpea EP136 - Tanumbirini Station Letter Part II drat EMP appendices	Email to new owners of Tanumbirini Station	-	Provided more details for the proposed exploration activities on Tanumbirini Station.
13/05/2020	Rallen Australia	Sweetpea EP136 - Tanumbirini Station Letter Part II draft EMP appendices	Email to Sweetpea	Yes	Informed Sweetpea the new owners of Tanumbirini Station and requested that a new Land Access Agreement will need to be agreed by both parties.
21/05/2020	Sweetpea Petroleum	Sweetpea EP136 - Tanumbirini Station Survey Plan and COVID Management Plan	Email to Tanumbirini Station Manager and cc'd the new Tanumbirini Station Owner	-	Provided Travel and Operational Plans for the baseline survey (helicopter based). Confirmed permission from Santos to access their site to get Fuel supply for helicopter. Advised on the measures in place for COVID-19.
21/05/2020	Sweetpea Petroleum	Sweetpea EP136 - Tanumbirini Station	Follow up email to new Tanumbirini Station Owner	-	Notification of resumption of reconnaissance activities. Confirmation that baseline surveys are planned for next week fully inform draft Seismic EMP. Request feedback on the provided summary and draft EMP so can capture Station comments.
22/05/2020	Sweetpea Petroleum	EP136: Authority to access Tanumbirini Station 26th-30th May for reconnaissance activities	Email to Tanumbirini Station Manager	-	Request authority to access EP136/Tanumbirini Station to carry out helicopter-based reconnaissance surveys. Request communication protocols required.
25/05/2020	Sweetpea Petroleum	Sweetpea Reconnaissance Activities 26th-30th May	Follow up email to Tanumbirini Station Manager	-	Confirmation that the baseline surveys and field scouting by AECOM will commence on 26th May (following day). Noted similar activity to what was planned mid-March but postponed due to COVID-19 impacts. AECOM to liaise further. Noted that Santos had permitted access to have helicopter access fuel drums. Confirm if no issues for Tanumbirini Station.
26/05/2020	AECOM	Sweetpea scouting survey check-in	Email to Tanumbirini Station Manager	-	Email communication over duration of field program commencing morning of 26/5/2020 through to 31/5/2020. Alerted Station Manager start time and finish time.
22& 24/06/2020	Tanumbirini Station Representative	84.6.1 Rallen: Tanumbirini: Sweetpea	Email to Sweetpea	-	Correspondence for Sweetpea's attention.

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Summary of Sweetpea Petroleum Pty Ltd Stakeholder Engagement Log					
Date	**Company**	**Information Provided**	**Correspondence Type**	**Objections**	**Discussion/Assessment of Objections**
29/06/2020	Tanumbirini Station Representative	84.6.1 Rallen Australia Pty Ltd: Sweetpea Petroleum Pty Ltd – General	Letter to Sweetpea	Yes	Letter response provided to Sweetpea following review of proposed Work Program and draft EMP.
6/07/2020	Ward Keller on behalf of Sweetpea	Tanumbirini Station Sweetpea EMP EP138	Letter Response to Tanumbirini Station	-	Sweetpea provided a response letter to Tanumbirini Station in relation to comments on Sweetpea's proposed Work Program and draft EMP.
13/07/2020	Sweetpea Petroleum	Tanumbirini Station Sweetpea EMP EP136	Email to Tanumbirini Station Owner	-	Request opportunity to meet.
3/08/2020	Tamboran Resources/Sweetpea Petroleum and Tanumbirini Station Representative	Proposed exploration activities on EP136 over next 3-7 years	Face-to-Face Meeting	-	Meeting with owner of Tanumbirini Station to discuss ways to work in collaboration on Tanumbirini Station. Outlined proposed exploration works within EP136. Sweetpea advised that would like to engage further on the formalised Land Access and Compensation Agreement.
15/09/2020	Tanumbirini Station Representative	Response to DPIR notification of Sweetpea application for Access Authority over part of Tanumbirini Station	Email to DPIR	Yes	Objections to Sweetpea's proposed activities on Tanumbirini Station.
23/09/2020	Tanumbirini Station Representative	Additional information provided to support Rallen's objection to the grant of AA9 over Tanumbirini Station	Email to DPIR	Yes	Summary of scientific studies undertaken by a NSW vet done on the impact of mining exploration activities on sheep.
25/09/2020	Ward Keller on behalf of Sweetpea	Address of issues raised by Rallen in emails of 15 Sept and 23 Sept	Letter to DPIR	-	Letter to DPIR (now DITT), addressing issues raised by Tanumbirini Station.
23/10/2020	Sweetpea Petroleum	Update on EP136 Work Program, Notice of access for site surveys	Letter to Rallen Australia, cc. Tanumbirini Station Manager	-	Update on EP136 Work Program, Notice of Access for Site Surveys.
6/11/2020	BB Survey (contractor to Sweetpea)	Sweetpea site surveys EP136	Email/voice message to Tanumbirini Station Owner and Station Manager	-	BB Survey Representative provided information regarding survey schedule.
17/12/2020	Ward Keller on behalf of Sweetpea	Draft Land Access and Compensation Agreement with Tanumbirini Station	Draft LACA emailed to Tanumbirini Station Representative	-	Draft Land Access and Compensation Agreement with Tanumbirini Station.
7/01/2021 to 05/03/2021	Ward Keller on behalf of Sweetpea, and Tanumbirini Station Representatives	Draft Land Access and Compensation Agreement with Tanumbirini Station	Multiple emails between Ward Keller and Tanumbirini Station Representatives	-	Draft Land Access and Compensation Agreement with Tanumbirini Station. Land Condition Assessment and vegetation clearing for access specific items.
9/03/2021	Sweetpea Petroleum	Notice of preliminary activities - Form 52	Letter to Rallen Australia, cc. Tanumbirini Station Manager	-	Letter and Form 52 notice of preliminary activities on EP136/Tanumbirini Station.
14/04/2021	Ward Keller on behalf of Sweetpea	Tanumbirini Station and Land Access & Compensation Agreement - Matter 20210287	Email to Tanumbirini Station Representative	-	Attached email correspondence of fees (and confirming payments).

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Summary of Sweetpea Petroleum Pty Ltd Stakeholder Engagement Log					
Date	**Company**	**Information Provided**	**Correspondence Type**	**Objections**	**Discussion/Assessment of Objections**
14/04/2021	DITT	Request to DITT	Application to appoint a mediator	-	Sweetpea applied to the Northern Territory Department of Industry, Tourism and Trade (DITT) on 14 April 2021 request the appointment of a mediator.
28/07/2021 to 11/08/2021	Sweetpea Petroleum	Facilitated negotiations with the mediator	Negotiations	-	Mediation.
13/08/2021	Northern Territory Civil and Administrative Tribunal (NTCAT)	NTCAT application	Application	-	Application lodged with the Northern Territory Civil and Administrative Tribunal (NTCAT).
26/10/2021	Tamboran	Letter, form 54, arial survey route	Email to Station Owner and Tanumbirini Station Manager	-	Letter to the Tanumbirini Station manager to notify of intent to perform Airborne Survey, Nov 9th onward. Form 54 Notification, and Airborne Route pdf.
5/11/2021	Tamboran	Letter, arial survey route	Email to Station Owner and Tanumbirini Station Manager	-	Letter to the Tanumbirini Station manager to notify them we are providing an updated Airborne Survey map
12/8/2021 - 12/10/2021	NTCAT	NTCAT Hearings	NTCAT Hearing	-	-
Beetaloo Station Communication Log					
6/09/2019 to 11/05/2021	Sweetpea Petroleum	Email, Face-to-Face and telephone	General	-	Ongoing conversations regarding multiple EMP scopes of work and future Land Access and Compensation Agreement.
OSD Pipeline Communication Log					
13/07/2020 to 26/08/2020	OSD Pipelines	Sweetpea planned Seismic Survey activities and where cross MRM pipeline	Emails, telephone	No	Communication with OSD in relation to Sweetpea activities that may interact with the MRM gas pipeline (i.e. transit). Advise on requirements where transit over pipeline provided.
NLC					
1/07/2019	Ward Keller on behalf of Sweetpea	EP136 and EP143 Sweetpea Petroleum and Paltar Petroleum - Matter: 20181126	Email to NLC coordinator	-	Introductory email identifying Sweetpea Petroleum are now the title holder and operator of EP136 and EP143.
3/07/2019	Sweetpea Petroleum	Introductory Meeting	Face-to-Face Meeting between NLC, Ward Keller and Sweetpea	-	Initial meet and greet between NLC and Sweetpea. Introduce Sweetpea and update NLC on the acquisition of EP136 interest and to re-engage with NLC.
25/07/2019	Sweetpea Petroleum	Follow up Meeting	Face-to-Face Meeting between NLC, Ward Keller and Sweetpea	-	Follow-up catch up to discuss processes going forward for intended 2020 work program.
25/07/2019	Sweetpea Petroleum	Sweetpea Petroleum Environment & Heritage Assessments for EMP on EP136	Email to NLC representative	-	Sweetpea provided notice of the intention to undertake seismic surveys in 2020 in EP136. Request for support of the NLC staff during site-based assessments, in the form of Cultural Monitors and any other relevant NLC staff for the duration of the field work, and to provide a Cultural Heritage Assessment and Report to AAPA to obtain a clearance certificate. A brief outline of site assessment provided.
29/08/2019	AECOM	Land Condition and Heritage (Archaeological and Anthropological) (AECOM/NLC) Assessment	Email to NLC representative	-	Notice that AECOM would like to progress with the field works for land condition and heritage assessments for the Sweetpea Seismic program. Request to check that the proposed fieldwork timings with NLC resource constraints.

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Summary of Sweetpea Petroleum Pty Ltd Stakeholder Engagement Log					
Date	**Company**	**Information Provided**	**Correspondence Type**	**Objections**	**Discussion/Assessment of Objections**
30/08/2019	NLC	Land Condition and Heritage (Archaeological and Anthropological) (AECOM/NLC) Assessment	Response to AECOM and Sweetpea	-	No works are able to be facilitated by the NLC. Noted that Sweetpea will need to submit a work program, and hold work program meeting prior to any on ground work. NLC requested confirmation of ownership of land and the submission of work program.
3/09/2019	Sweetpea Petroleum	Land Condition and Heritage (Archaeological and Anthropological) (AECOM/NLC) Assessment	Response to NLC representative	-	Sweetpea requested NLC to schedule dates for work program meeting.
10/10/2019	NLC	Request for meeting	Response to Sweetpea	-	NLC are seeking further guidance and advice in relationship to the requirements under the agreement, and the transfer deed requirements. Requested update on the transfer deed with the NLC. Confirmed Sweetpea will need to engage and provide information with Native Title Parties to have a social licence to operate.
10/10/2019	Sweetpea Petroleum	Request for meeting	Response to NLC representative	-	Sweetpea acknowledges the need to engage and share information with Native Title Parties. Requested assistance with baseline surveys to inform the EMP, in the form of cultural monitors and an Anthropologist. Conditions required before NLC could formally provide help with this. Sweetpea requested a copy of the Service Agreement to be signed and estimate for holding work program
10/10/2019	Ward Keller on behalf of Sweetpea	Sweetpea Petroleum - EP 136 and EP 143	Response to NLC representative	-	Sweetpea seeking to co-ordinate with the NLC on its initial baseline environmental studies planned to be undertaken in the first week of November 2019. Noted that the initial baseline environmental studies do not constitute "Exploration" as defined in the Exploration Agreement for EP136 and are not the subject of the Sacred Site Avoidance Survey or Work Program provisions contained in clause 5 of the Exploration Agreement.
7/11/2020	Sweetpea Petroleum	Follow up discussion on EP136 Work Program	Face-to-Face Meeting	-	Meeting between Sweetpea/Ward Keller and NLC representatives to discuss EP136 work program and exploration agreement.
21/01/2020	Sweetpea Petroleum	Subject: Meeting this week	Email to NLC representative	-	Sweetpea advised that will be in Darwin and would like catchup in relation to the following matters: 1.Deed of Assumption EP 136 and 143 Exploration Agreement executed by Sweetpea 2.Receipt and updated Statement of Account 3.Submission of a Work Program etc. as required under the Exploration Agreement EP136 dated 18 July 2012 ("Exploration Agreement") – which is the relevant native title agreement covering EP136 4.Work Program meeting for EP136 – scheduling, cost estimate, materials/content 5.Update on Sweetpea activity plans and preparedness for 2020 on EP136 (i.e. draft EMP for seismic, AAPA application for sacred site clearance).
6/02/2020	Sweetpea Petroleum	Letter EP136 2020 Work Program	Email to NLC representative	-	Letter detailing 2020 work program. Request scheduling of on-country meeting to discuss the program with TO's. Close to finalising a draft EMP for 2020 activities, final draft copy will be sent to NLC. Request for meeting.
9/03/2020	Sweetpea Petroleum	Sweetpea EP136 2020 Exploration Work Program	Email to NLC representative	-	Sweetpea confirmed to NLC that the draft EMP submitted to DENR (now DEPWS) for the EP136 2020 Work Program of a proposed seismic and gravity survey. Copy of EMP provided to NLC along with updated shape files and kmz files and maps of seismic survey program. Confirmed that had submitted an application to AAPA for sacred site clearance and avoidance certificates. Letters of notice of the draft seismic survey EMP sent to Tanumbirini and Beetaloo Stations. Request for confirmation that the on-country work program meetings have been scheduled.
24/03/2020	NLC	COVID-19 Potential Impacts	Email to Sweetpea	-	NLC requested information in relation to how Sweetpea is managing the risk of COVID-19 transmission in the NLC's regions
15/05/2020	Sweetpea Petroleum	COVID-19 Response - Sweetpea activities on EP136 and EP143	Follow up with NLC Representative	-	Sweetpea confirmed that activities on EP136 by Sweetpea remain temporarily suspended due to COVID-19. Noted that Sweetpea had developed COVID-19 Response Management Plan and that plan to resume reconnaissance activities on EP136 as governed by the plan. Request for time of rescheduled on-country meetings.
29/05/2020	Sweetpea Petroleum	Update on Work Program	Video Meeting	-	Video conference with Sweetpea and NLC for update on Work Program.
29/05/2020	NLC	RE: Catch-up call	Phone Call with NLC coordinator	-	Phone call between Sweetpea and NLC Coordinator to discuss Sweetpea's operations within the NT. NLC wanted to confirm that the information provided to the NLC, AAPA, and DPIR was consistent. Requested Sweetpea provide copy of Sweetpea's latest submission to AAPA and DPIR, including all spatial files so that we can cross-reference the information against our records.
4/06/2020	Sweetpea Petroleum	Phone Call	Phone Call	-	Catch up call between Sweetpea and NLC representative.

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Summary of Sweetpea Petroleum Pty Ltd Stakeholder Engagement Log					
Date	**Company**	**Information Provided**	**Correspondence Type**	**Objections**	**Discussion/Assessment of Objections**
4/06/2020	NLC	2020 work program	Email to Sweetpea	-	Sweetpea are required to engage with adjacent land/lease owners and exploration permit holders regarding the work proposed on their land or leases.
10/06/2020	Sweetpea Petroleum	Sweetpea Petroleum EP136 2020 Work Program	Email to NLC coordinator	-	Details the Sweetpea's 2020 Work Program provided to NLC.
18/06/2020	Sweetpea Petroleum	Sweetpea Work Program Notice & Meetings	Email to NLC coordinator	-	Sweetpea enquire into the residual restrictions to enter the Barkly region associated with COVID-19. Requested an update of scheduling for the Sweetpea on-country Work Program meetings. Queried if NLC had and questions or feedback on the draft seismic EMP for EP136.
19/06/2020	NLC	Sweetpea Work Program Notice & Meetings	Email to Sweetpea	-	NLC reviewed draft EMP and discussed risk assessment. Confirmed Work Program meeting secured for 10th August.
19/06/2020	Sweetpea Petroleum	[EXTERNAL] FW: Sweetpea Work Program Notice & Meetings	Email to NLC coordinator	-	Sweetpea confirm the 10th of August for the Work Programme Meeting. Identified that works well with the AAPA sacred site avoidance survey work, noting AAPA were doing preliminary field work next week and looking at formal consultations around mid-July.
9/07/2020	Sweetpea Petroleum	[EXTERNAL] FW: On-country Work Program Meeting EP136 10th August	Email to NLC coordinator	-	Sweetpea requested details for Work Program Meeting from NLC.
14/07/2020	NLC	[EXTERNAL] FW: Standard Work Program meeting agenda	Email to Sweetpea	-	NLC provided Sweetpea with the generic meeting agenda for Work Programs.
15/07/2020	NLC	Call to discuss EP136 WP meeting	Email to Sweetpea	-	Requested if the latest round of NT coronavirus restrictions will impact on the Sweetpea Work Program progressing.
23/07/2020	NLC	EP136 2020 August Work Program and Cultural Monitor cost estimates	Email to Sweetpea	-	NLC provide cost estimates for the proposed Work Program meetings and Cultural Monitor requirements for EP136.
29/07/2020	NLC	Work Program Meetings EP136	Email to Sweetpea	-	NLC advice delay may occur to Work Program Meeting due to unforeseen circumstances. Will keep Sweetpea updated.
31/07/2020	Sweetpea Petroleum	Work Program Meetings EP136	Email to NLC coordinator	-	Sweetpea request update on current schedule/dates of Work Program Meeting and locations.
6/08/2020	NLC	EP136 meeting information	Email to Sweetpea	-	Unable to provide information about previous Work Programs and meeting notes/attendance without legal advice. Suggest to contact DIPR and see if they are willing to provide it. Team's meeting scheduled with NLC employees.
10/08/2020 to 14/08/2020	NLC/TO/Sweetpea	On country Work Program Meetings	Presentation to Native Title Representatives and TOs	-	Work program meetings held over between 10 August and 14 August 2020. Meetings were held in Tennant Creek, Elliott and Mataranka with Sweetpea presenting the planned seismic surveys and temporary camp locations. The NLC hosted the work program meetings and arranged for the affected parties to attend.
27/08/2020	Sweetpea Petroleum	Sweetpea EP136 2020 Schedule of Operations	Email to NLC coordinator	-	Sweetpea provide NLC current operational schedule to assist in planning of Cultural Monitors.
28/08/2020	NLC	Sweetpea EP136 2020 Schedule of Operations	Email to Sweetpea	-	NLC confirm Cultural Monitors are employed by the NLC and as such the NLC is responsible for ensuring the appropriate individuals are engaged. The primary objectives of the program, as I understand them, are to: 1. ensure the protection of areas of high cultural and environmental significance during on Country works; 2. assist with environmental and cultural heritage management issues including surveys; and 3. deliver onsite cultural competence training to the Proponent's employees participating in on Country works.
28/08/2020	Sweetpea Petroleum	Input required from NLC to address comments from DENR on the EMP	Email to NLC coordinator	-	Sweetpea requested if NLC could provide the identification of TO's and Native Title Parties present or represented at the Work Program Meetings. This is in response to comments received on the draft EMP from DENR (now DEPWS) and if it is appropriate for this level of detail to be provided.

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Summary of Sweetpea Petroleum Pty Ltd Stakeholder Engagement Log					
Date	**Company**	**Information Provided**	**Correspondence Type**	**Objections**	**Discussion/Assessment of Objections**
28/08/2020	NLC	Input required from NLC to address comments from DENR on the EMP	Email to Sweetpea	-	NLC response by confirming cannot provide individual details that attended work program meeting, but can provide high level summary.
25/01/2021	Sweetpea Petroleum	EP136 2021 Work Program - Seismic Survey amendments; draft Civils & Waterbore EMP	Email to NLC coordinator	-	Sweetpea provide updated map and shape files of the proposed amended seismic survey lines in the Northern Area of EP136/Access Area. Noted that many of the ingress seismic lines have been reduced in length and to route away from sacred sites and will be part of an AAPA Certificate variation request/application, along with extension lines. Also provide copy of the draft Civil Construction and Waterbore EMP for review and comment by NLC.
28/01/2021	Sweetpea Petroleum	EP136 2021 Proposed Work Program	Email letter to NLC coordinator	-	Notification of proposed 2021 Work Program for EP136 in accordance with clause 5.7 and 5.8 of the EP136 Exploration Agreement.
5/02/2021	Sweetpea Petroleum	EP136 & AA9 Areas 2021 consultation/work program meetings with TO's	Face-to-Face Meeting NLC representatives	-	1.Access Authority (AA9) – Section 31 Deed and Ancillary Agreement (to EP136 Exploration Agreement) with Native Title Party in Access Area 2.EP136 2021 work program, including minor modifications (seismic program) to carried-over 2020 Work Program 3.Provisional scheduling of 2021 work program meetings & likely format 4.Cultural Monitors for 2021 work program 5.AAPA Authority Certificate Revision request 6.Feedback on draft Civils Construction and Waterbores EMP.
8/02/2021	Sweetpea Petroleum	EP136 & AA9 Areas 2021 consultation/work program meetings with TO's	Email to NLC Coordinator	-	Request work program meeting dates in March/April that combines with consultations with the TO's representing the Access Authority Areas outside the EP136, for cost, time and logistics efficiency, noting that there are modifications to the seismic program within the EP136 permit area and outside the permit boundary.
8/02/2021	Sweetpea Petroleum	EP136 & AA9 Areas 2021 consultation/work program meetings with TO's	Email in response to NLC Coordinator	-	Sweetpea confirm one modification to a seismic line has been made which exceeds the buffer. There are also a number of contingent modifications being considered.
8/02/2021	NLC	EP136 & AA9 Areas 2021 consultation/work program meetings with TO's	Email in response to Sweetpea	-	Confirming that NLC has been progressing the request for anthropological information over the AA9 areas. Requested Sweetpea to provide further detail on the list of priority lots - which may impact the consultations prioritised.
11/02/2021	Sweetpea Petroleum	EP136 & AA9 Areas 2021 consultation/work program meetings with TO's	Email to NLC Coordinator	-	Reviewed the cost determination and to arrange payment of the estimated cost invoice.
12/02/2021	Sweetpea Petroleum	Statement of Account Request	Email in response to NLC Coordinator	-	State that will review and provide annual exploration expense report since inception.
15/02/2021	Sweetpea Petroleum	Variation of Work Program	Email in response to NLC Coordinator	-	In regard to whether Sweetpea requires further consultation if the seismic program is adjusted. Sweetpea to go with base case assumptions: - Resubmission of work program notice - Re-Consultation with TO's on revised seismic program in conjunction with AA9 consultations (tentatively mid-April).
15/02/2021	Ward Keller	Ep136 & AA9 - Ancillary Agreement and Section 31 Deed	Email to NLC representative	-	Sweetpea representative requested the progress of drafting of the Ancillary Agreement for AA9 - EP136 and the Section 31 Deed regarding the grant of AA9. Any proposed changes to the draft (provided last September) can be addressed while awaiting the advice, and can be incorporated along with modifications as a result of the prioritisation of the AA9 areas in the norther exploration
16/02/2021	Sweetpea Petroleum	Variation of Work Program	Email to NLC Coordinator	-	Sweetpea requested a time to discuss the change in seismic alignment and if would trigger the need for further consultation with TO's.
22/02/2021	AECOM	EP136 & AA0 - Ancillary Agreement and Section 31 Deed	Email to NLC Coordinator	-	Forward email from NLC legal branch which stated that in the scheduling meeting previous week, discussions held on establishing a time when logistically consultations can be achieved. Can be difficult with Clients based in remote areas and issues with road closures in the wet season. Consultation dates are scheduled for April.

*Please note some items have been removed from the original Stakeholder log to preserve confidentiality, sensitive and personal information.

Summary of Sweetpea Petroleum Pty Ltd Stakeholder Engagement Log					
Date	**Company**	**Information Provided**	**Correspondence Type**	**Objections**	**Discussion/Assessment of Objections**
23/02/2021	NLC	Variation of Work program	Email to Sweetpea	-	After internal discussion, the advice is that if Sweetpea change the seismic program to cover different areas they will need to consult.
24/02/2021	Sweetpea Petroleum	2021 EP136 Work Program Meeting	Email to NLC Coordinator	-	Sweetpea acknowledge the dates for 2021 Work Program Meeting. Sweetpea also no longer considering changing the seismic program alignment.
24/02/2021	Sweetpea Petroleum	2021 EP136 Work Program Meeting and AA9 Areas consultations	Email to NLC Coordinator	-	Sweetpea requests NLC coordinator to provide rough cost estimate for the AA9 consultations for budgeting purposes. Also requested feedback or comments on the EP136 draft Civil Construction and Waterbore EMP to finalise and submit to DEPWS early next week.
2/03/2021	Sweetpea Petroleum	AA9 Areas research and consultations. Detail of activities in AA9 Areas.	Email to NLC representative	-	Sweetpea highlighted the critical timeline of undertaking the seismic survey in EP136 in early May 2021, and to reinforce the prioritisation of research and consultation of the AA9. Requested that NLC advance the consultations to early April, weather and travel conditions allowing. Progression of the Ancillary Agreement for AA9 – EP136 and the Section 31 Deed regarding the grant of AA9.
3/03/2021	Sweetpea Petroleum	Request list of indigenous Civils companies	Email to NLC Coordinator	-	Sweetpea requested if NLC have a list of Civils Contractors that could support the civil construction work on EP136. Requested advice on any regional sensitivity with the TO's on EP136 that should be aware of when looking at contracting Indigenous companies?
1/04/2021	Ward Keller on behalf of Sweetpea	Amendment of AA9 Application and negotiations	Email to NLC representative	-	Sweetpea confirmed that did not wish to amend the AA9 application.
31-05-2021	Sweetpea	Updated 2021 WP	Email to NLC Coordinator	-	Annual 2021 WP submitted for NLC
07-08-2021	NLC	Cultural Monitor Fee Estimate	Email to Sweetpea PM	-	Provided cost estimate for Cultural Monitors.
13/08/2021	Sweetpea Petroleum	Cultural Monitor Fee Estimate	Email to NLC Coordinator	-	Sweetpea approved cost estimate.
25/08/2021	Sweetpea Petroleum	Contact by TO	Email to NLC representative	-	Request to NLC in relation to a voice mail received from a TO regarding royalties from August 2020 meeting. Noted this was when NLC and Tamboran presented the annual work program. Wanted NLC to follow up with TO and to obtain guidance from NLC.
25/08/2021	NLC	Contact by TO	Email to Sweetpea PM	-	Replied to Sweetpea, requesting message to determine course of action.
25/08/2021	Sweetpea Petroleum	Contact by TO	Email to NLC representative	-	Sweetpea advised NLC representative that received call from a Traditional Owner for EP136.
31/09/2021	NLC	Update on AA9 Consults	Email to Sweetpea PM	-	NLC planning to hold the EP136 and AA9 meetings for each different Native Title group. Agenda: · Native title legal overview · Hydraulic fracturing (fracking) information · Questions and answers · AA9 (for decision) · EP136 and AA9 work program for information (Sweetpea to present) · EP136 royalty instructions (if time permits)
8/10/2021	NLC	AA9 and Annual WP Consulting scheduling update	Email to Sweetpea PM	-	NLC identified finalising logistics for the 2022 Work Program Meetings.
13/10/2021	NLC	AA9 and Annual WP Consulting scheduling update	Email to Sweetpea PM	-	NLC noted that have some issues with logistics organising meeting as planned for next week due to the large number of people and the location of where they live, and the logistical coordination of driving people to the meeting locations. Advised working to overcome the issues and plan to reschedule for the following week. Plan is one large meeting at Tennant Creek for AA9 and Work Program, as well as two shorter meetings at Katherine and Elliot over the preceding two days focussing on the Work Program.
22/10/2021	Sweetpea Petroleum	Annual 2022 WP Draft Slides for presentation	Email to NLC representative	-	Confirmed accept work program costs for NLC to commence arrangement for Work Program meetings.
22/10/2021	Sweetpea Petroleum	Annual 2022 WP Draft Slides for presentation	Email to NLC coordinator	-	Sweetpea provided copies to NLC of the Work Program Letter, Draft slide pack that will be presented by Sweetpea representatives during the meeting and confirmed remote attendance of Sweetpea technical members not able to attend in person.
21/10/2021	NLC	Agenda and meeting times for NLC annual WP consultations	email to Sweetpea/Tamboran Representatives	-	NLC provided copies of the agendas for the work program and AA9 meetings to be held between 27 and 29 October 2021. Noted that agendas aspirational in terms of times but provide a plan for intended order of business.

*Please note some items have been removed from the original Stakeholder log to preserve confidentiality, sensitive and personal information.

Summary of Sweetpea Petroleum Pty Ltd Stakeholder Engagement Log					
Date	**Company**	**Information Provided**	**Correspondence Type**	**Objections**	**Discussion/Assessment of Objections**
27-29/10/2021	NLC, Native Title Owners and Sweetpea representatives.	Annual 2022 Work Program consults	Presentation in person	-	Sweetpea attended Katherine, Elliott and Tennant to present Sweetpea's work program for 2022. Advised of all planned activities and how manage environmental risks during exploration.
5/11/2021	NLC	Agenda and meeting times for NLC annual WP consultations	Email to Tamboran/Sweetpea representatives	-	Update on last meeting date for Darwin confirm to be held at the NLC office in Darwin at 8:30 on Saturday 6 November 2021.
16/11/2021	NLC	Agenda and meeting times for NLC annual WP consultations	Email to Tamboran/Sweetpea representatives	-	Informed that needed to cancelled Darwin meeting of the Annual Work Program consult due to Covid. Noted that NLC had postponed all meetings until after next Monday given the evolving COVID situation in the NT.
30/11/2021	NLC	Update on 2022 work program and future plans for EP136.	Tamboran/Sweetpea meeting with NLC	-	NLC provided feedback on future consultations and Sweetpea/Tamboran provided company updates on on ground activities in EP136.

*Please note some items have been removed from the original Stakeholder log to preserve confidentiality, sensitive and personal information.

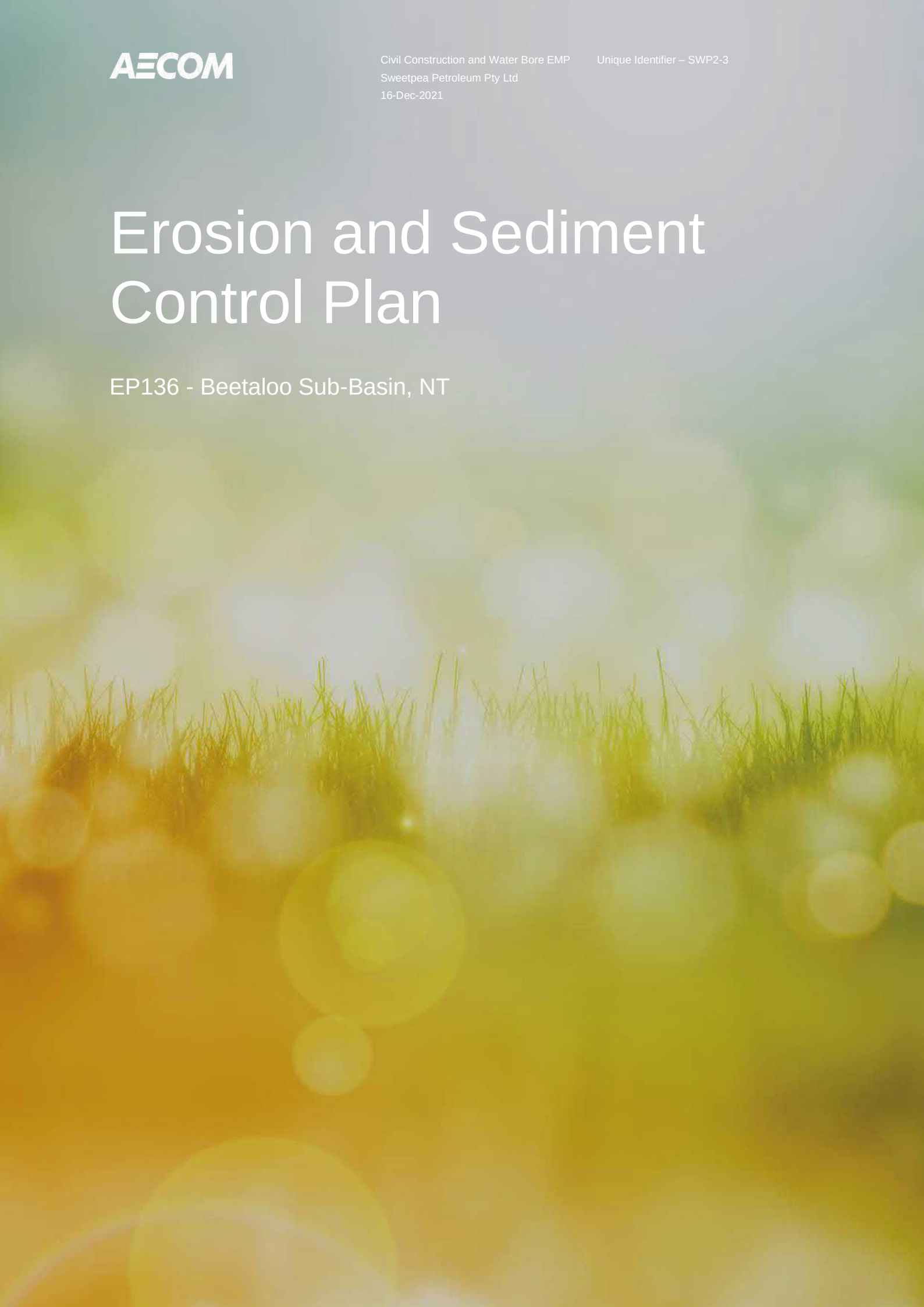
Appendix K

Erosion and Sediment Control Plan

Appendix K Erosion and Sediment Control Plan

Erosion and Sediment Control Plan

EP136 - Beetaloo Sub-Basin, NT



Erosion and Sediment Control Plan

EP136 - Beetaloo Sub-Basin, NT

Client: Sweetpea Petroleum Pty Ltd

ABN: 472 074 750 879

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Quality Information

Document Erosion and Sediment Control Plan

Ref 60611666

Date 16-Dec-2021

Prepared by William Riddell, Adam Tran

Reviewed by James Jentz, Tyler Hill

CPESC Sign Off

Date	CPESC Name / Position	Signature
10-Mar-2021	Tim Anderson MAgrSc, BAgrSc (Hons), CPESC (#2723), CEnvP (#002).	[redacted]

Revision History

Rev	Revision Date	Details	Authorised	
			Name/Position	Signature
1	04-Jan-2021	Final for Reg 6 Submission	Alana Court Associate Director - Environment	[redacted]
2	03-Mar-2021	Draft for CPESC Review	Alana Court Associate Director - Environment	
3	10-Mar-2021	Final	Alana Court Associate Director - Environment	
4	22-Nov-2021	Final for revised C&WB EMP	Alana Court Associate Director - Environment	

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1.0 Introduction

1.1 Background

The focus of this Erosion and Sediment Control Plan (ESCP) is to provide strategies to minimise impacts of soil and erosion during Sweetpea Petroleum Pty Ltd exploration program for nine exploration lease pads and associated infrastructure, located in the Beetaloo Sub-basin, Barkly Region, 500km south-east of Darwin, Northern Territory.

The objectives of this ESCP include:

- To avoid, or minimise and control, soil erosion and discharge of sediment or soil into waterways or established drainage systems.
- To minimise disturbance of soil, vegetation and drainage during site activities.
- To minimise the creation of dust.

The location of Sweetpea's exploration activities was approved by the Aboriginal Areas Protection Authority (AAPA) on the 23rd October 2020, with conditions specified within the "*Issued certificate C2020072 for Sweetpea Petroleum Exploration Areas within EP136*". A supplementary AAPA application is currently underway and will provide further clarity around the conditions for the individual activities.

The exploration activities, including civil works will span across 2022-2025 during the dry seasons (typically April to October). Should wet weather occur in the permit area during the civil construction, control measures will be implemented as outlined in Section 4.0. Experience in the permit areas suggests that accessibility to the permit site won't be affected by extended rainfall events until mid-December.

Where forecasts indicate rainfall is likely to limit access to the work area, Sweetpea and its contractor will stabilise the current work areas and go into standby mode, in order to assess the track condition to recommence activities.

The erosion hazard assessment in Section 3.2 indicates that with the exception of area of disturbance, site conditions do not reach trigger point levels for any of the Erosion Hazard Assessment criteria. The cumulative area disturbed for the exploration programs associated with the drill pads, tank pads, gravel pits and access tracks is greater than 4 ha which invokes the requirement to prepare an ESCP.

1.2 Project Context

This plan covers all exploration activities to be undertaken by Sweetpea Petroleum Pty Ltd (Sweetpea) within permit EP136 on Tanumbirini and Beetaloo Station during the proposed 2022-2025 program. The civil construction is in support of Sweetpea's exploration program.

The primary activities subject to this ESCP are:

- land and vegetation clearing to allow construction of nine exploration lease pads, access tracks, accommodation camp and gravel pits
- use, maintenance and upgrade (where required) of the existing pastoral access track tracks for purpose of access into the permit area
- repurpose sections of seismic line 6, 7, 8, 9 and 10 for access tracks to the lease pads from either the eastern access track or the western access track
- construction and operation of accommodation camp to support personnel undertaking construction works and future operations
- construction and maintenance of seven (7) exploration lease pads, including water tank pads and access tracks
- the installation and maintenance water monitoring bores which consist of 'control' and 'impact' monitoring bores for each aquifer

- water extraction at the lease pad and camp (extraction under an approved water extraction licence under the NT *Water Act*
- routine and ongoing maintenance of any infrastructure and or services
- resource extraction of up to ten (10) gravel pits to support the construction of access tracks lease pads and the accommodation camp
- monitoring and work-over activity
- minor works ancillary to those mentioned above including routine ongoing monitoring and maintenance of infrastructure and or services.

1.3 Location and Disturbance Area

The location and disturbance area of the exploration program is reflected in Table 1.

The civil exploration program proposes to use one of the two primary access options identified in this EMP as follows:

- Option 1 Eastern Access Track (EAT) – 39.56 km length x 18 m wide, including 17.65 km of existing pastoral track and 21.91 km of repurposed 2D seismic lines; or
- Option 2 Western Access Track (WAT) – 35.45 km length x 18 m wide, including 3.1 km of existing pastoral track and 32.35 km of repurposed 2D seismic lines.

Both options require access at two intersections off the Carpentaria Highway, one located on the western side of the permit to gain access to Pad 1 and the other in the centre. The access track options presented are clearly shown in Figure 1 (EAT) and Figure 2 (WAT).

Table 1 Geographical coordinates of the proposed Exploration Program

Infrastructure	Name	Location Lat/Long	Length (km)	Footprint Area (Ha)	Total Area of Vegetation Clearing (Ha)
Lease Pads					
Lease Pad 1	LP1	-16.517663°, 134.515147°	-	11.0	10.65*
Lease Pad 2	LP2	-16.517668°, 134.558468°		11.0	11.0
Lease Pad 3	LP3alt	-16.558253°, 134.556614°	-	11.0	10.65*
Lease Pad 4	LP4	-16.600557°, 134.515315°		11.0	11.0
Lease Pad 5	LP5new	-16.600649°, 134.556760°	-	11.0	11.0
Lease Pad 6	LP6	-16.600930°, 134.606624°	-	11.0	11.0
Lease Pad 7	LP7	-16.639982°, 134.606535°	-	11.0	11.0
Main Camp Options	Highway Camp	-16.480922°, 134.565871°	-	1.3	0.0*
	LP1 Camp	-16.519364°, 134.510563°			1.3
		Lease Pad Disturbance Total	**-**	**78.30**	**77.60**
Lease Pad Access Track Option 1 – Eastern Access, Plus access to Pad 1					
Access into EP136 from Carpentaria Highway	Eastern Access Track (EAT) (existing pastoral track, maintain 18 m class 5 pastoral 2 (type c)), with exception of 0.61 km at RWA2 which is for transit only. Length from Carpentaria Highway to Pad 7 turn-in.		17.65	30.65	0
Access to Lease Pad (LP) LP1	Ingress from the western Carpentaria Highway intersection to LP1		5.52	9.94	2.43*

Infrastructure	Name	Location Lat/Long	Length (km)	Footprint Area (Ha)	Total Area of Vegetation Clearing (Ha)
	(existing pastoral track and repurposed seismic line 9, with only extra clearing up to 18 m class 5 pastoral 2 (type c))				
Access to LP2	Track off EAT to LP2 (repurposed seismic line 9, with only extra clearing for 18 m class 5 pastoral 2 (type c))		2.18	3.92	2.83*
Access to LP3	Track off EAT to LP3 (repurposed seismic line 8, with only extra clearing 18 m class 5 pastoral 2 (type c))		2.28	4.10	2.28*
Access Tracks to remaining LPs	LP4, LP5, LP6 and LP7 Access Tracks (repurposed seismic line 6 and 7, with only extra clearing for 18 m class 5 pastoral 2 (type c))		11.94	21.49	15.52*
LP Access Track Option 1 Disturbance Total			**39.56**	**70.10**	**23.06**
Access Track Option 2 – Western Access					
Access to Lease Pad (LP) LP1	Ingress from the western Carpentaria Highway intersection to LP1 (existing pastoral track and repurposed seismic line 9, with only extra clearing up to 18 m class 5 pastoral 2 (type c))		5.52	9.94	2.48*
Access to LP2	Track from LP1 to LP2 (repurposed seismic line 9, with only extra clearing for 18 m class 5 pastoral 2 (type c))		4.38	7.88	5.69*
North-South Access to LP3, LP4	Western Access Track (WAT) (existing Pastoral Track and repurpose of seismic line 10 between LP1 and LP4. 18 m class 5 pastoral 2 (type c))		9.18	16.52	11.93*
Access to LP3	Track off WAT to LP3 (repurposed seismic line 8, from intersection of WAT to LP3 to 18 m class 5 pastoral 2 (type c))		4.43	7.97	5.76*
Access Tracks to remaining LPs	LP4, LP5, LP6 and LP7 Access Tracks (repurposed seismic line 6 and 7, with only extra clearing for 18 m class 5 pastoral 2 (type c))		11.94	21.49	15.52*
LP Access Track Option 2 Disturbance Total			**35.45**	**63.80**	**41.38**
Gravel Pit Options (Final Gravel Pit Footprint Centre Points)					
Gravel Pit 1	GP1	-16.515163°, 134.508993°	-	2.0	2.0
Gravel Pit 2	GP2	-16.572622°, 134.559877°	-	2.0	2.0
Gravel Pit 3	GP3	-16.586119°, 134.559696°	-	2.0	2.0
Gravel Pit 4	GP4	-16.586022°, 134.563468°	-	2.0	2.0
Gravel Pit 5	GP5	-16.593853°, 134.560048°	-	2.0	2.0
Gravel Pit 6	GP6	-16.597240°, 134.516823°	-	2.0	2.0
Gravel Pit 7	GP7	-16.598583°, 134.539951°	-	2.0	2.0
Gravel Pit 8	GP8	-16.598259°, 134.556367°	-	2.0	2.0
Gravel Pit 10	GP10	-16.628015°, 134.605151°	-	2.0	2.0

Infrastructure	Name	Location Lat/Long	Length (km)	Footprint Area (Ha)	Total Area of Vegetation Clearing (Ha)
Gravel Pit 11	GP11	-16.635584°, 134.608731°	-	2.0	2.0
Gravel Pit 12	GP12	-16.644924°, 134.600328°	-	2.0	2.0
10 x Gravel Pit Disturbance Total			**-**	**20.0**	**20.0**
Gravel Pit Access					
Gravel Pit (GP) Access Track (8 m wide)	GP Access Track		7.80	6.24	6.24
Gravel Pit Access Track Disturbance Total			**7.80**	**6.24**	**6.24**
Total Footprint Option 1 EAT			**47.36**	**174.60**	**126.90**
Total Footprint Option 2 WAT			**43.25**	**168.34**	**145.22**

EASTERN ACCESS OPTION

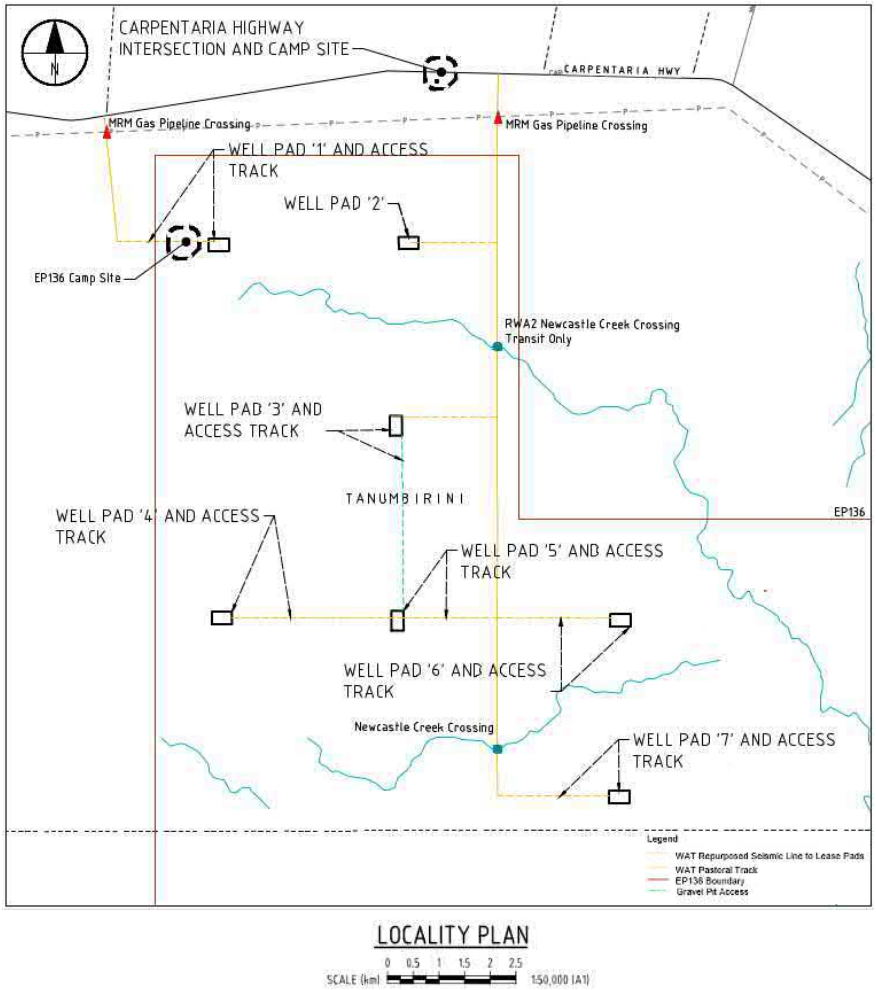


Figure 1 Eastern Access Track, showing existing and repurposed seismic lines

WESTERN ACCESS OPTION

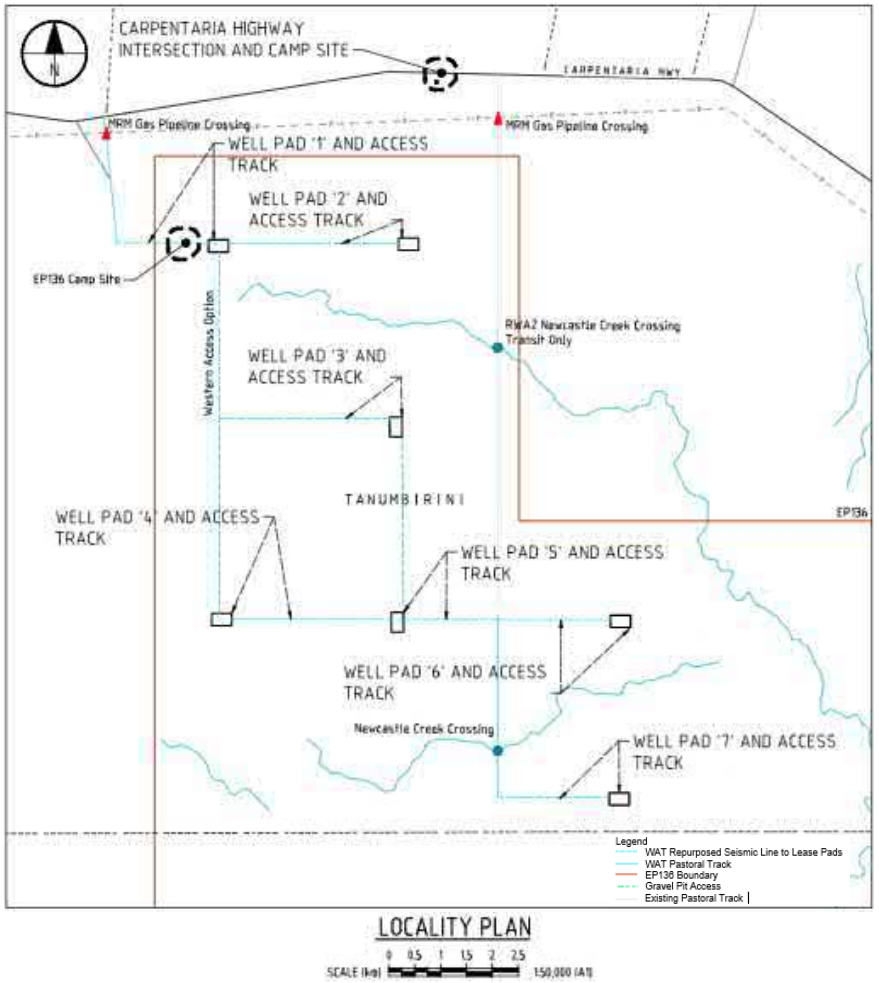


Figure 2 Western Access Track, showing existing and repurposed seismic lines

1.4 Legislation

The activities outlined within the EMP, which this management sub-plan is a component of, aim to comply with relevant guidelines associated with construction activities, such as *International Erosion Control Association (IECA) Best Practice for Erosion and Sediment Control (2008)*, *IECA Appendix P: Land Based Pipeline Construction December 2015* (Addendum to IECA 2008), the *Australian Pipeline Industry Association Code of Environmental Practice for Onshore Pipelines 2017* and the *Code of Practice for Onshore Petroleum Activities in the Northern Territory 2019*.

1.4.1 *Code of Practice for Onshore Petroleum Activities in the Northern Territory 2019*

The *Code of Practice for Petroleum Activities in the Northern Territory* is a mandatory code of practice for the petroleum industry to ensure that petroleum activities in the Northern Territory are managed according to minimum acceptable standards to ensure that risks to the environment can be managed to a level that is as low as reasonably practical (ALARP) and acceptable.

Under these regulations Sweetpea is required to submit an EMP prior to any petroleum exploration, civil construction or production activity. The EMP for a petroleum activity must include a primary Erosion and Sediment Control Plan (ESCP) outlining all activities. This should be developed by a suitably qualified person in accordance with relevant guidelines including specific environmental outcomes and environmental performance standards to be included in the Implementation Strategy in the EMP. The ESCP must include:

- A risk assessment in relation to the potential impact to the environment from erosion and sedimentation associated with the proposed activities. Including an assessment of site-specific conditions and the nature and timing of works with the Land Clearing Guidelines as published on the Department of Environment, Parks and Water Security (DEPWS) website and any amendments
- Where the Primary ESCP requires it, a further ESCP (being the Secondary ESCP) must be developed by a suitably qualified person in relation to the relevant matters identified in the Primary ESCP and implemented by the interest holder.
- Road and pipeline designs must:
    - Minimise erosion of exposed road surfaces and drains
    - Ensure that roads and pipeline surface water flow paths minimise erosion of all exposed surfaces and drains
    - comply with legislative requirements.
- The requirements of the Land Clearing Guidelines as published on the DEPWS website and amended from time to time must be complied with in relation to protection of natural waterways as a result of land disturbance and ensure the following:
    - appropriate buffers are implemented around natural waterways
    - disturbance in the wet season is minimised
    - the number of crossing points is minimised
    - crossings are constructed as close as practicable to right angles to the waterway
    - material changes in the shape of the waterway are avoided
    - material changes in the volume, speed or direction of flow or likely flow of water in the waterway are avoided
    - alteration to the stability of the bed or banks of the waterway (including by removal of vegetation) is avoided
    - erosion risk, sedimentation and pollution of waterways is minimised through the appropriate design and implementation of best practice erosion and sediment control measures.

1.5 Objective

The ESCP aims to:

- Address key soil and water management issues, including legislative and client requirements.
- Determine the “Type” of erosion and sediment control to be implemented during/post-civil construction and monitoring activities associated with those respective works.
- Where practical, identify, eliminate and reduce hazards and associated risks inherent in specific work activities, which if untreated could lead to a diminished product or create the potential for an accident, dangerous occurrence or environmental incident.

The objective of this ESCP is to manage Sweetpea and their principal contractors’ activities within the project area in a manner that minimises the impacts upon soil, vegetation and surface water which may result from soil disturbance activities including land clearing and lease pad establishment.

This ESCP may be amended as required, in response to the monitoring and maintenance programs described herein to avoid significant and/or sustained deterioration in downstream water quality. Standard drawings are provided as a guide, with the responsible person making final determination on site with input as relevant from the Certified Professional in Erosion and Sediment Control (CPESC) (refer to Section 3.4.1).

Should construction be delayed towards the wet season or wet weather were to occur, wet weather contingencies have been identified in this plan and the overarching EMP. It is anticipated that due to the known ground conditions across the region, ground conditions following rainfall events can make access impossible. The primary mitigation will be to monitor weather forecasts daily during the program and where rainfall is likely to result in an event that has potential to limit access, the subcontractor will stabilise the current work areas and go into standby mode until such time can assess the track conditions to recommence activities.

Strategies shall be developed, implemented and reviewed on a regular basis so that risks are identified, measured and recorded throughout the course of the project.

2.0 Exploration Schedule

Civil construction activities, including water bore drilling activities are planned to commence in March 2022 and continue over a four-year period to 2025. It is noted that the schedule may be varied based on the interpretation of results from the seismic survey (schedule May/June 2021) that will determine the preferred sequence of drilling on each lease pad.

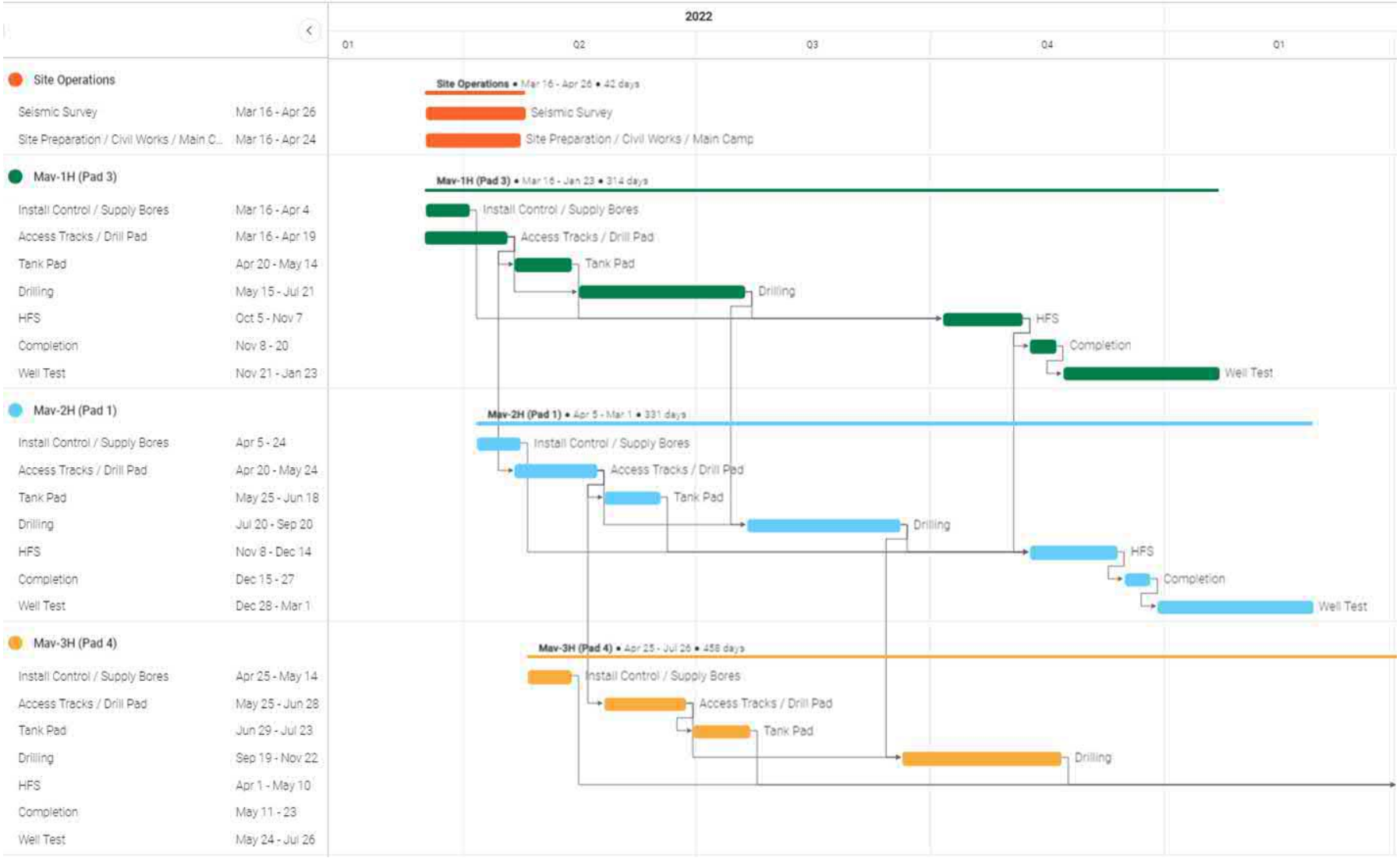
This EMP activities indicative schedule is summarised below, however, the schedule could be impacted by factors such as Covid19, equipment availability, exploration activity results, and/or land access negotiations and timing of commencement of regulated activities. Note that up to 12 monitoring bores and associated water bore pads are covered by the existing approved Seismic EMP so are not included in the below schedule.

- 2022 Mar/Apr - December:
  - Establish an access junction at Carpentaria Highway and construct the access for entry to the Permit tracks.
  - Establish gravel pits to provide material for improving the stability of the access tracks and constructing well site pad areas.
  - Construct access track to Lease Pad 1, Lease Pad 3 and Lease Pad 4 to enable to the construction of well and water tank pads, and the main camp pad at primary option Lease Pad 1 Camp or re-occupy the Highway Camp (Figure 1 or Figure 2).
  - Construct well and water tank pad at Lease Pad 1, Lease Pad 3 and Lease Pad 4.
  - Install water monitoring bores as required (prior to stimulation operations).
  - Construct, upgrade and maintain other access tracks as per Figure 1 or Figure 2 to Lease Pad 2, which may include an access junction at the Carpentaria Highway and the EAT (which is an existing pastoral access track).
  - Construct well and water tank pad at Lease Pad 2.
- 2023 Mar/Apr - December:
  - Establish gravel pits to provide material for improving the stability of the access tracks.
  - Construct access tracks to Lease Pad 5 and Lease Pad 6 respectively to enable the construction of well and water tank pads.
  - Construct well and water tank pad each at Lease Pad 5 and Lease Pad 6.
  - Install water monitoring bores as required (prior to stimulation operations).
- 2024 Mar/Apr - December:
  - Construct access track to Lease Pad 7.
  - Install water monitoring bores as required.
  - Construct well and water tank pad at Lease Pad 7.
  - Install water impact monitoring bores as required (prior to stimulation operations).
- 2025 April - December:
  - Install water monitoring bores as required at Lease Pad 7 (prior to stimulation operations).

Past experience in the permit area indicates that extended rainfall events (i.e. monsoonal rains), that have the potential to limit access, usually don't start until mid-December. However, Sweetpea will implement their wet weather contingency plan as detailed in Section 5.3 should activities continue past 1 October each year.

Rehabilitation will be progressive over the life of the exploration program. Rehabilitation would commence at completion of exploration activities and continued under a 5-year monitoring program.

Table 2 Gantt Chart of Exploration Schedule



3.0 Permit Area Erosion Susceptibility

3.1 Project Area Risk Rating/Matrix

Erosion susceptibility varies dependent upon the soil types, slope and extent of ground disturbance. Apart from the erosive impact of climatic conditions, soil erosion is influenced mainly by the inherent properties of the soils and the processes which occurred during the formation of the landscapes.

Erosion will occur in the permit area if the land is used beyond its capacity, as is seen if the land is overstocked or vehicle movements not controlled. The locations of the proposed construction areas for the 2022-2025 program have been examined in the field to determine the risk of erosion occurring from construction activities.

Factors that would affect the rate of erosion considered include the following:

- Season (R factor) - The timing of the project works will occur mostly within the dry season of the NT, which has low amounts of rainfall and is considered a low-risk factor. Risk levels of rainfall data of Daly Waters can be seen in Table 3 which represents the expected rainfall the permit site experiences, where Daly Waters' station data represents the permit area best. The rainfall data taken from BOM are the averages of all the years of data collected from the respective stations.

Table 3 Erosion Risk Rating based on average monthly rainfall at Daly Waters (all years of data, BOM 2020)

Item	Jan	Feb	Mar	Apr	May	June	Jul	Aug	Sep	Oct	Nov	Dec
Rainfall (mm)	165.4	165.4	120.1	23.6	5.0	5.6	1.5	1.7	4.9	22.5	59.4	110.0
Erosion Risk*	H	H	H	VL	VL	VL	VL	VL	VL	VL	M	H

** E = Extreme (>225 mm); H = High (100+ to 225 mm); M = Moderate (45+ to 100 mm); L = Low (30+ to 45 mm); VL = Very Low (0 to 30 mm)*

- Soil type (K factor) – soils with higher clay content are prone to generation of bulldust and are easily eroded by wind and water. Gravelly soils tend to be more robust to disturbance on the scale expected for construction activities. The primary soil type encountered during the land condition assessment can be described as silty SAND, SM with some gravel. These soils are considered to have a low to medium erodibility potential when the soils are disturbed.
- Slope length - The slope length within the project work area is considered low risk, with respect to the dominant slope being below 2%. The area with slope >2% is generally small (<200 m) across the activity area.
- Slope – The slope of a site has a great influence on the impacts of erosion during rainfall events, where steeply inclined areas posing a greater risk than small undulations in landform. A slight undulation is consistent throughout the region which constitutes a gradient less than 2% which poses negligible risk from erosion generated from the slope of the project area.

  Areas with slope >2% will be avoided where possible from the proposed clearing and development footprint area. However, treatments are defined for sections less than 2% and greater than 2%. The relevant treatment will be implemented on a case by case basis on site.
- Groundcover –Clearing will be conducted to construct access tracks, establish gravel pits and earthworks relating to the construction of the well pads. The clearing method used will consist of a dozer to initially clear vegetation and then dozer or grader to strip topsoil, ensuring that rootstock is retained in the stockpiled topsoil. Expected machinery includes grader, 4W loader, tip truck, water truck, water tanks, excavators and compactors.
- Creek and drainage line crossings – No new waterway crossings will be established in the construction of the gravel pits and access tracks. Existing waterway crossings stem from existing pastoral tracks where the use of existing waterway crossings will require treatment to retain its existing profile in accordance to drawing *Typical Road Invert Crossing Detail* found in Appendix K3. Material used in the treatment plan will be removed once the waterway crossings are no longer required.

3.2 Erosion Hazard Assessment for Project Area

An Erosion Hazard Assessment for the Project Area, including the Carpentaria Highway turn in and proposed camp area (included under lease pad) has been conducted to inform the specific issues and actions that will be required for conducting civil construction and water bore activities.

Table 4 presents the results of the assessment. The IECA (2008) Explanatory Notes were used to support the assessment.

Table 4 Erosion Hazard Assessment for Project Area

Condition (as described by IECA, 2008)	Points	Score			Trigger value
		EP136			
		Lease Pads	Access Tracks	Gravel Pits	
AVERAGE SLOPE OF DISTURBANCE AREA [1]					
• not more than 3% [3% = 33H:1V]	0	**0**	**0**	**0**	4
• more than 3% but not more than 5% [5% = 20H:1V]	1	**Comment** - Topographical data of lease areas indicated (low relief) with a slope <1-2%. Isolated areas increase to 3% to 5%. Note that the area with slope >2% is generally small (<200 m) across the activity area and primarily associated with creek/drainage crossings. In addition, lease pads would be levelled to achieve a uniform grade <2%.			
• more than 5% but not more than 10% [10% = 10H:1V]	2				
• more than 10% but not more than 15% [15% = 6.7H:1V]	4				
• more than 15%	6				
SOIL CLASSIFICATION GROUP (AS1726) [2]					
• GW, GP, GM, GC	0	**2**	**2**	**0**	N/A
• SW, SP, OL, OH	1	**Comment** – Initial soil testing during the baseline survey indicated SM - Silty sands, poorly graded sand-silt mixtures (refer EMP). The identified gravel pits will contain a variety grade that will be used as a foundation for the access tracks. This constitutes a 0 score.			
• SM, SC, MH, CH	2				
• ML, CL, or if imported fill is used, or if soils are untested	3				
EMERSON (DISPERSION) CLASS NUMBER [3]					
• Class 4, 6, 7, or 8	0	**4**	**4**	**4**	6
• Class 5	2	**Comment** – Class 3 – Specific testing for Emerson Class not conducted. Therefore, the default value used.			
• Class 3, (default value if soils are untested)	4				
• Class 1 or 2	6				
DURATION OF SOIL DISTURBANCE [4]					
• not more than 1 month	0	**2**	**2**	**2**	6
• more than 1 month but not more than 4 months	2	**Comment** –Well sites disturbance will span for a maximum of 2 months during the civil works, at which time they will be stabilised for operational activities.	**Comment** – Access tracks disturbance will span for a maximum of 2 months during the civil works, at which time they will be stabilised for the duration of operations.	**Comment** – Access to the gravel pits will continue until the pits have been depleted or until all the access tracks have been developed/upgraded. Gravel pits will be opened up progressively and rehabilitate.	
• more than 4 months but not more than 6 months	4				
• more than 6 months	6				

Condition (as described by IECA, 2008)	Points	Score			Trigger value
		EP136			
		Lease Pads	Access Tracks	Gravel Pits	
AREA OF DISTURBANCE [5]					
• not more than 1000 m^2 (0.1 ha)	0	**6**	**4**	**4**	4
• more than 1000 m^2 (0.1 ha) but not more than 5000 m^2 (0.5 ha)	1	**Comment –** Lease Pads, including main camp, requires a total of 100.3 ha to be cleared. Nine lease pads require 11 ha each and main camp requires 1.3 ha.	**Comment** – Access tracks will require approximately 84.1 ha to be disturbed to establish a total of 51.0 km of tracks. Lease pad tracks on Tanumbirini (40.63 km, 73.1 ha), lease pad tracks on Beetaloo (2.6 km, 4.7 ha) and gravel pit tracks (7.8 km, 6.3 ha). Linear disturbance as constructed and stabilised.	**Comment** – Eleven x 2 ha gravel pits will be prepared and one x 5.3 ha gravel pit near camp. Disturbance will be progressive and stabilisation at complete that unlikely to be disturbance at any one time greater than 4 ha.	
• more than 5000 m^2 (0.5 ha) but not more than 1 ha	2				
• more than 1 ha but not more than 4 ha	4				
• more than 4 ha	6				
WATERWAY DISTURBANCE [6]					
• No disturbance to a watercourse, open-drain or channel	0	**0**	**2**	**0**	2
• Involves disturbance to a constructed open-drain or channel	1	**Comment** – Access to well sites, main access tracks and gravel pits majorly avoids natural courses in exception of two crossings that will require treatment to retain existing profile.			
• Involves disturbance to a natural watercourse	2				
REHABILITATION METHOD [7] Percentage of area (relative to total disturbance) revegetated by seeding without light mulching (i.e. worst-case revegetation method).					
• not more than 1%	1	**4**	**4**	**4**	NA
• more than 1% but not more than 5%	2	**Comment –** Lease pads to be stabilised post development to provide adequate degree of protection.	**Comment –** Access tracks to be stabilised post development to provide adequate degree of protection.	**Comment –** Gravel pits to be stabilised post development to provide adequate degree of protection.	
• more than 5% but not more than 10%	3				
• more than 10%	4				
RECEIVING WATERS [8]					
• Saline waters only	0	**2**	**2**	**2**	NA
• Freshwater body (e.g. creek or freshwater lake or river)	2	**Comment –** no new disturbances within major flow pathways	**Comment –** no new disturbances within major flow pathways	**Comment –** no new disturbances within major flow pathways	

Condition (as described by IECA, 2008)	Points	Score			Trigger value
		EP136			
		Lease Pads	Access Tracks	Gravel Pits	
SUBSOIL EXPOSURE [9]					
• No subsoil exposure except of service trenches	0	**0**	**0**	**0**	NA
• Subsoils are likely to be exposed	2				
EXTERNAL CATCHMENTS [10]					
• No external catchment	0	**1**	**2**	**1**	NA
• External catchment diverted around the soil disturbance	1	**Comment –** External catchment diverted around soil disturbance.	**Comment –** External catchment not diverted around soil disturbance. Where possible the external catchment will be diverted around access tracks however in many cases the external flows will be either captured in table drains or managed by controlling flows across the tracks at causeways.	**Comment –** External catchment diverted around soil disturbance.	
• External catchment not diverted around the soil disturbance	2				
ROAD CONSTRUCTION [11]					
• No road construction	0	**2**	**2**	**2**	NA
• Involves road construction works	2	**Comment** – Layer of gravel will be established for vehicle movements on the well sites.	**Comment –** Access tracks will be installed.	**Comment –** Access tracks will be installed.	
pH OF SOILS TO BE REVEGETATED [12]1					
• more than pH 5.5 but less than pH 8	0	**1**	**1**	**1**	NA
• other pH values, or if soils are untested	1	**Comment –** Majority soils recorded within Soil pH range 5.5-8 across exploration area.			
Total Score [13]		**24**	**25**	**20**	
For guidance purposes only: [13] A preliminary ESCP must be submitted to the local government for approval during the planning phase for any development that obtains a total point score of 17 or greater or when any trigger value is scored or exceeded.					

3.3 Soil Loss Estimate

IECA (2008) soil loss estimation has been used to determine the type of controls the project should adopt to limit soil loss during civil construction when soils are exposed to rainfall. Long term average soil loss resulting from sheet and rill flow can be predicted using the Revised Universal Soil Loss Equation (RUSLE).

Soil loss calculated using RUSLE for the project area was calculated as follows:

$$A = R \times K \times LS \times C \times P$$

Where	$A =$	annual soil loss due to erosion [tonnes/hectare/year (t/ha/yr)]
	$R = 6297$	rainfall erosivity factor
	$K = 0.055$ (silt loam)	soil erodibility factor
	$LS = 0.24$	topographic factor derived from slope length and slope gradient
	$C = 1$	cover and management factor
	$P = 1.3$	erosion control practise factor

The R rainfall erosivity factor of 6297 for the Katherine Region has been adopted as per comment received by DEPWS Land Management team. The K-factor is 0.055 for “Silt Loam” from Table E4 of the IECA Guidelines.

The region for the proposed civil works is flat with low changes in elevation levels and hence has a small gradient. As a conservative estimate, a 200m slope at 0.01 m/m (1.0%) will result in a LS factor of 0.24.

From the following factors, the Annual Soil Loss estimate was calculated to be 108 t/ha/yr.

3.4 Erosion Risk and Determination of ESC

From Table 4, the site conditions did not trigger any points for the Erosion Hazard Assessment criteria apart from area of disturbances, with the construction of the lease pads, gravel pits and access tracks accumulating greater than 4 ha and waterway disturbances to establish access tracks. The rehabilitation for the lease pads, gravel pits and access tracks will follow similar requirements and timeline.

The disturbances of the waterways should be nil as no civil works will be established along the bank of the river, where waterway crossings will stem from utilising the pastoral tracks. The erosion risk rating based on rainfall shows that rainfall related constraints are not likely until November when the erosion risk rating for rainfall moderate seen in Table 3. Experience in the permit area also shows that extended rainfall events that will limit access onto the ground usually don’t start until mid-December. Furthermore, from the Beetaloo SILO Data, Figure 3 historically shows October not being a ‘wet month’, is similar to April and are both significantly drier than November to March.

Using the calculated annual soil estimate of 108t/ha/year found in Section 3.3, the erosion risk rating for the site provided in Table 5 has a rating of *very low* during the dry season. Furthermore, based on of the average monthly rainfall data during the dry season, the erosion risk rating is also *very low*. However, during rainfall events, the monthly erosivity factor would fall under the erosion risk rating of *extreme.*

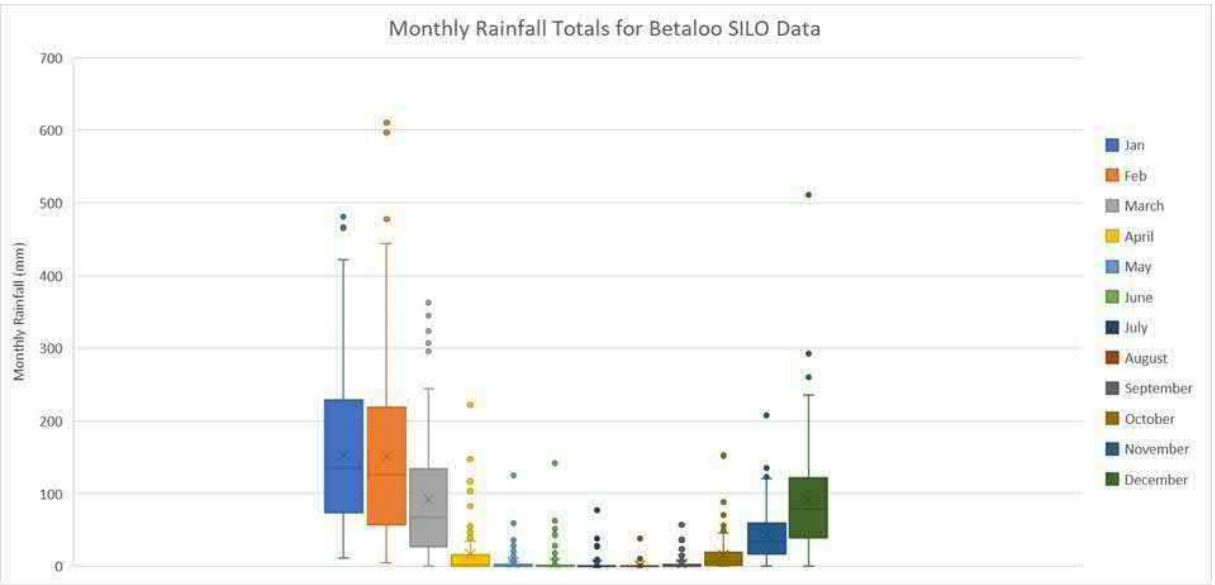


Figure 3 Q100 Monthly Rainfall Totals for Beetaloo SILO Data

Table 5 Erosion Risk Rating (adapted from IECA, 2008, Tables 4.4.1, 4.4.2 and 4.4.3)

Erosion Risk Rating	Average Monthly Erosivity (R-Factor)	Average Monthly Rainfall Depth (mm)	Soil Loss (t/ha/yr)
Very Low	0 to 60	0 to 30*	0 to 150
Low	60+ to 100	30+ to 45	150+ to 225
Moderate	100+ to 285	45+ to 100	225+ to 500
High	285+ to 1,500	100+ to 225	500+ to 1,500
Extreme	>1,500*	>225	>1,500

**Monthly erosivity factor would only be triggered during rainfall events. The construction period is proposed to occur from April to October and based on assessment of the average monthly rainfall for the region (refer* Table 3 *and Figure 3), the erosion risk rating is considered very low (0 to 30mm during April to October). It is anticipated that at completion of construction the site would be stabilised for normal operation*

Table 6, provides an indication of the "Type" of erosion and sediment controls that should be deployed during civil construction and camp operation, based on annual soil loss estimate of 108 t/ha/yr and with the catchment area being greater than 2,500m^2. With consideration of the civil works taking place during the dry season and referencing the applicable columns in Table 6, the civil portion of the project will trigger the use of Type 2 erosion and sediment controls.

Table 6 Sediment Control Standard (adapted from IECA, Table 4.5.1)

Catchment Area (m^2)	Soil Loss Rate Limit (t/ha/yr)		
	Type 1	Type 2	Type 3
250	N/A	N/A	All Cases
1000	N/A	N/A	All Cases
2500	N/A	>75	75
>2500	>150	150	75

Table 7 provides a range of erosion and sediment controls that can be deployed. Under 'Type 2', highlighted in grey are sediment and erosion control measures that should be implemented for the civil works.

Table 7 Classification of Sediment Controls (adapted from IECA, 2008. Table 4.5.3)

Type 1	Type 2	Type 3
Sheet Flow		
Buffer Zone capable of infiltrating 100% of stormwater runoff or processed water Infiltration basin or sand filter bed capable of infiltration of 100% of flow	Buffer Zone capable of infiltrating the majority of stormwater runoff **Compost/Mulch Berm**	**Buffer Zone** Filter Fence Modular Sediment Trap Sediment Fence
Concentrated Flow		
Sediment basin (sized in accordance with design standard)	Sediment Basin (smaller than the design standard) Filter Tube Dam Rock Filter Dam Sediment Trench Sediment Weir	Coarse Sediment Trap Modular Sediment Trap U-shaped Sediment Trap
Dewatering Sediment Control		
Type F/D Sediment Basin Stilling Pond	Filter Bag or Filter Tube Filter Pond Filter Tube Dam Portable Sediment Tank Settling Pond Sump Pit	Filter Fence Grass Filter Bed Hydrocyclone Portable Sediment Tank Sediment Fence
In-stream Sediment Control		
Pump sediment-laden water to an off-stream Type F/D Sediment Basin or high filtration system	Filter Tube Barrier Modular Sediment Barrier Rock Filter Dam Sediment Weir	Modular Sediment Barrier Sediment Filter Cage

The final implantation of the ESC controls will be dependent on the decisions made in the field by the site conditions during the time of construction related to the Civil Works contractors.

3.4.1 Modifying the ESC Measures

It is possible that some ESC measures will require modification as the project is constructed and in response to the performance of ESC measures or changes in project circumstances. The modifications may be considered minor, moderate or significant. Moderate and minor changes will occur, and it is expected that significant modifications will be the exception. If significant erosion events occur, significant changes to the measures used will be required and should be approved by a CPESC or suitably qualified consulting engineer.

To accommodate the range of circumstances likely to occur, a change management decision matrix is presented in Table 8. Where changes are required these will be risked assessed through a change management process as detailed in Section 8.7 of the C&WB EMP and kept in a change management register.

Table 8 Change management decision matrix

Authority required	Minor	Moderate		Significant
	Maintenance of all measures	Removal or relocation of minor temporary controls	Permanent measure relocation	Permanent measure removal/revisions to ESCP
Sweetpea Onsite Company Rep	✓	×	×	×
Site Supervisor	-	✓	×	×
CPESC	-	-	✓	✓
Consulting Engineer	-	-	✓	✓

✓ Authorised to undertake.

× Not Authorised to undertake.

- Denotes that authority level is not required

Examples of different types of sediment controls can be seen in Table 7. Examples of minor temporary controls would fall under Type 3 Sediment Controls while Type 2 Sediment Controls provide examples of permanent measures.

It is noted that minor and permanent are not indications of how long the sediment controls are in place. At completion of the activities related to the civil works, the disturbed areas to be restored and/or rehabilitated to pre-disturbed conditions consistent with the surrounding land use.

If ESC measures are observed to be ineffective (*e.g.* obvious sediment deposition has occurred, or is occurring in a waterway), the source of the sediment must be identified, and corrective ESC measures implemented.

4.0 Erosion and Sediment Control

Appendix K1 contains typical erosion and sediment control measures that are to be applied throughout the project when required. Treatments are identified for specific situations and should be applied appropriately.

4.1 Erosion and Sediment Control Measures

Table 9 Measures to be implemented for Sediment and Erosion Control

Activity	Management Controls
Vegetation clearing	• Undertake selective clearing (only necessary clearing areas), using lighter machinery such as graders or smaller bulldozers, taking care, not to overwork tracks or pads. Overworking the site can lead to the loss of topsoil, compaction, the formation of windrows and wheel rutting. Refer to Appendix K3. • Ground surface to be stabilised before the onset of the wet season (November to March), and only where an alternative route is unavoidable. • Take all reasonable and practicable measures to minimise the removal of, or disturbance to, trees, shrubs and ground covers (organic or inorganic) that are to be retained. • All land clearing must be in accordance with the Federal, Territory and local government vegetation clearing requirements and IECA Table 4.4.7 Best practice land clearing and rehabilitation requirements (Appendix K3). • All reasonable and practicable steps to be taken to apply best practice Erosion control measures following earthworks and site stabilised prior to anticipated rainfall. Disturbed areas will be stabilised in accordance with the rehabilitation plan. Reference should be made to Appendix F Rehabilitation Plan for the lease pads, access tracks and gravel pits. • Where possible, i.e. gravel pits, vegetation clearing should be in small units over time, keeping the disturbed areas small and exposure time short, in conjunction with progressive re-vegetation (assisted natural regeneration using available topsoil and removed vegetation). • Minimise impact to vegetation and soils within the 200 m native vegetation buffers along pastoral property boundaries and 50 m buffer for land adjoining NTG road reserves.
Creek and Drainage Line Crossings	• Creeks and drainage lines (also referred to as intermittent streams) will only be crossed whilst using the pastoral track to gain access for the civil and bore water monitoring works. No additional tracks that are constructed for the civil works will cross any waterways. • Only ‘transit’ of Newcastle Creek Crossing on the Eastern Access Track in accordance with AAPA Certificate conditions on RWA2. • All other crossings will be located at stable and level crossing points. • The civil construction crew will need to engage with the TOs and the NLC wherever the access track cross Newcastle Creek, because of its known cultural sensitivities (RWA2 requirements).

<table>
<tr><th>Activity</th><th>Management Controls</th></tr>
<tr><td></td><td>

All large shrubs and trees will be avoided along creeks and drainage lines during access track construction.
Where ramps are required for improving the crossing, they will be aligned perpendicular to creek bed or drainage line, as much as possible using local materials.
Protection of the crossings, including ramps, shall be undertake using the “Typical Floodway Detail” as shown on Dwg No. 60611666-0000-04, with exception of crossings within RWA2, these will be ‘transit’ only.
Any rock protection must be restricted to what is necessary to provide safe passage and be placed at bed level.
The retention of vegetation buffers (as outlined in the NTG Land Clearing Guidelines 2019) as they relate to stream order will need to be considered for the improvements to the existing crossing points.
Disturbance in the riparian buffers in accordance with the stream order of the encountered drainage lines will be in accordance with the buffers provided below:

<table>
<tr><th>Riparian class</th><th>Stream order</th><th>Minimum buffer width</th><th>Measured from</th></tr>
<tr><td>Drainage depression</td><td>Not applicable</td><td>25</td><td>The outer edge of the drainage depression, which is the extent of the associated poorly drained soils and associated vegetation</td></tr>
<tr><td>Intermittent streams</td><td>First</td><td>25</td><td>The outer edge of the riparian vegetation or levee (whichever is greater). If braided channels are present, the edge of the outer most stream channel</td></tr>
<tr><td>Intermittent streams</td><td>Second</td><td>50</td><td>As above</td></tr>
<tr><td>Creeks</td><td>Third and fourth</td><td>100</td><td>As above</td></tr>
<tr><td>Rivers</td><td>Fifth or higher</td><td>250</td><td>As above</td></tr>
</table>

Wet weather contingency procedures will be implemented from 1 October to 31 March.
The activities are to be completed in a manner that does not cause material change to the shape of a waterway, the volume, speed or direction of flow or likely flow of water in or into a waterway, or alteration to the stability of the bed or banks of a waterway, including by removal of vegetation. Waterways will require treatment to retain its existing profile.
Monitoring of creek and drainage crossing condition prior to, during and at completion of rehabilitation will be required.
The original topography of the creek or drainage bed will be reinstated by removing material related to treatment of retaining the waterway’s existing profile following practical completion of the exploration program.

</td></tr>
<tr><td>Access track and camp establishment/maintenance.</td><td>

Existing pastoral station tracks will be used to access construction sites wherever practicable, or will minimise the removal of the vegetation, leaving as much intact as possible.
Vehicles (Surveyors/Bore Water Monitors with 4WD) that enter and exit the site will be constrained in such a manner to prevent dropping or tracking material on the Highway in accordance with the Road Agency Approval. Refer treatment in Appendix K1 to be used during construction phase.

</td></tr>
</table>

Activity	Management Controls
	• Monitor Carpentaria Highway during operation. Where tracked material on the road pavement becomes a potential safety issue, Sweetpea and principal contractors will sweep and clean material off the road. If Carpentaria Highway Turn-in results in dust, dirt creating a hazard to road users, additional ESC will be considered including installation of shaker grid or rock pad. • Place scrub and vegetation cleared from the route adjacent to the route where practical to facilitate its return to the disturbed area. Where this occurs, spread the material out rather than form windrows. Allow disturbed areas to be stabilised and natural regeneration of the native grasses to occur. • Monitor road conditions to ensure deterioration does not occur. Assist in the maintenance and repair work on roads and tracks used.
Pad construction/maintenance	• Pad construction to be in accordance with the typical ESCP. - Use topsoil berms to divert upstream runoff from undisturbed areas ('clean' water) around and away from disturbed areas, and back to the environment. Where erosion of the berm is evident application of cover (eg vegetative cover in mulch) will be required. - Use topsoil/mulch berms to contain/manage runoff from disturbed construction areas ('dirty' water) and minimise release to the environment without treatment. - Treat runoff from construction areas through suitable sediment controls (e.g. sediment traps). - Configure berms so that upstream runoff does not mix with construction area runoff prior to treatment of construction area runoff. • Where topsoil stripping is required, the stripping depth would be in accordance with Technical Instruction (NT-2050-15-TI-0001) and amelioration rates agreed with the Construction Supervisor, engineers and by a suitably qualified ESC practitioner. It is noted that the expected nominal depth of topsoil across the lease pads at all locations will range from <100 mm to 150 mm. Final strip depth will be confirmed in the field. Any changes to the adopted ESCs will be reflected in the ESCP and to satisfaction of DEPWS. • Stockpiled felled trees nearby for future use in rehabilitation. • Maintenance is undertaken by an appropriately qualified person i.e. approved contractor / Sweetpea • Following the completion of activities and within 2 years after the surrender of a lease, the land surrounding or affected by the exploration wells shall be restored per the site-specific rehabilitation plan and final determination of asset (i.e. if transferring asset ownership to landholder).

Activity	Management Controls
Site management	• All materials, plant and equipment brought to the site are to be certified as "free" of weeds, soil pathogens and pests. • All disturbed areas identified as very low, low, medium or high erosion risk must be suitably stabilised before anticipated rainfall. • External catchments at gravel pits are to be diverted around the area of soil disturbance. • Gravel pits will be formed in a manner to be internally draining at all times during gravel extraction (i.e. a basin) and shall be maintained as such for the term of it's operational life until rehabilitated. • Tracks to be regularly inspected for early signs of compaction, erosion and soil degradation (generation of bulldust). Ongoing maintenance and repair work should be implemented as required on tracks. • Monitor road conditions for deterioration. Assist in the maintenance and repair work on roads and tracks used. • No off-lease or off-road driving. • Land-disturbing activities must: - allow stormwater to pass through the site in a controlled manner and at non-erosive flow velocities. Preferably, stormwater runoff must be diverted around the site. - minimise soil erosion resulting from rain, water flow and/or wind. - minimise adverse effects of sediment runoff, including safety issues. - avoid, or at least minimise, environmental harm resulting from work-related soil erosion and sediment runoff. - ensure that the value and use of land/properties adjacent to the site (including access roads) are not diminished as a result of the adopted ESC measures. • Additional and/or alternative ESC measures must be implemented if unacceptable off-site sedimentation is occurring as a result of the work activities. • Sediment deposited off the site as a direct result of on-site activity is collected and the area appropriately rehabilitated as soon as reasonable and practicable, subject to consideration of the safety and environmental risks associated with the sediment deposition. • At completion of the activities related to the civil works, the disturbed areas to be restored and/or rehabilitated to original pre-disturbed condition consistent with the surrounding land use.
Erosion Control	• If synthetic reinforced erosion control mats or blankets cannot be avoided, they must not be placed in, or adjacent to, riparian zones and watercourses if such materials are likely to cause environmental harm to wildlife or wildlife habitats. • A minimum 60% ground cover must be achieved on all non-completed earthworks exposed to accelerated soil erosion. If further construction activities or soil disturbances are likely to be suspended for more than 30 days during months when the expected rainfall erosivity is less than 60; - minimum 70% cover within 30 days if between 60 and 100; - minimum 70% cover within 20 days if between 100 and 285; - minimum 80% cover within 10 days if between 285 and 1,500; and - minimum 95% cover within 5 days if greater than 1,500.

Activity	Management Controls
Sediment Control	• The optimum benefit must be made of every opportunity to trap sediment within the work site, and as close as practicable to its source. • Sediment pond to be designed and installed in accordance with IECA 2008 (Appendix B June 2018) specifically, for example, in regard to selection of reagents to promote the settlement of suspended solids *i.e.* jar testing and with regard to ecotoxicity. All reasonable and practicable measures must be taken to prevent, or at least minimise, the release of sediment from the site. • Initial jar test work undertaken at site establishment, reagent(s) types and application rates determined for potential treatment of sediment laden runoff. Maintain supply of selected reagent onsite for treatment when required. • Sediment control devices must be de-silted and made fully operational as soon as reasonable and practicable after a sediment-producing event if the device's sediment retention capacity falls below 75% of its design retention capacity. • Materials removed from sediment control devices must be disposed of in a manner that does not cause ongoing soil erosion or environmental harm. • Ensure that gravel tracks have adequate thickness to increase the structural stability for vehicle use. This minimises rapid deterioration. • Have onsite storage of emergency materials to establish and uphold the site's erosion and sediment controls.
Soil and Stockpile Management	• Stockpile existing topsoil, where available, so that it can be reused on the site for ESC and future rehabilitation after the project. • Stockpiles of erodible material that has the potential to cause environmental harm if displaced, must be: i. Appropriately protected from wind, rain, concentrated surface flow and excessive up-slope stormwater surface flows. ii. Located at least 2m away from any retained vegetation. iii. Located up-slope of an appropriate sediment control system. iv. Provided with an appropriate protective, impervious cover (synthetic or vegetative) if the materials are likely to be stockpiled for more than 28 days. v. Provided with an appropriate protective, impervious cover (synthetic or vegetative) if the materials are likely to be stockpiled for more than 10 days during those months that have an erosion risk rating higher than medium. • A suitable flow diversion system must be established immediately up-slope of a stockpile of erodible material that has the potential to cause environmental harm if displaced if the up-slope catchment area draining to the stockpile exceeds 1,500m^2. • Avoid creating windrows. Do not create windrows across creeks, use rollers when putting in tracks in preference to dozers, or walk the dozer with the blade raised off the ground.
Wet weather contingency	• 7-day forecast from the Bureau of Meteorology (BOM) to be monitored and the civil and water bore construction activities planned around the forecasts.

Activity	Management Controls
	• Where forecasts indicate monsoonal rainfall is likely to result in an event that has potential to limit access to the work area, the civil and water bore contractor will stabilise the current work areas and go into standby mode until such time they can assess the track condition after an event to recommence activities. • Wet weather use of the Eastern Access Track will require a new Sacred Site Clearance Certificate, this will only be necessary if the Western Access Track is not available due to delays with land access negotiations. If neither a new SSCC nor access to the Western Access Track is available by Q4 2022 then Sweetpea will need to potentially stack equipment south of Newcastle Creek or move all equipment north of Newcastle Creek prior to the 2022-23 wet season and alter the drilling priority. This approach mitigates the risk of not being able to do works, other than transit, of the Newcastle Creek crossing(s) within RWA2. • Emergency response – a post-rainfall/flood damage reconnaissance and assessment will be undertaken as soon as the area becomes accessible. Any damage observed would be repaired as soon as practicable after the event and ensure the controls and measures are in place prior to the next rainfall event.
Site rehabilitation	• At the completion of activities and before the commencement of decommissioning activities, Sweetpea will discuss any possible residual beneficial use of the assets with the landowner. Assets may include the well lease pads, tank pads, access tracks, accommodation camps, gravel pits and water infrastructure. If the landholder does request for infrastructure to remain in place, the proposed infrastructure will have ownership transferred following approval by DEPWS and the Pastoral Land Board. • Where assets cannot be beneficially used, the site will be rehabilitated using assisted natural regeneration to a safe, stable landform consistent with surrounding land use. Once Sweetpea identifies the completion of activities within an area of the permit, rehabilitation will commence within that 12-month period. • Rehabilitation of disturbed areas will occur as soon as practicable following completion of works in accordance with Appendix F Rehabilitation Plan to reduce exposed soils and minimise runoff from first flush events. • Gravel pits to have topsoil returned and re-profiled. • All compacted areas will be ripped and scarified to promote regeneration of vegetation. • All disturbed areas will be allowed to naturally regenerate or be revegetated on completion of use. • Rehabilitation of disturbed areas should follow a similar landform to the surrounding area. • The formation of steep slopes, barriers, fencing components should not be left on site which could endanger wildlife or humans. • After activities, establish vegetation to the standard of that registered in the pre-assessment, or better. • Remove and appropriately dispose of all synthetic erosion and sediment control materials. • At completion of activities, establish vegetation similar to adjacent vegetation, unless agreement with landowner for alternative use. • Stabilise disturbed areas quickly to reduce the potential for erosion.

Activity	Management Controls
	• Previously removed vegetation and topsoil will be uniformly re-spread over the disturbed area to assist with the rehabilitation process through agencies of increased infiltration and return of seed-bearing topsoil. If required, additional native seed mix from the area could be respread to speed up the rehabilitation process. This will be confirmed during rehabilitation monitoring activities. • Windrows to be removed as soon as practicable. • The type of ground cover applied to completed earthworks is compatible with the anticipated long-term land use, environmental risk, and site rehabilitation measures.

5.0 Monitoring

5.1 General

Monitoring for soil erosion and related issues is undertaken at the following key stages:

- Assessment of existing erosion during siting of access track, well lease pads and field camp.
- Following completion of key phase of activity – e.g. inspected for early signs of compaction, erosion and soil degradation (generation of bulldust) following completion of the civil construction program.
- If the 7-day forecast indicates greater than 50% chance of rain.
- After more than 20 mm of rainfall has fallen in a 24-hr period.
- Vegetation recovery monitoring (refer below).

Additional, routine inspections are to be conducted monthly to assess:

- Erosion and sediment controls employed on site are in place and in working order.
- For wind erosion scalds, especially along the access tracks, well lease pads and camp areas.
- For erosion gullies forming along access tracks and well lease pads or around the field camp.
- Erosion along the extent of the access tracks would be assessed and compared to the results from the baseline land condition assessment (AECOM, 2021).

When accessing the site after the wet season, all disturbed areas should be inspected for signs of accelerated erosion. If significant impacts are identified remediation works may need to be conducted.

5.2 Operations

Visual inspections to assess the impact risk levels and the likelihood of accelerated erosion occurring will be carried out throughout civil construction and operational activities to ensure that mitigation measures are implemented. Regular assessments will be conducted to ensure that mitigation techniques are implemented efficiently and effectively. Greater emphasis will be required during the wet season.

Inspections of all disturbed areas are required before and after the wet season. Maintenance activities should be prioritised immediately; involving monitoring of the erosion and sediment rehabilitation procedures to ensure that issues are rectified.

5.3 Wet Weather Contingency

The monitoring requirements for undertaking civil construction activities and maintenance activities for the wet season will require the following:

- Monitoring of the 7-day forecast to determine the civil and water bore construction program around the forecasts.
- The positioning of monsoonal troughs in Northern Australia to be monitored and tracked.
- Potential high rainfall incidents such as tropical lows, cyclones will be monitored and tracked using BOM information.
- During rainfall events, daily inspections of all Erosion and Sediment Control (ESC) devices from all disturbance areas during activities

A log of information monitored will be kept for the duration of the exploration activities.

5.4 ESC Trigger Action Response Plan

The following Trigger Action Response Plan (TARP) is to be implemented during construction:

- **Monitoring Requirements:**
  - Daily visual inspection of access track, lease pads and campsite conditions for duration of civil construction activities.
  - Routine visual inspections of the creek and drainage line access track crossings and the wastewater containment system at the camp weekly or following a rainfall event (i.e. greater than 20 mm in 24 hours).
- **Action:**
  - On establishment of each exploration lease pad, undertake jar testing work to determine anticipated settling rate of sediments on site. This will inform flocculent dosing requirements as required.
  - Repair of ESC devices immediately when found not to comply.
  - Where monitoring has indicated weather condition have impacted the integrity of the erosion and sediment controls, operators must adopt one of the treatment plans from Section 3.4 to mitigate the impacts of rainfall and ensure that the ESC devices are reinstated as soon as physically practicable after the event.
  - Inspection of all ESC devices across the worksite and physical water quality testing (physical parameters only) at the lease pad sediment basin should be conducted prior to discharge of water offsite. Water quality discharge indicators include:
    - No visible oil, grease or other hydrocarbons
    - pH: Between 6.0-8.0
    - EC: 250 uS/cm.

    The adopted discharge criteria are based on ANZECC 2000 Table 3.3.4 and Table 3.3.5 default trigger values for pH and conductivity (EC, salinity) indicative of slightly disturbed ecosystems in tropical Australia, as well as consideration of the distance and type of nearby sensitive surface water receptors as ephemeral drainage lines and creeks.
- **Response:**
  - If water quality conditions meet discharge indicators, beneficial reuse of water may be considered for construction activities.
  - External NATA accredited laboratory testing of soil/sediment or surface water would only be required for the following triggers:
    - Work area has a known existing contaminating event in the preceding 3 months that could influence stormwater discharge quality (refer to Spill Prevention and Response Plan – Section 7.6 of the EMP).
    - The visual inspection and physical water quality testing indicated potential contamination.
    - Where there is a sensitive receiving water body within 200 m of the discharge point.

5.5 Rehabilitation

Rehabilitation will be undertaken along all newly constructed access tracks to the well sites and gravel pits concurrently with the completion of the civil works from each lease pad location. Rehabilitation monitoring will commence pre and post initial wet season and then annually for 3 years.. This will determine whether additional rehabilitation works are required. A successful rehabilitation from preliminary, early and long-term stages are defined and include:

- Seed germination and plant establishment rates are sufficient and are observed.

- Safe for humans and wildlife. Assessment on the number of species present in the rehabilitated area.
- Stable, with appropriate vegetation cover.
- Non-polluting.
- Resilient, self-sustaining vegetation.
- Land condition suitable for existing pastoral land use

5.6 Incident Reporting

The civil construction and maintenance contractors must follow incident reporting requirements covered in the Sweetpea Incident Management Procedure.

5.7 Records

Records shall be retained demonstrating area have been inspected. Georeferenced photographic records will be maintained over the duration of the activities for documenting soil disturbance.

All environmentally relevant incidents are to be recorded in a field log that must remain accessible to all relevant regulatory authorities.

Mi[redacted]um records to be retained for each site include:

Location of disturbance	Area of Disturbance	Date	Closeout

5.8 ESCP Revisions

Where major changes are required to the proposed controls in the ESCP, DEPWS would be advised and a revised ESCP provided for review and approval. Should the civil and water bore construction activities progress into the wet season, the wet weather contingency plan will be implemented.

5.9 Maintenance

All temporary erosion and sediment control measures, including drainage control measures, must always be fully operational and maintained in proper working order during the project.

When undertaking construction work, erosion and sediment control measures must be inspected:

- at least daily (when work is occurring on-site)
- within 24 hours of expected rainfall
- within 18 hours of a rainfall event of enough intensity and duration to cause runoff on-site or greater than 20mm in 24 hours.

Once operational, inspections of the survey lines will continue daily while onsite, and before and after the wet season. Where erosion is observed, maintenance activities shall be undertaken.

Before the completion of activities on the ground, the construction areas will be stabilised to the satisfaction of the Exploration Supervisor and Sweetpea.

6.0 References

AECOM Australia Pty Ltd. 2021. *Land Condition Assessment – EP136 Beetaloo Sub-basin, NT*, report prepared for Civil Construction and Water Bore EMP.

ANZECC. 2000. *Australian and New Zealand Guidelines for Fresh and Marine Water Quality*, Published by ANZECC/ARMCANZ, Canberra, ACT.

Department of Environment and Natural Resources (DENR). 2019, *Land Clearing Guidelines, Northern Territory Government* (dated February 2019), Palmerston, NT.

Department of Natural Resources, Environment, The Arts and Sport (NRETAS). 2010. *Land Clearing Guidelines. Northern Territory Government*, Palmerston, NT.

International Erosion Control Association (IECA). 2008. *Best Practice Erosion and Sediment Control – for building and construction sites*. Picton, NSW: International Erosion Control Association (Australasia).

Scientific Inquiry into Hydraulic Fracturing in the Northern Territory. 2018. *Scientific Inquiry into Hydraulic Fracturing in the Northern Territory* – Final Report.

Appendix K1

Erosion Control Treatments

Appendix K1 Erosion Control Treatments

Where clearing is not required for earthworks, vehicle movements should be limited to the following activities.

- Blade up areas where only wheel tracks will develop – no treatments required.
- Surface bladed by grader to smooth out ground surface to allow vehicle movements. No tree removal. Topsoil will be bladed off by grader and windrowed for later respreading at completion of construction activities, to preserve the soil structure.
    - At the conclusion of activities, or as part of progressive rehabilitation, or the anticipated onset of a significant rainfall event which will require the site to be abandoned, topsoil would be respread and ripped into the soil surface.
    - Works on grade (>2%)– Surface bladed by grader to smooth out ground surface to allow vehicle movements. No tree removal. Topsoil will be bladed off by grader and windrowed for later respreading at completion of construction activities, to preserve the soil structure. Whoa boys or roll over banks to be provided as per details in Appendix K3.

The figure below shows the condition of land following blade up traverse of survey area.

Figure 4 Typical condition 'blade up' treatment

Figure 5 Sediment Control Standard - Construction Exit – Rock Pad (construction sites only)

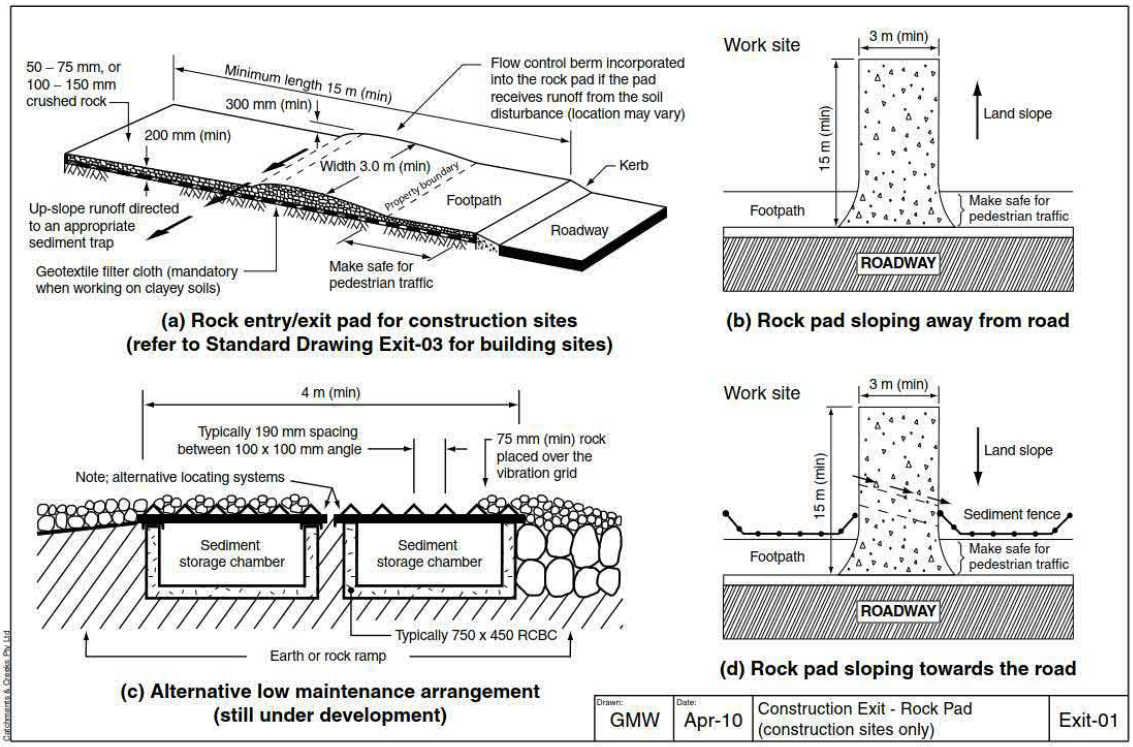


Figure 6 Sediment Control Standard - Construction Exit – Rock Pad (construction sites only)

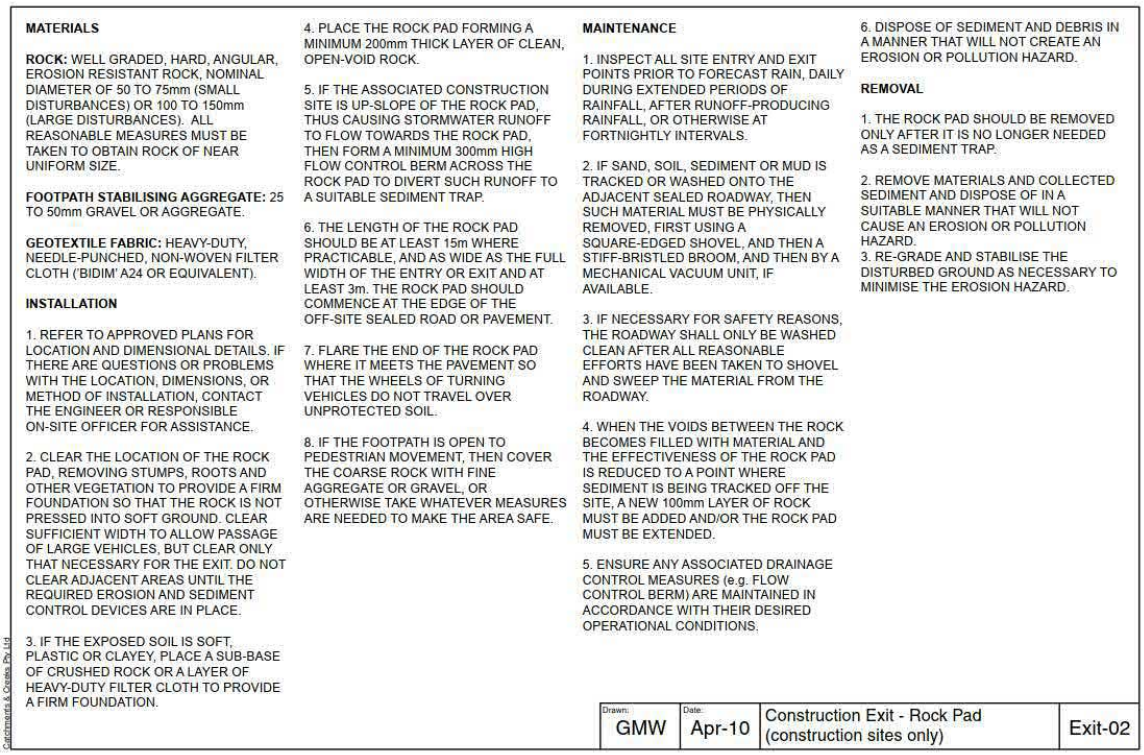
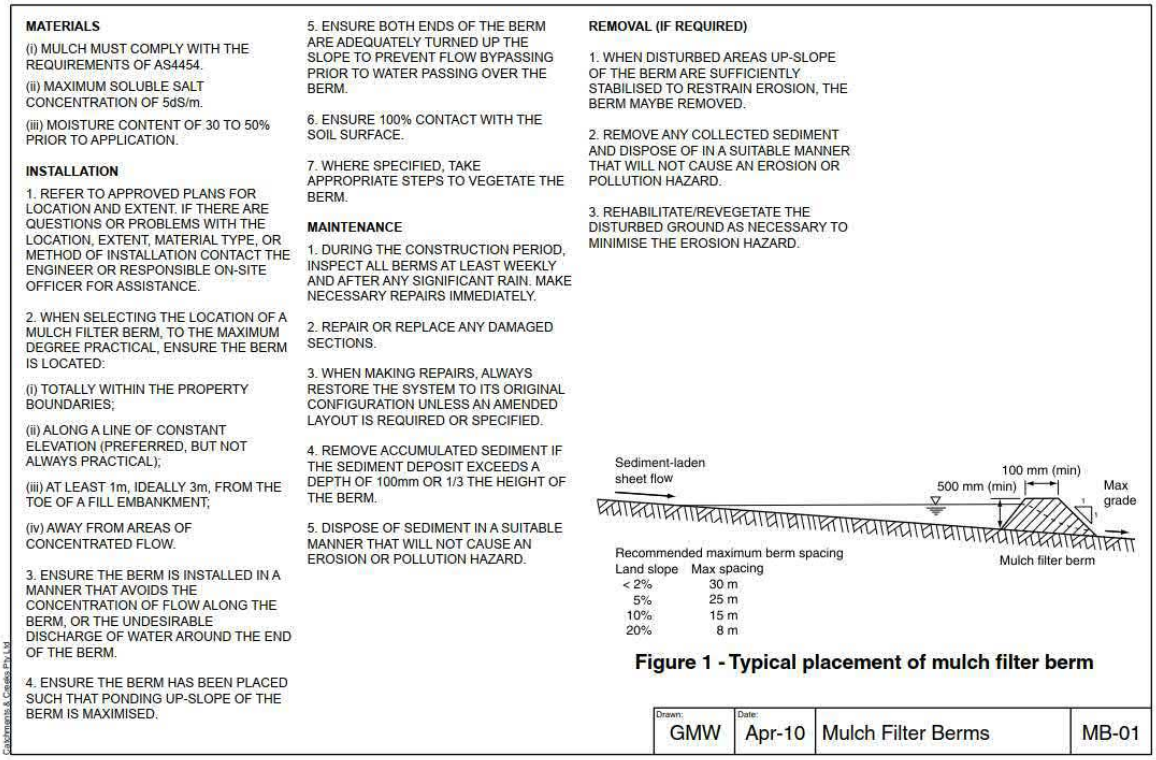


Figure 7 Mulching Sediment Control Standard - Mulch Filter Berms



MATERIALS

(i) MULCH MUST COMPLY WITH THE REQUIREMENTS OF AS4454.

(ii) MAXIMUM SOLUBLE SALT CONCENTRATION OF 5dS/m.

(iii) MOISTURE CONTENT OF 30 TO 50% PRIOR TO APPLICATION.

INSTALLATION

1. REFER TO APPROVED PLANS FOR LOCATION AND EXTENT. IF THERE ARE QUESTIONS OR PROBLEMS WITH THE LOCATION, EXTENT, MATERIAL TYPE, OR METHOD OF INSTALLATION CONTACT THE ENGINEER OR RESPONSIBLE ON-SITE OFFICER FOR ASSISTANCE.

2. WHEN SELECTING THE LOCATION OF A MULCH FILTER BERM, TO THE MAXIMUM DEGREE PRACTICAL, ENSURE THE BERM IS LOCATED:

(i) TOTALLY WITHIN THE PROPERTY BOUNDARIES;

(ii) ALONG A LINE OF CONSTANT ELEVATION (PREFERRED, BUT NOT ALWAYS PRACTICAL);

(iii) AT LEAST 1m, IDEALLY 3m, FROM THE TOE OF A FILL EMBANKMENT;

(iv) AWAY FROM AREAS OF CONCENTRATED FLOW.

3. ENSURE THE BERM IS INSTALLED IN A MANNER THAT AVOIDS THE CONCENTRATION OF FLOW ALONG THE BERM, OR THE UNDESIRABLE DISCHARGE OF WATER AROUND THE END OF THE BERM.

4. ENSURE THE BERM HAS BEEN PLACED SUCH THAT PONDING UP-SLOPE OF THE BERM IS MAXIMISED.

5. ENSURE BOTH ENDS OF THE BERM ARE ADEQUATELY TURNED UP THE SLOPE TO PREVENT FLOW BYPASSING PRIOR TO WATER PASSING OVER THE BERM.

6. ENSURE 100% CONTACT WITH THE SOIL SURFACE.

7. WHERE SPECIFIED, TAKE APPROPRIATE STEPS TO VEGETATE THE BERM.

MAINTENANCE

1. DURING THE CONSTRUCTION PERIOD, INSPECT ALL BERMS AT LEAST WEEKLY AND AFTER ANY SIGNIFICANT RAIN. MAKE NECESSARY REPAIRS IMMEDIATELY.

2. REPAIR OR REPLACE ANY DAMAGED SECTIONS.

3. WHEN MAKING REPAIRS, ALWAYS RESTORE THE SYSTEM TO ITS ORIGINAL CONFIGURATION UNLESS AN AMENDED LAYOUT IS REQUIRED OR SPECIFIED.

4. REMOVE ACCUMULATED SEDIMENT IF THE SEDIMENT DEPOSIT EXCEEDS A DEPTH OF 100mm OR 1/3 THE HEIGHT OF THE BERM.

5. DISPOSE OF SEDIMENT IN A SUITABLE MANNER THAT WILL NOT CAUSE AN EROSION OR POLLUTION HAZARD.

REMOVAL (IF REQUIRED)

1. WHEN DISTURBED AREAS UP-SLOPE OF THE BERM ARE SUFFICIENTLY STABILISED TO RESTRAIN EROSION, THE BERM MAYBE REMOVED.

2. REMOVE ANY COLLECTED SEDIMENT AND DISPOSE OF IN A SUITABLE MANNER THAT WILL NOT CAUSE AN EROSION OR POLLUTION HAZARD.

3. REHABILITATE/REVEGETATE THE DISTURBED GROUND AS NECESSARY TO MINIMISE THE EROSION HAZARD.

Recommended maximum berm spacing

Land slope	Max spacing
< 2%	30 m
5%	25 m
10%	15 m
20%	8 m

Figure 1 - Typical placement of mulch filter berm

Drawn:	Date:		
GMW	Apr-10	Mulch Filter Berms	MB-01

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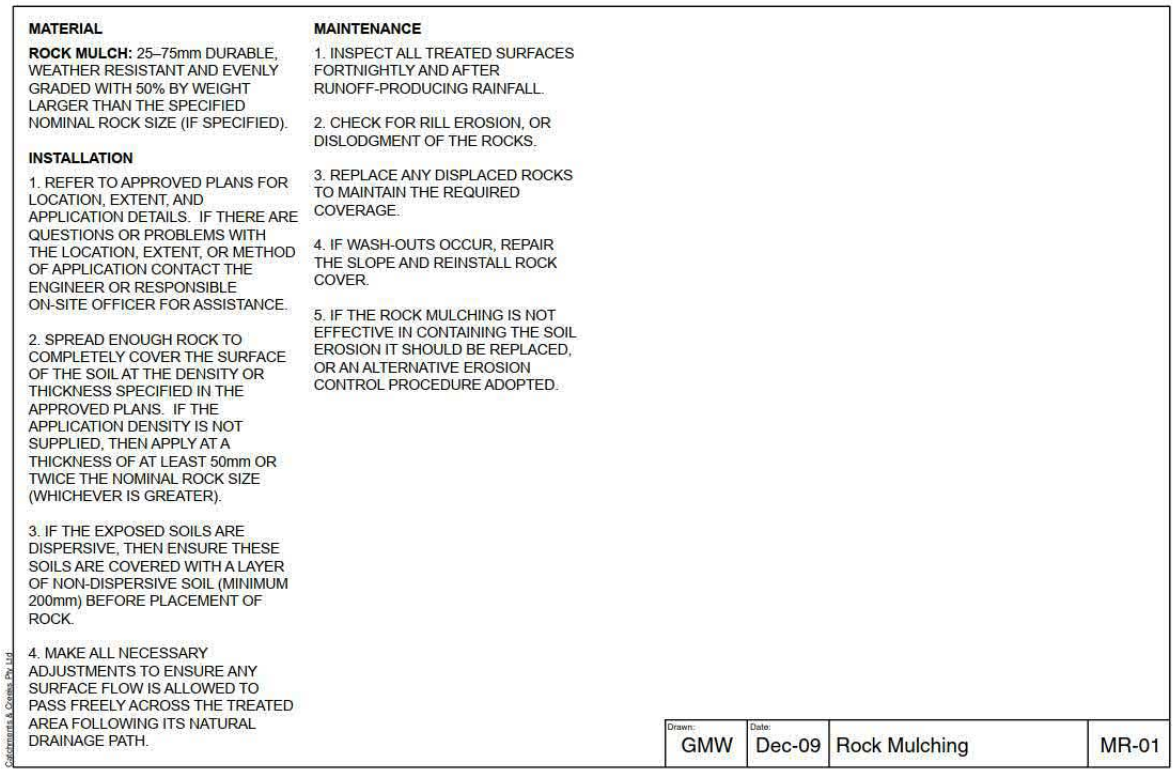
Figure 8 Erosion Control Standard – Rock Mulching Detail



MATERIAL

ROCK MULCH: 25–75mm DURABLE, WEATHER RESISTANT AND EVENLY GRADED WITH 50% BY WEIGHT LARGER THAN THE SPECIFIED NOMINAL ROCK SIZE (IF SPECIFIED).

INSTALLATION

1. REFER TO APPROVED PLANS FOR LOCATION, EXTENT, AND APPLICATION DETAILS. IF THERE ARE QUESTIONS OR PROBLEMS WITH THE LOCATION, EXTENT, OR METHOD OF APPLICATION CONTACT THE ENGINEER OR RESPONSIBLE ON-SITE OFFICER FOR ASSISTANCE.

2. SPREAD ENOUGH ROCK TO COMPLETELY COVER THE SURFACE OF THE SOIL AT THE DENSITY OR THICKNESS SPECIFIED IN THE APPROVED PLANS. IF THE APPLICATION DENSITY IS NOT SUPPLIED, THEN APPLY AT A THICKNESS OF AT LEAST 50mm OR TWICE THE NOMINAL ROCK SIZE (WHICHEVER IS GREATER).

3. IF THE EXPOSED SOILS ARE DISPERSIVE, THEN ENSURE THESE SOILS ARE COVERED WITH A LAYER OF NON-DISPERSIVE SOIL (MINIMUM 200mm) BEFORE PLACEMENT OF ROCK.

4. MAKE ALL NECESSARY ADJUSTMENTS TO ENSURE ANY SURFACE FLOW IS ALLOWED TO PASS FREELY ACROSS THE TREATED AREA FOLLOWING ITS NATURAL DRAINAGE PATH.

MAINTENANCE

1. INSPECT ALL TREATED SURFACES FORTNIGHTLY AND AFTER RUNOFF-PRODUCING RAINFALL.

2. CHECK FOR RILL EROSION, OR DISLODGMENT OF THE ROCKS.

3. REPLACE ANY DISPLACED ROCKS TO MAINTAIN THE REQUIRED COVERAGE.

4. IF WASH-OUTS OCCUR, REPAIR THE SLOPE AND REINSTALL ROCK COVER.

5. IF THE ROCK MULCHING IS NOT EFFECTIVE IN CONTAINING THE SOIL EROSION IT SHOULD BE REPLACED, OR AN ALTERNATIVE EROSION CONTROL PROCEDURE ADOPTED.

Drawn:	Date:		
GMW	Dec-09	Rock Mulching	MR-01

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Figure 9 Standard Drawing – Rock Linings

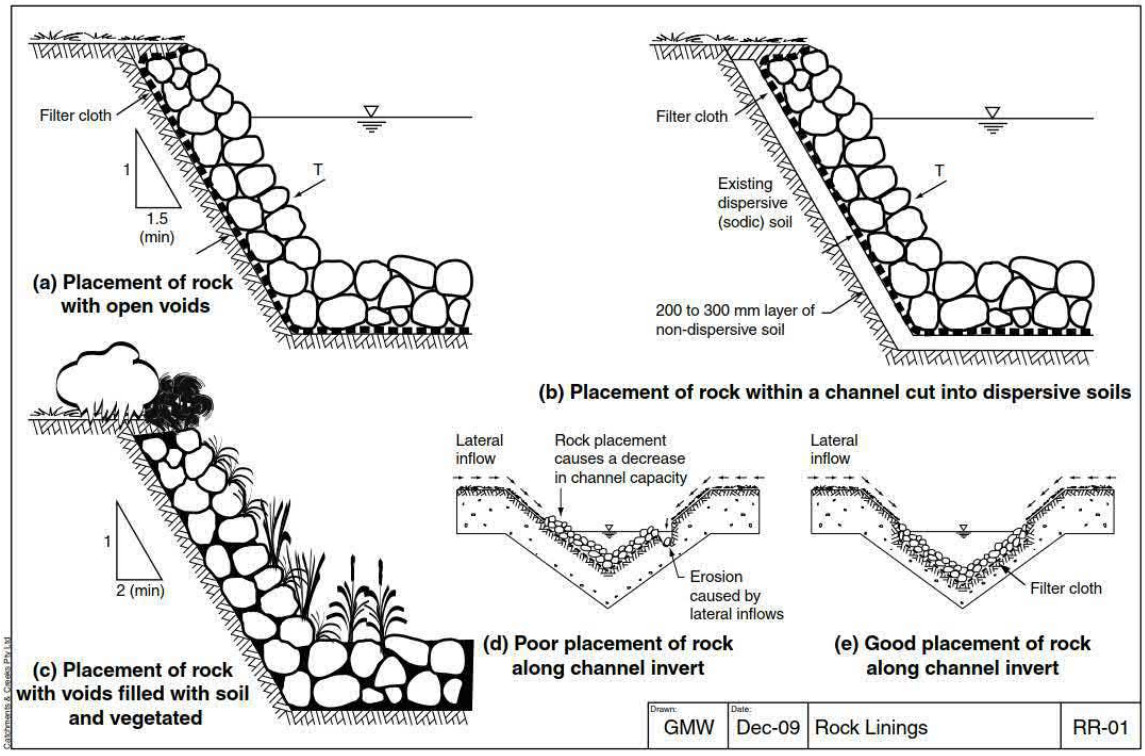

Figure 10 Standard Drawing – Rock Linings Details

MATERIALS

ROCK: HARD, ANGULAR, DURABLE, WEATHER RESISTANT AND EVENLY GRADED WITH 50% BY WEIGHT LARGER THAN THE SPECIFIED NOMINAL ROCK SIZE AND SUFFICIENT SMALL ROCK TO FILL THE VOIDS BETWEEN THE LARGER ROCK. THE DIAMETER OF THE LARGEST ROCK SIZE SHOULD BE NO LARGER THAN 1.5 TIMES THE NOMINAL ROCK SIZE. SPECIFIC GRAVITY TO BE AT LEAST 2.5.

GEOTEXTILE FABRIC: HEAVY-DUTY, NEEDLE-PUNCHED, NON-WOVEN FILTER CLOTH, MINIMUM BIDIM A24 OR EQUIVALENT.

INSTALLATION

1. REFER TO APPROVED PLANS FOR LOCATION, EXTENT AND INSTALLATION DETAILS. IF THERE ARE QUESTIONS OR PROBLEMS WITH THE LOCATION, EXTENT, OR METHOD OF INSTALLATION CONTACT THE ENGINEER OR RESPONSIBLE ON-SITE OFFICER FOR ASSISTANCE.

2. CLEAR THE PROPOSED CHANNEL AREA OF TREES, STUMPS, ROOTS, LOOSE ROCK, AND OTHER OBJECTIONABLE MATERIALS.

3. EXCAVATE THE CHANNEL TO THE LINES AND GRADES AS SHOWN ON THE PLANS. OVER-CUT THE CHANNEL TO A DEPTH EQUAL TO THE SPECIFIED DEPTH OF ROCK PLACEMENT SUCH THAT THE FINISHED ROCK SURFACE WILL BE AT THE ELEVATION OF THE SURROUNDING LAND.

4. ROCK MUST BE PLACED WITHIN THE CHANNEL AS SPECIFIED WITHIN THE APPROVED PLANS, INCLUDING THE PLACEMENT OF ANY SPECIFIED FILTER LAYER.

5. IF DETAILS ARE NOT PROVIDED ON THE ROCK PLACEMENT, THEN THE PRIMARY ARMOUR ROCK MUST BE EITHER PLACED ON:

(i) A FILTER BED FORMED FROM A LAYER OF SPECIFIED SMALLER ROCK (ROCK FILTER LAYER);

(ii) AN EARTH BED LINED WITH FILTER CLOTH;

(iii) AN EARTH BED NOT LINED IN FILTER CLOTH, BUT ONLY IF ALL VOIDS BETWEEN THE ARMOUR ROCK ARE TO BE FILLED WITH SOIL AND POCKET PLANTED IMMEDIATELY AFTER PLACEMENT OF THE ROCK.

6. IF A ROCK/AGGREGATE FILTER LAYER IS SPECIFIED, THEN PLACE THE FILTER LAYER IMMEDIATELY AFTER THE FOUNDATIONS ARE PREPARED. SPREAD THE FILTER ROCK IN A UNIFORM LAYER TO THE SPECIFIED DEPTH BUT A MINIMUM OF 150mm. WHERE MORE THAN ONE LAYER OF FILTER MATERIAL HAS BEEN SPECIFIED, SPREAD EACH LAYER SUCH THAT MINIMAL MIXING OCCURS BETWEEN EACH LAYER OF ROCK.

7. IF A GEOTEXTILE (FILTER CLOTH) UNDERLAY IS SPECIFIED, PLACE THE FABRIC DIRECTLY ON THE PREPARED FOUNDATION. IF MORE THAN ONE SHEET OF FABRIC IS REQUIRED TO OVER THE AREA, OVERLAP THE EDGE OF EACH SHEET AT LEAST 300mm AND PLACE ANCHOR PINS AT MINIMUM 1m SPACING ALONG THE OVERLAP.

8. ENSURE THE GEOTEXTILE FABRIC IS PROTECTED FROM PUNCHING OR TEARING DURING INSTALLATION OF THE FABRIC AND THE ROCK. REPAIR ANY DAMAGE BY REMOVING THE ROCK AND PLACING WITH ANOTHER PIECE OF FILTER CLOTH OVER THE DAMAGED AREA OVERLAPPING THE EXISTING FABRIC A MINIMUM OF 300mm.

9. WHERE NECESSARY, A MINIMUM 100mm LAYER OF FINE GRAVEL, AGGREGATE OR SAND SHOULD BE PLACED OVER THE FABRIC TO PROTECT IT FROM DAMAGE.

10. PLACEMENT OF ROCK SHOULD FOLLOW IMMEDIATELY AFTER PLACEMENT OF THE FILTER LAYER. PLACE ROCK SO THAT IT FORMS A DENSE, WELL-GRADED MASS OF ROCK WITH A MINIMUM OF VOIDS.

11. PLACE ROCK TO ITS FULL THICKNESS IN ONE OPERATION. DO NOT PLACE ROCK BY DUMPING THROUGH CHUTES OR OTHER METHODS THAT CAUSE SEGREGATION OF ROCK SIZES.

12. THE FINISHED SURFACE SHOULD BE FREE OF POCKETS OF SMALL ROCK OR CLUSTERS OF LARGE ROCKS. HAND PLACING MAY BE NECESSARY TO ACHIEVE THE PROPER DISTRIBUTION OF ROCK SIZES TO PRODUCE A RELATIVELY SMOOTH, UNIFORM SURFACE. THE FINISHED GRADE OF THE ROCK SHOULD BLEND WITH THE SURROUNDING AREA. NO OVERFALL OR PROTRUSION OF ROCK SHOULD BE APPARENT.

13. IMMEDIATELY UPON COMPLETION OF THE CHANNEL, VEGETATE ALL DISTURBED AREAS OR OTHERWISE PROTECT THEM AGAINST SOIL EROSION.

14. WHERE SPECIFIED, FILL ALL VOIDS WITH SOIL AND VEGETATE THE ROCK SURFACE IN ACCORDANCE WITH THE APPROVED PLAN.

MAINTENANCE

1. ROCK-LINED CHANNELS SHOULD BE INSPECTED PERIODICALLY AND AFTER SIGNIFICANT STORM EVENTS. CHECK FOR SCOUR OR DISLODGED ROCK. REPAIR DAMAGED AREAS IMMEDIATELY.

2. CLOSELY INSPECT THE OUTER EDGES OF THE ROCK PROTECTION. ENSURE WATER ENTRY INTO THE CHANNEL OR CHUTE IS NOT CAUSING EROSION ALONG THE EDGE OF THE ROCK PROTECTION.

3. CAREFULLY CHECK THE STABILITY OF THE ROCK LOOKING FOR INDICATIONS OF PIPING, SCOUR HOLES, OR BANK FAILURES.

4. REPLACE ANY DISPLACED ROCK WITH ROCK OF A SIGNIFICANTLY (MINIMUM 110%) LARGER SIZE THAN THE DISPLACED ROCK.

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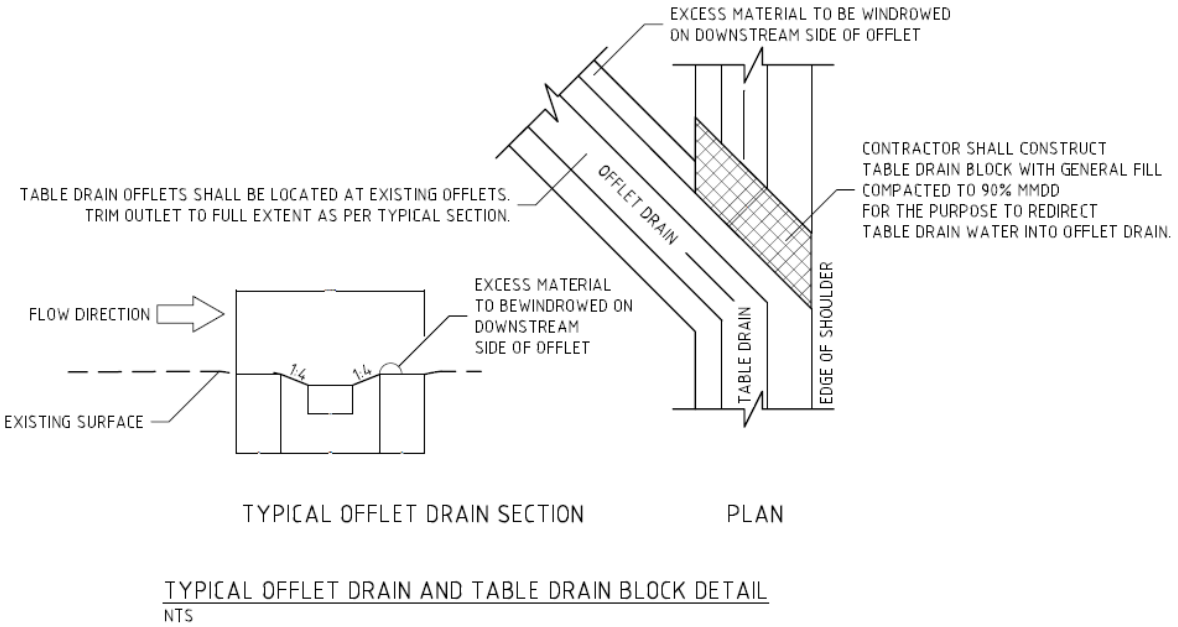
Drawn:	Date:		
GMW	May-10	Rock Linings	RR-02

Typical Offlet Drain Detail for Access Tracks

- Construct access tracks with table drains that are free draining.
- Avoid road crowning to allow water to naturally cross the road.
- Form tracks to allow off-road drainage. Where track intercepts the direction of overland flow and re-directs this flow to a non-natural drainage line, install erosion control works to minimise potential erosion.
- The design and position of erosion control measures to be determined by experienced operator and site engineer, based on the site characteristics of the access track location.
- Where construction of table drains are deemed necessary, they should have a broad flat base at least 1 m wide and should not be graded to produce a 'V' shape. To minimise erosion, the slope should be no greater than 0.5% on erodible soils or 1% on stable soils.
- Where encounter dispersive / erosive soils they should be stabilised with gypsum or other stabiliser, as determined by laboratory analysis of soils.
- Where cut-out drains are required, they should be spaced based on the slope of the area i.e. 0.5% slope, allow for cut-out draining every 170-180 m or 1 % slope, allow for cut-out drainage every 120-130 m etc. (refer to NT Road Drainage Fact Sheet). It is noted that the recommended distance between turn-out drains is a guide and may not apply to all locations along the access track.
- Monitor road conditions to ensure deterioration does not occur. Assist in the maintenance and repair work on roads and tracks used.

Figure 11 Typical offlet drain and table drain block details



Appendix K2

Best Practice Land Clearing and Rehabilitation

Appendix K2 Best Practice Land Clearing and Rehabilitation

Table 10 IECA Table 4.4.7 Best practice land clearing and rehabilitation requirements

Risk[1]	Best practice requirements
All cases	• All reasonable and practicable steps taken to apply best practice erosion control measures to completed earth works, or otherwise stabilise such works, prior to anticipated rainfall – including existing unstable, undisturbed, soil surfaces under the management or control of the building/construction works.
Very low	• Land clearing limited to 8 weeks of work if rainfall is reasonably possible. • Disturbed soil surfaces stabilised with minimum 60% cover[2] within 30 days of completion of works if rainfall is reasonably possible. • Unfinished earthworks are suitably stabilised if rainfall is reasonably possible, and disturbance is expected to be suspended for a period exceeding 30 days.
Low	• Land clearing limited to maximum 8 weeks of work. • Disturbed soil surfaces stabilised with minimum 70% cover[2] within 30 days of completion of works within any area of a work site. • Unfinished earthworks are suitably stabilised if rainfall is reasonably possible and disturbance is expected to be suspended for a period exceeding 30 days. • Appropriate protection of all planned garden beds is strongly recommended.
Moderate	• Land clearing limited to a maximum 6 weeks of work. • Disturbed soil surfaces stabilised with minimum 70% cover[2] within 20 days of completion of work within any area of a work site. • All planned garden beds protected with a minimum 75mm layer of organic *Mulching*, heavy *Erosion Control Blanket, Rock Mulching,* or the equivalent. • Staged construction and stabilisation of earth batters (steeper than 6H:1V) in maximum 3m vertical increments wherever reasonable and practicable. • The use of turf to form grassed surfaces given appropriate consideration. • Soil stockpiles and unfinished earthworks are suitably stabilised if disturbance is expected to be suspended for a period exceeding 10 days.
High	• Land clearing limited to a maximum 4 weeks of work. • Disturbed soil surface stabilised with minimum 75% cover[2] within 10 days of completion of works within any area of a work site. • All planned garden beds protected with a minimum 75mm layer of organic *Mulching*, heavy *Erosion Control Blanket, Rock Mulching,* or the equivalent. • Staged construction and stabilisation of earth batters (steeper than 6H:1V) in maximum 3m vertical increments wherever reasonable and practicable. • The use of turf to form grassed surfaces given appropriate consideration. • Soil stockpiles and unfinished earthworks are suitably stabilised if disturbance is expected to be suspended for a period exceeding 10 days.
Extreme	• Land clearing limited to maximum 2 weeks of work. • Disturbed soil surfaces stabilised with minimum 80% cover[2] within 5 days of completion of works within any area of a work site. • All planned garden beds protected with a minimum 75mm layer of organic *Mulching*, heavy *Erosion Control Blanket, Rock Mulching,* or the equivalent. • Staged construction and stabilisation of earth batters (steeper than 6H:1V) in maximum 2m vertical increments wherever reasonable and practicable. • High priority given to the use of turf to form grassed surfaces. • Soil stockpiles and unfinished earthworks are suitably stabilised if disturbance is expected to be suspended for a period exceeding 5 days.

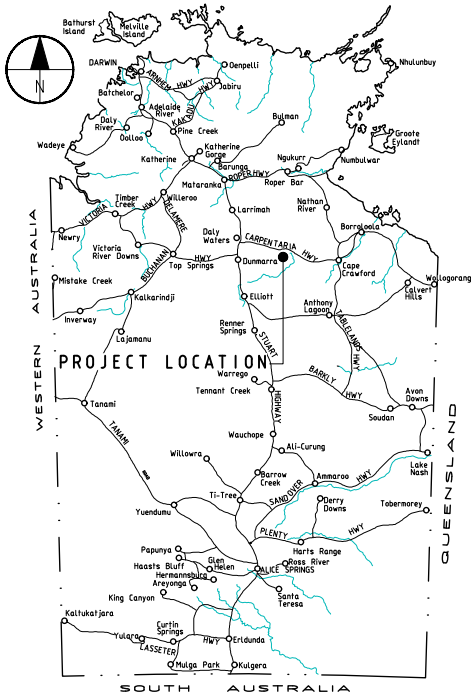
1. Erosion risk based on monthly erosivity (Table 4.4.1), average monthly rainfall depth (Table 4.4.2), or soil loss rate (Table 4.4.3) as directed by the regulatory authority.
2. Minimum cover requirements may be redirected if the natural cover of the immediate land is less than the nominated value, for example in arid and semi-arid areas or on coastal sand dunes.

Appendix K3

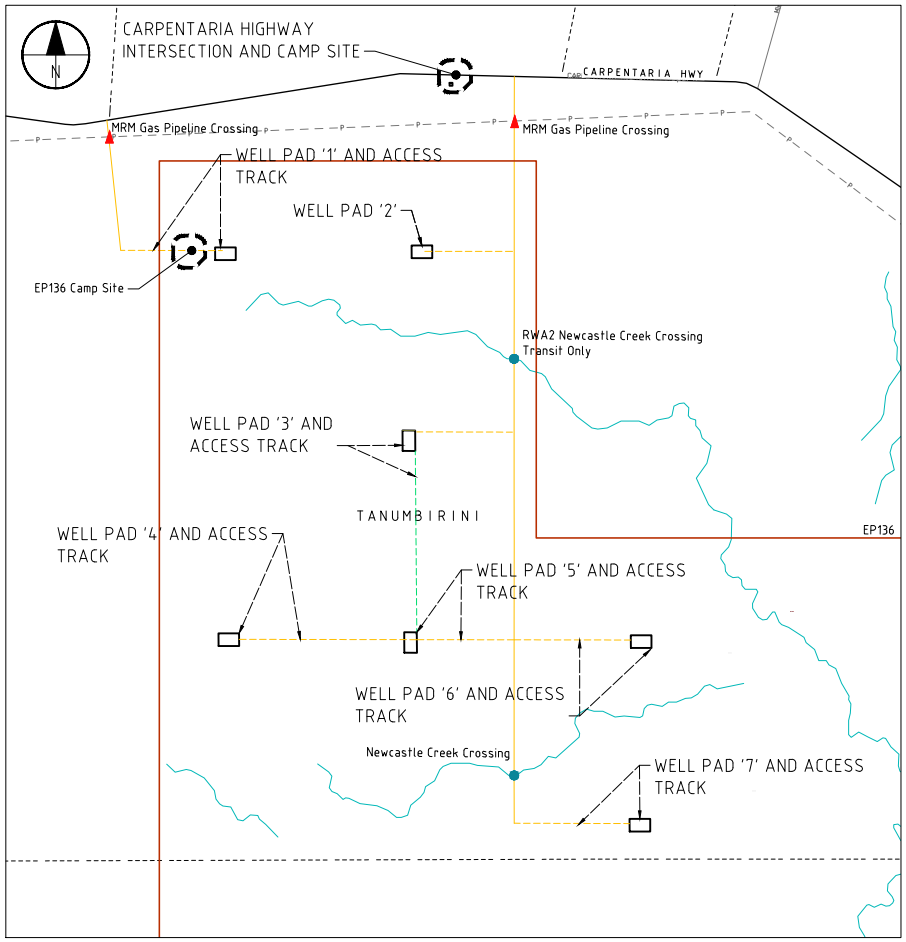
Lease Pad and Access Track ESCP

Appendix K3 Lease Pad and Access Track ESCP

Option 1 Eastern Access Track



LOCALITY MAP



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60611666-0000-02	TYPICAL ACCESS ROAD SECTION AND DETAILS
60611666-0000-03	TYPICAL MUD SUMP DETAILS
60611666-0000-04	TYPICAL FLOODWAY LAYOUT PLAN
60611666-0001-01	WELL PAD 1 ACCESS ROAD DETAILS
60611666-0001-02	WELL PAD 1 GENERAL ARRANGEMENT PLAN
60611666-0001-03	WELL PAD 1 ACCESS ROAD INTERSECTION DETAIL
60611666-0001-04	WELL PAD 1 EROSION AND SEDIMENT CONTROL PLAN
60611666-0001-05	WELL PAD 1 ACCESS ROAD INTERSECTION EROSION AND SEDIMENT CONTROL PLAN
60611666-0002-01	WELL PAD 2 ACCESS ROAD DETAILS
60611666-0002-02	WELL PAD 2 GENERAL ARRANGEMENT PLAN
60611666-0002-03	WELL PAD 2 INTERSECTION DETAILS
60611666-0002-04	WELL PAD 2 EROSION AND SEDIMENT CONTROL PLAN
60611666-0002-05	WELL PAD 2 ACCESS ROAD INTERSECTION EROSION AND SEDIMENT CONTROL PLAN
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60611666-0003-03	WELL PAD 3 INTERSETION DETAILS
60611666-0003-04	WELL PAD 3 EROSION AND SEDIMENT CONTROL PLAN
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60611666-0004-03	WELL PAD 4 EROSION AND SEDIMENT CONTROL PLAN
60611666-0005-01	WELL PAD 5 ACCESS ROAD DETAILS
60611666-0005-02	WELL PAD 5 GENERAL ARRANGEMENT PLAN
60611666-0005-03	WELL PAD 5 & 6 INTERSETION DETAILS
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60611666-0006-03	WELL PAD 6 EROSION AND SEDIMENT CONTROL PLAN
60611666-0007-01	WELL PAD 7 ACCESS ROAD DETAILS
60611666-0007-02	WELL PAD 7 GENERAL ARRANGEMENT PLAN
60611666-0007-03	WELL PAD 7 INTERSETION DETAILS
60611666-0007-04	WELL PAD 7 EROSION AND SEDIMENT CONTROL PLAN
60611666-0007-05	WELL PAD 7 ACCESS ROAD INTERSECTION EROSION AND SEDIMENT CONTROL PLAN
60611666-0008-01	CARPENTARIA HIGHWAYINTERSETION DETAILS
60611666-0008-02	CAMP SITE AREAGENERAL ARRANGEMENT PLAN
60611666-0008-03	CARPENTARIA HIGHWAY INTERSECTIONEROSION AND SEDIMENT CONTROL PLAN
60611666-0008-04	CAMP SITE AREAEROSION AND SEDIMENT CONTROL PLAN

LEGEND

EXISTING

- PIPELINE
- FENCE
- PRINCIPAL ROAD
- UNSEALED TRACK
- WATERCOURSE

LOCALITY PLAN

SCALE (km) 0 0.5 1 1.5 2 2.5 1:50,000 (A1)

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SWEETPEA EXPLORATION DRILL CAMPAIGN

SWEETPEA EXPLORATION DRILL CAMPAIGN
LOCALITY PLAN AND DRAWING INDEX

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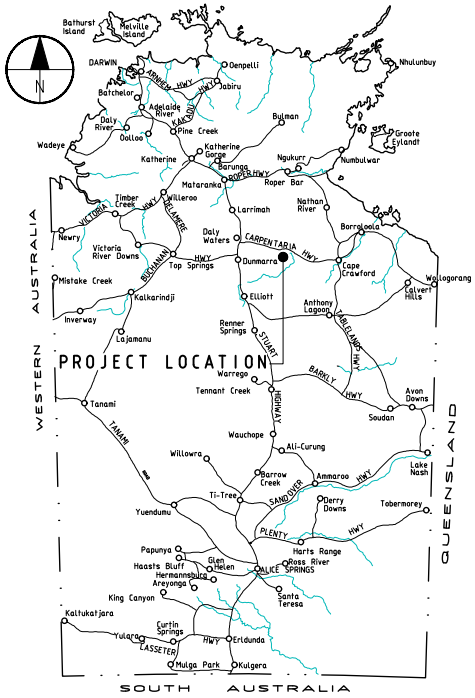
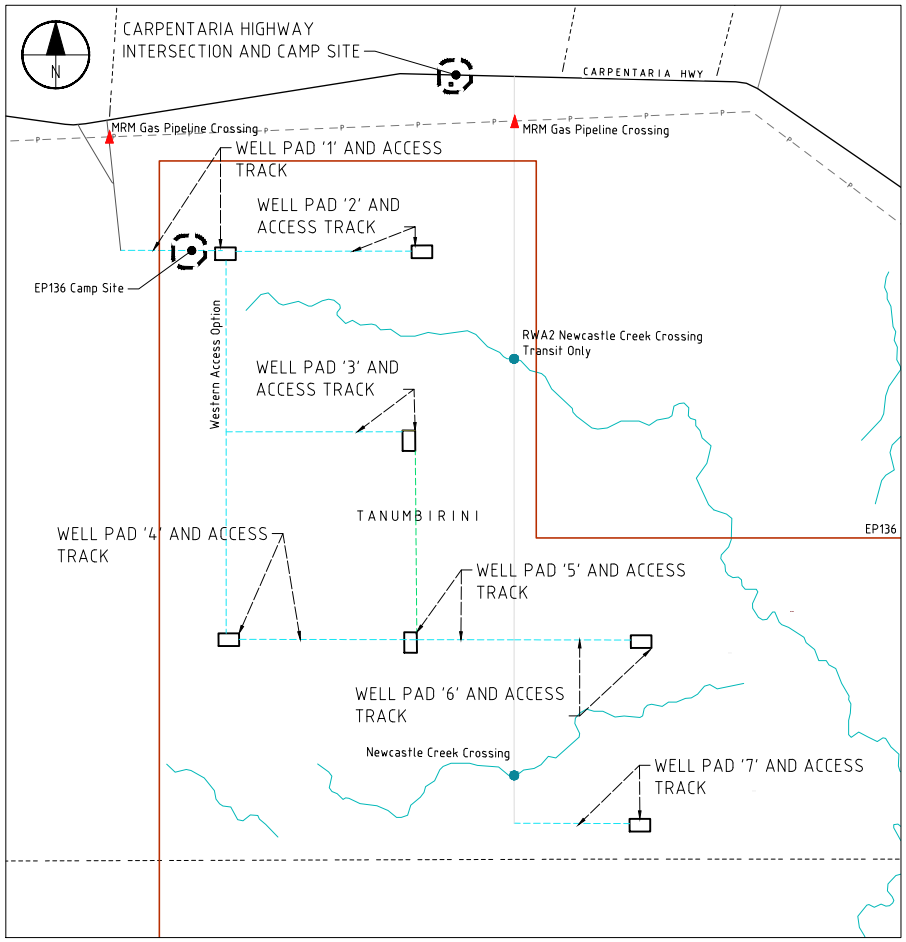
OPTION 2 Western Access Track



LOCALITY MAP



LEGEND

EXISTING

- PIPELINE
- FENCE
- PRINCIPAL ROAD
- UNSEALED TRACK
- WATERCOURSE

LOCALITY PLAN

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LOCALITY PLAN AND DRAWING INDEX

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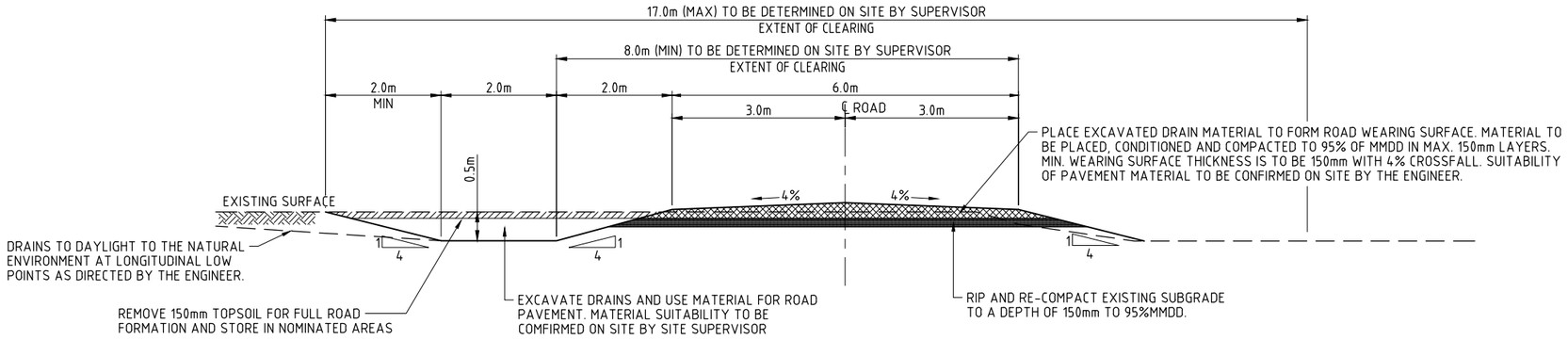
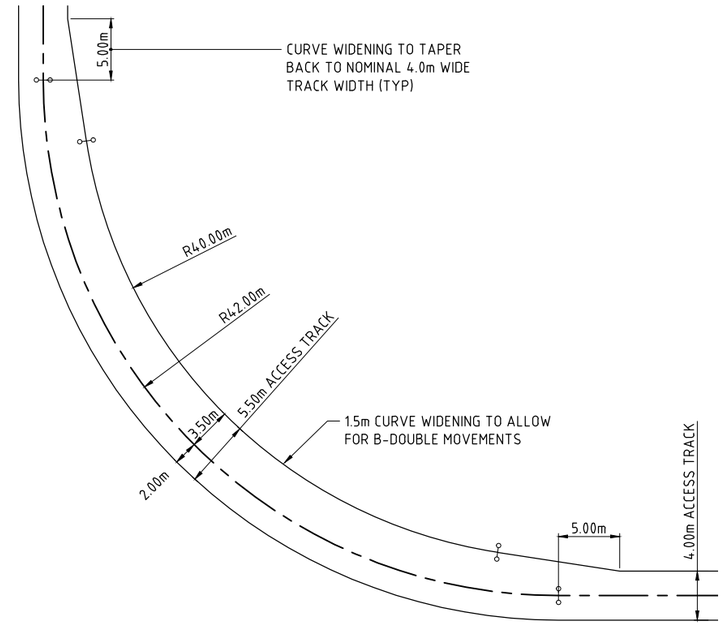


TYPICAL CROSS SECTION - ACCESS ROAD

SCALE (m) 0 0.5 1.0 1.5 2.0 2.5 1:50 (A1)

NOTES:

1. ALL UNITS ARE IN METRES (m) UNLESS NOTED OTHERWISE.
2. ENSURE THAT TABLE DRAINS ARE FREE DRAINING.
3. GROUND CONDITIONS AND SUITABLE MATERIALS TO BE CONFIRMED ON SITE BY SUPERINTENDENT.
4. CLEARED VEGETATION TO BE STORED ALONGSIDE NEW ROAD FOR FUTURE REHABILITATION.
5. REFER TO SPECIFICATION FOR COMPACTION REQUIREMENTS.
6. STRIPPED TOPSOIL TO BE STORED IN BERMS ALONGSIDE ROAD.
7. REFER TO SPECIFICATION FOR GENERAL REQUIREMENTS.
8. THE CONTRACTOR IS TO NOTIFY THE SUPERVISOR IF AREAS OF SOFT GROUND ARE ENCOUNTERED OR IF THE SPECIFICATION CANNOT BE ACHIEVED.
9. CLEAR, STRIP 150mm TOPSOIL AND STOCKPILE IN NOMINATED BUFFER ZONE TO ESTABLISH BORROW PITS.
10. THIS DRAWING MAY BE USED FOR TEMPORARY ACCESS APPLICATION TO NT ROADS.
11. TYPICAL CROSS SECTION DESIGNED IN ACCORDANCE WITH NORTHERN TERRITORY STANDARD DRAWING C(S)3003.



TYPICAL ACCESS TRACK CURVE WIDENING DETAIL

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PRELIMINARY

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SWEETPEA EXPLORATION DRILL CAMPAIGN
TYPICAL ACCESS ROAD
SECTION AND DETAILS

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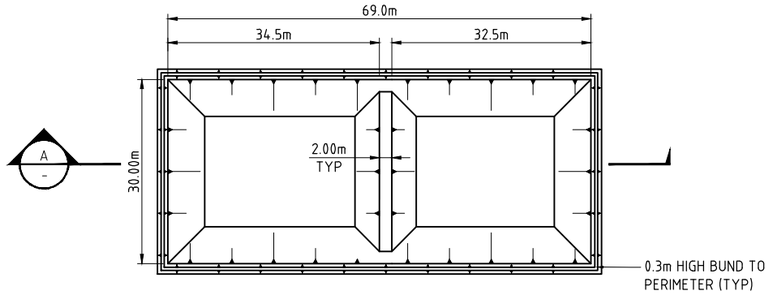
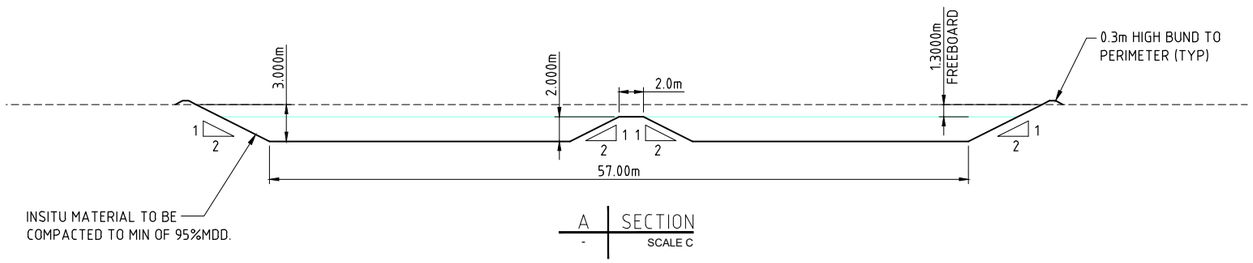
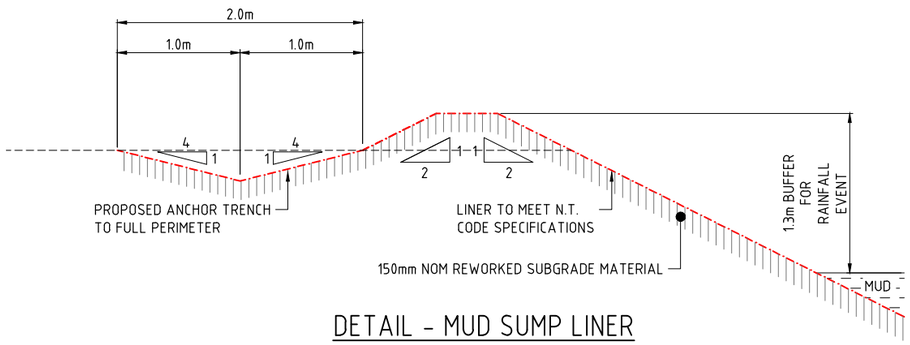
Rev.



PLAN - MUD SUMP
SCALE B



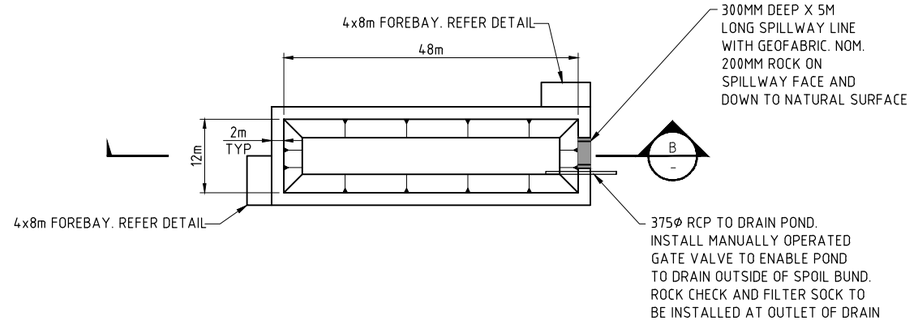
A - SECTION
SCALE C



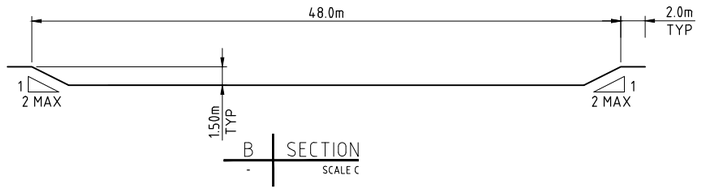
DETAIL - MUD SUMP LINER
SCALE 1:25 (A1)

NOTES:

1. ALL UNITS ARE IN METRES (m) UNLESS NOTED OTHERWISE.
2. GROUND CONDITIONS AND SUITABLE MATERIALS TO BE CONFIRMED ON SITE BY SUPERINTENDENT.
3. REFER TO SPECIFICATION FOR COMPACTION REQUIREMENTS.
4. REFER TO SPECIFICATION FOR GENERAL REQUIREMENTS.
5. THE CONTRACTOR IS TO NOTIFY THE SITE SUPERVISOR IF AREAS OF SOFT GROUND ARE ENCOUNTERED OR IF THE SPECIFICATION CANNOT BE ACHIEVED.
6. FAUNA LADDERS TO BE INSTALLED TO MUD SUMP.
7. CONTRACTOR TO PROVIDE CATTLE PANELS FOR FENCING AROUND SUMP WHERE DEPTH IS GREATER THAN 1.5m.



PLAN - WATER STORAGE / SEDIMENT POND



B - SECTION
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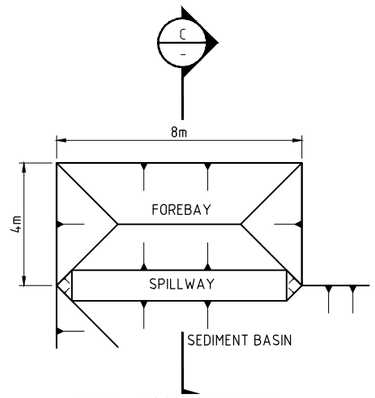
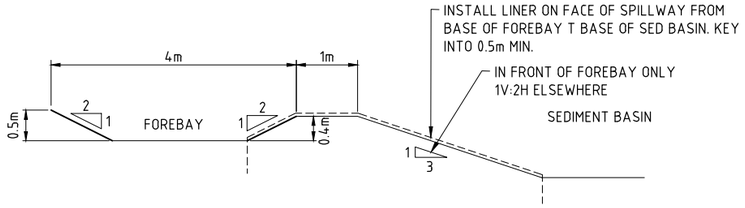


PLAN - FOREBAY DETAIL



C - SECTION
SCALE F

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Scale
SCALE F 1 : 100 (A3) 1 : 50 (A1)
SCALE B 1 : 1000 (A3) 1 : 500 (A1)
SCALE C 1 : 500 (A3) 1 : 250 (A1)

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SWEETPEA EXPLORATION DRILL CAMPAIGN
TYPICAL MUD SUMP DETAILS

Status: ISSUED FOR INFORMATION
Drg No.: 60611666-0000-03
Rev.:

LAST MODIFIED:3/10/2021 9:12 AM
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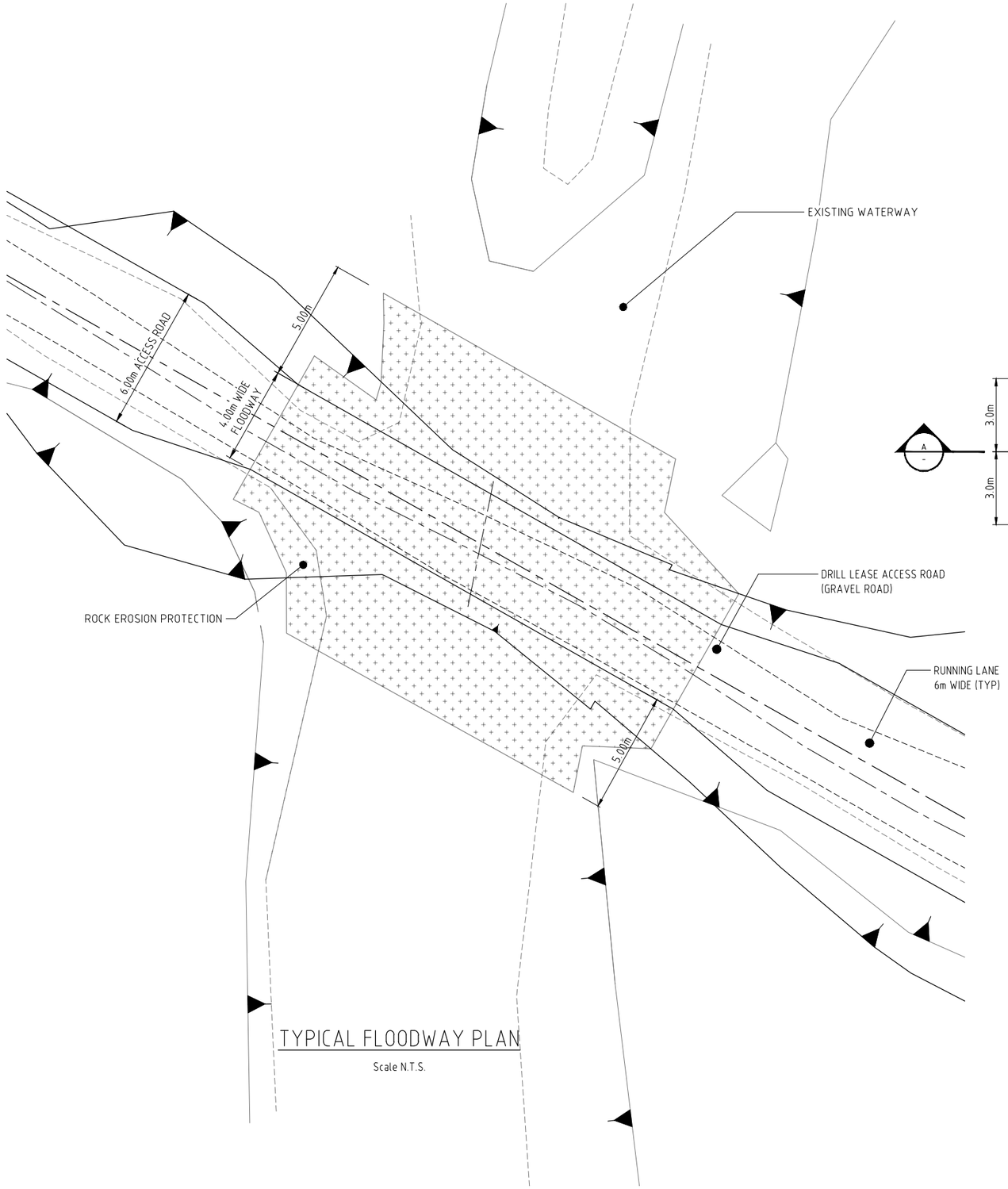


TYPICAL FLOODWAY PLAN

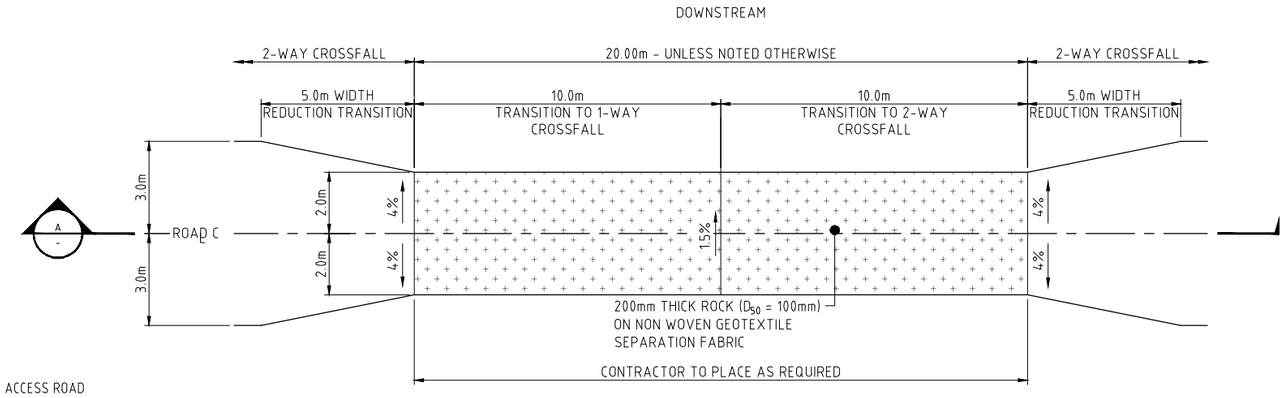
Scale N.T.S.

NOTES:

1. FINAL LOCATION OF FLOODWAYS TO BE DETERMINED ON SITE BY SUPERVISOR.
2. ALL DIMENSIONS ARE IN METRES UNLESS NOTED OTHERWISE.
3. ALL WORKS TO BE CARRIED OUT IN ACCORDANCE WITH THE APPROVED MANAGEMENT PLAN REQUIREMENTS.
4. GEOTEXTILE FABRIC: HEAVY DUTY, NEEDLE PUNCHED, NON-WOVEN FILTER CLOTH, MINIMUM BIDIM A64 OR SIMILAR.
5. CLEAN ROCK (TYPICALLY D50 50-100mm) TO BE COMPACTED TO FILL VOIDS ON THE SURFACE BETWEEN THE LARGER ROCK.

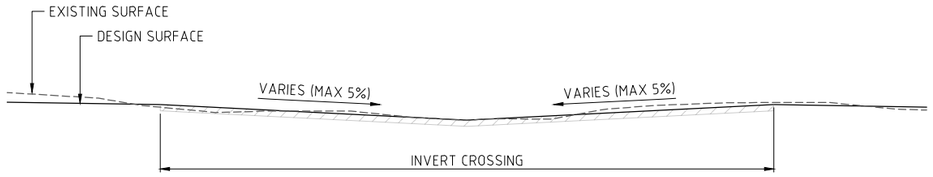
REQUIREMENTS INCLUDE BUT NOT LIMITED TO THE FOLLOWING -

- BED LEVEL CROSSING TO BE ALIGNED PERPENDICULAR (±10°) TO WATER FLOW.
- LOWEST POINT OF BED LEVEL CROSSING MUST MATCH LOWEST POINT OF EXISTING CHANNEL.



PLAN

Scale N.T.S.



A - SECTION

Scale N.T.S.

TYPICAL ROAD INVERT CROSSING DETAIL

Scale N.T.S.

NOTE:

- CONTRACTOR TO TRANSITION CROSSFALL AT INVERT CROSSINGS FROM 4% 2-WAY CROSSFALL TO 1.5% 1-WAY CROSS FALL AT INVERT, EACH SIDE - AT ALL LOCATIONS UNLESS SHOWN OTHERWISE.
- UPSTREAM ROCK LEVEL TO BE NO HIGHER THAN EXISTING NATURAL SURFACE LEVEL.

NOT FOR CONSTRUCTION

This drawing is confidential and shall only be used for the purposes of this project.

No.	BY	DATE	DESCRIPTION	APPD
A	G.T		ISSUED FOR INFORMATION	

REVISIONS

Scale

THE SIGNING OF THIS TITLE BLOCK CONFIRMS THE DESIGN AND DRAFTING OF THIS PROJECT HAVE BEEN PREPARED AND CHECKED IN ACCORDANCE WITH THE AECOM QUALITY ASSURANCE SYSTEM TO ISO 9001:2000

DESIGNED	B.F	CHECKED	
DRAWN	G.T	CHECKED	K.P
APPROVED		DATE	

AECOM

RPEQ No.
AECOM Australia Pty Ltd A.B.N. 20 093 846 925

SWEETPEA EXPLORATION DRILL CAMPAIGN

SWEETPEA EXPLORATION DRILL CAMPAIGN
TYPICAL FLOODWAY LAYOUT PLAN

Status: ISSUED FOR INFORMATION

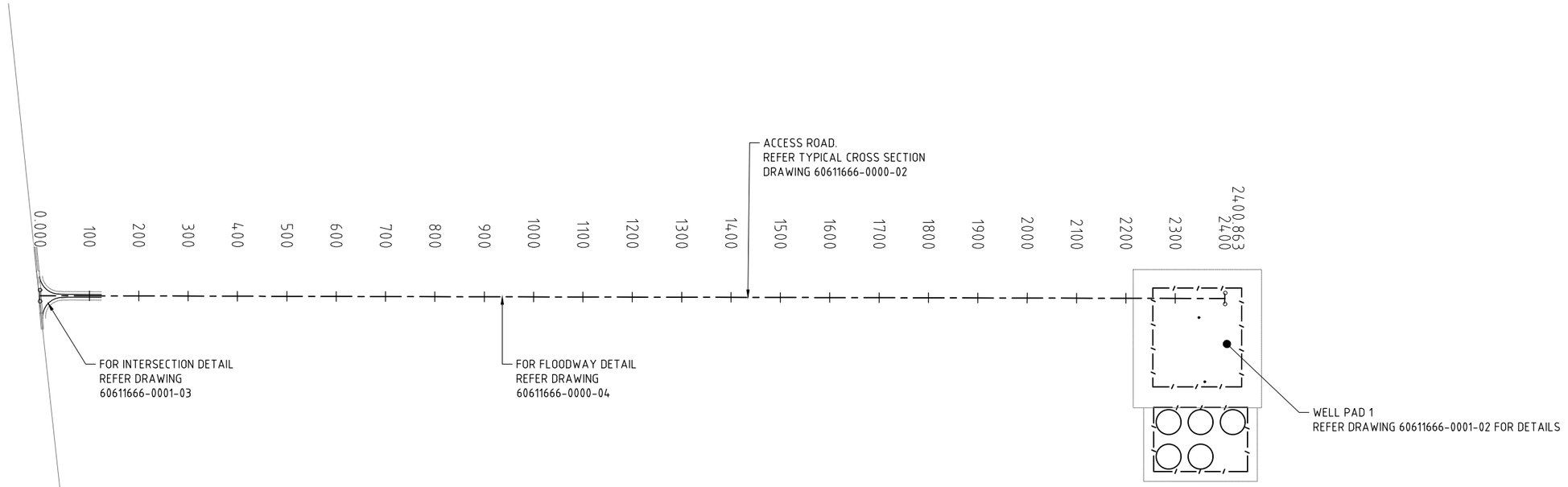
Drg No. 60611666-0000-04

Rev.

LAST MODIFIED:3/9/2021 5:44 PM
CAD REFS: \\SECURE\PROJECTS\60X\60611666\900_CAD_GIS\910_CAD\20_SHEETS\60611666-0000-A4.DWG

LEGEND

ACCESS ROAD CENTERLINE



ACCESS ROAD MCA01 - SETOUT				
PT	CHAINAGE	X COORD	Y COORD	BEARING
IP	0.000	445882.782	8173756.698	90°07'55.67"
IP	2400.863	448283.639	8173751.161	90°07'55.67"

NOT FOR CONSTRUCTION

This drawing is confidential and shall only be used for the purposes of this project.

REVISIONS				
No.	BY	DATE	DESCRIPTION	APPD
A	G.T		ISSUED FOR INFORMATION	

Scale

SCALE W 0 100 200 250m

1 : 10000 (A3) 1 : 5000 (A1)

THE SIGNING OF THIS TITLE BLOCK CONFIRMS THE DESIGN AND DRAFTING OF THIS PROJECT HAVE BEEN PREPARED AND CHECKED IN ACCORDANCE WITH THE AECOM QUALITY ASSURANCE SYSTEM TO ISO 9001-2000			
DESIGNED	B.F	CHECKED	
DRAWN	G.T	CHECKED	K.P
APPROVED		DATE	

AECOM

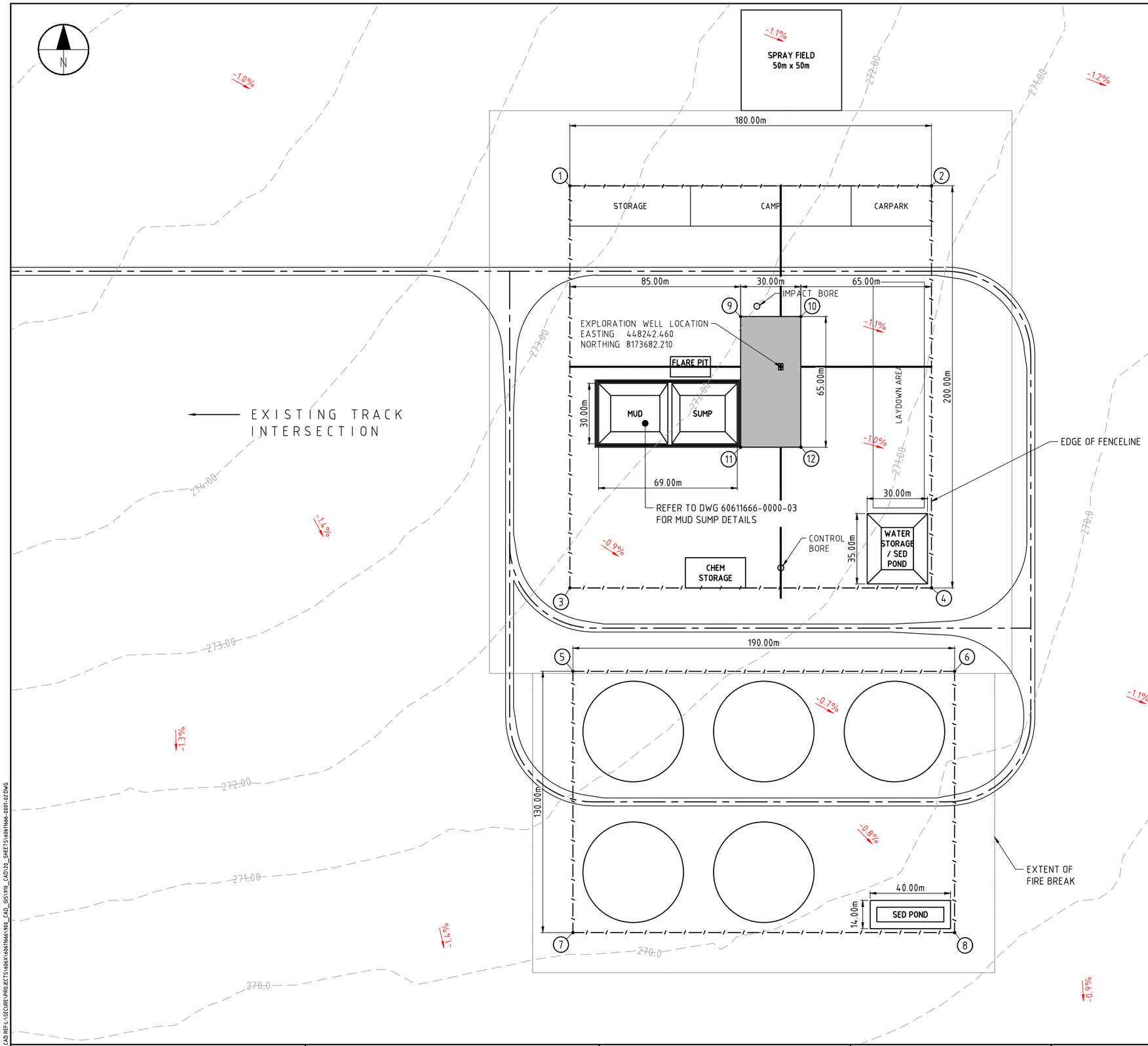
RPEQ No.
AECOM Australia Pty Ltd A.B.N. 20 093 846 925

SWEETPEA EXPLORATION DRILL CAMPAIGN

SWEETPEA EXPLORATION DRILL CAMPAIGN
WELL PAD 1
ACCESS ROAD DETAILS

Status: ISSUED FOR INFORMATION | Drg No.: 60611666-0001-01 | Rev.:

LAST MODIFIED:3/9/2015 6:41 PM
CAD REF:L:\SECURE\PROJECTS\60611666\WIP_CAD_GIS\WIP_CAD\20_SHEETS\60611666-0001-01.DWG



LEGEND

— — 278.00 — — EXISTING SURFACE CONTOURS (1.0m INTERVALS - DTM)

-0.1% EXISTING SURFACE SLOPES

SETOUT POINTS

POINT No.	COORDINATES	
	EASTING	NORTHING
1	448137.460	8173772.210
2	448317.460	8173772.210
3	448137.460	8173572.210
4	448317.460	8173572.210
5	448138.960	8173530.710
6	448328.960	8173530.710
7	448138.960	8173400.710
8	448328.960	8173400.710
9	448222.460	8173707.210
10	448252.460	8173707.210
11	448222.460	8173642.210
12	448252.460	8173642.210

GENERAL NOTES

1. ALL DIMENSIONS ARE IN METRES UNLESS NOTED OTHERWISE.
2. SEWER SPRAY FIELD AREA IS NOT TO BE CLEARED. SPRAY PIPES LAID ON EXISTING VEGETATION BY OTHERS.
3. ALL WORKS TO BE CARRIED OUT IN ACCORDANCE WITH THE APPROVED MANAGEMENT PLAN REQUIREMENTS.
4. NO CONSTRUCTION WORKS ARE TO BE CARRIED OUT OUTSIDE THE APPROVED WORK CORRIDOR BOUNDARIES.
5. CONSTRUCTION FACILITY AREA LOCATIONS TO BE APPROVED BY THE SUPERINTENDENT PRIOR TO WORKS COMMENCING.
6. THE CONTRACTOR IS TO LIAISE WITH SERVICE PROVIDERS AND THE RELEVANT AUTHORITIES TO ENSURE ALL CONSTRUCTION WORKS ARE CARRIED OUT IN ACCORDANCE WITH SERVICE PROVIDERS AND RELEVANT AUTHORITIES REQUIREMENTS.
7. NO SERVICES WERE PRESENT OR PROVIDED BY DBYD AT THE TIME OF DESIGN AND ARE THEREFORE NOT SHOWN, HOWEVER THE CONTRACTOR IS RESPONSIBLE FOR CONDUCTING A SEARCH PRIOR TO WORKS BEING CARRIED OUT. ANY DAMAGE TO EXISTING SERVICES IS TO BE RE-INSTATED AT THE CONTRACTORS EXPENSE.
8. THE CONTRACTOR IS TO CARRY OUT A DBYD AND LOCATE AND MARK SERVICES ON SITE. ANY DAMAGE TO EXISTING SERVICES IS TO BE RE-INSTATED AT THE CONTRACTORS EXPENSE.
9. SIGNAGE TO BE INSTALLED PRIOR TO ROAD USE.
10. NEW WATER BORE TO BE PROVIDED BY THE CONTRACTOR AND TO DISCHARGE TO ABOVE GROUND TANK.
11. DRILLING CONTRACTOR TO PROVIDE ALL AMENITIES INCLUDING ACCOMMODATION, ABLUTIONS, WATER SUPPLY, WASTE MANAGEMENT AND SEWAGE TREATMENT FOR THE CAMP AREA. AMENITIES TO COMPLY WITH NORTHERN TERRITORY REQUIREMENTS FOR FACILITIES OF THIS NATURE.
12. FIREBREAK CLEARINGS AROUND DRILLING LEASE AND CAMP PAD ARE TO BE USED FOR STORAGE OF TOPSOIL AND VEGETATION AS REQUIRED. IF ADDITIONAL STORAGE SPACE IS REQUIRED THE CONTRACTOR IS TO PROVIDE ADDITIONAL STORAGE AREA AS INDICATED ON THIS DRAWING.
13. SIGNAGE TO BE INSTALLED PRIOR TO ROAD USE.
14. LOCATION OF INTERSECTION IS TO BE CONFIRMED BY CONTRACTOR ON SITE.
15. TRAFFIC ROAD SIGNAGE TO COMPLY WITH AS1743 AND NORTHERN TERRITORY GUIDELINES.
16. REFER TO DRG. 60611666-0000-02 FOR ROAD PAVEMENT DETAILS.
17. FINISH SURFACE LEVELS ARE TO FOLLOW EXISTING SURFACE LEVELS AS NEAR AS POSSIBLE AND TO THE GRADES SPECIFIED ON THE DRAWINGS.
18. TABLE DRAINS ARE TO BE CUT ALONG THE LENGTH OF THE ROAD AND ALL ROAD PAVEMENTS ARE TO HAVE A 4% CROSSFALL IN ACCORDANCE WITH THE ROAD CROSS-SECTION DETAILED ON DRG. 60611666-0000-02.
19. FENCELINE IS TO BE MAINTAINED AT ALL TIMES.

NOT FOR CONSTRUCTION

This drawing is confidential and shall only be used for the purposes of this project.

REVISIONS No.	BY	DATE	DESCRIPTION	APPD
A	G.T		ISSUED FOR INFORMATION	

Scale

SCALE C 0 5 10 12.5m

1 : 500 (A3) 1 : 250 (A1)

THE SIGNING OF THIS TITLE BLOCK CONFIRMS THE DESIGN AND DRAFTING OF THIS PROJECT HAVE BEEN PREPARED AND CHECKED IN ACCORDANCE WITH THE AECOM QUALITY ASSURANCE SYSTEM TO ISO 9001-2000

DESIGNED	B.F	CHECKED	
DRAWN	G.T	CHECKED	K.P
APPROVED		DATE	

AECOM

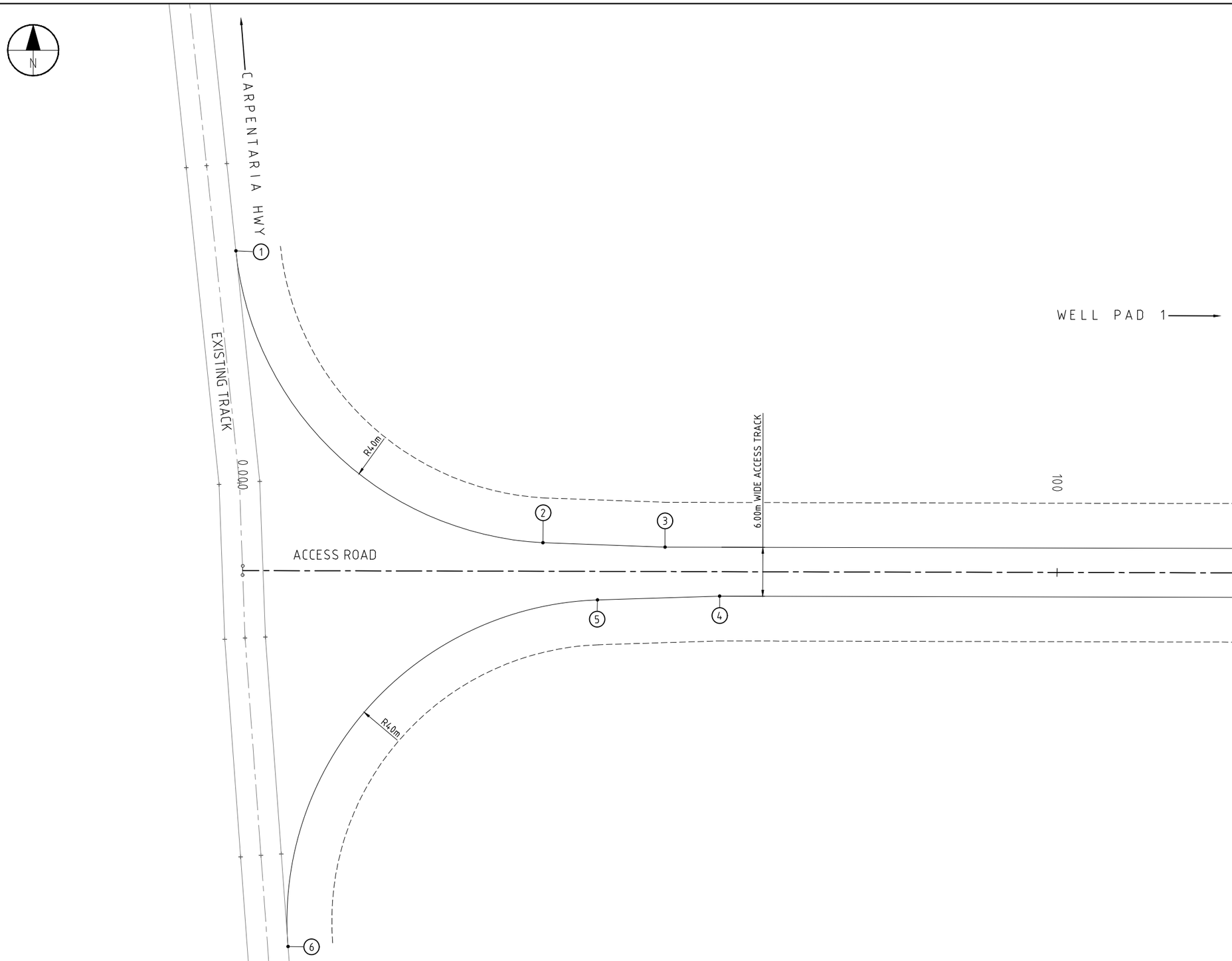
RPEQ No.
AECOM Australia Pty Ltd A.B.N. 20 093 846 925

SWEETPEA EXPLORATION DRILL CAMPAIGN

SWEETPEA EXPLORATION DRILL CAMPAIGN
WELL PAD 1
GENERAL ARRANGEMENT PLAN

Status ISSUED FOR INFORMATION | Drg No. 60611666-0001-02 | Rev.

LAST MODIFIED:3/9/2015 6:41 PM
CAD REF:L:\SECURE\PROJECTS\60611666\90A_CAD_GIS\99A_CAD\20_SHEETS\60611666-0001-02.DWG



LEGEND

- ACCESS ROAD CENTERLINE
- EDGE OF PAVEMENT
- EXTENT OF CLEARING - (EXTENT OF FIRE BREAK)

SETOUT POINTS

POINT No.	COORDINATES	
	EASTING	NORTHING
1	445881.958	8173795.939
2	445919.656	8173760.113
3	445934.653	8173759.578
4	445941.350	8173753.563
5	445926.349	8173753.097
6	445888.362	8173710.555

NOT FOR CONSTRUCTION

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REVISIONS

No.	BY	DATE	DESCRIPTION	APPD
A	G.T		ISSUED FOR INFORMATION	

Scale

SCALE C 0 5 10 12.5m
1 : 500 (A3) 1 : 250 (A1)

THE SIGNING OF THIS TITLE BLOCK CONFIRMS THE DESIGN AND DRAFTING OF THIS PROJECT HAVE BEEN PREPARED AND CHECKED IN ACCORDANCE WITH THE AECOM QUALITY ASSURANCE SYSTEM TO ISO 9001:2000

DESIGNED	B.F	CHECKED	
DRAWN	G.T	CHECKED	K.P
APPROVED		DATE	

AECOM

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AECOM Australia Pty Ltd A.B.N. 20 093 846 925

SWEETPEA EXPLORATION DRILL CAMPAIGN

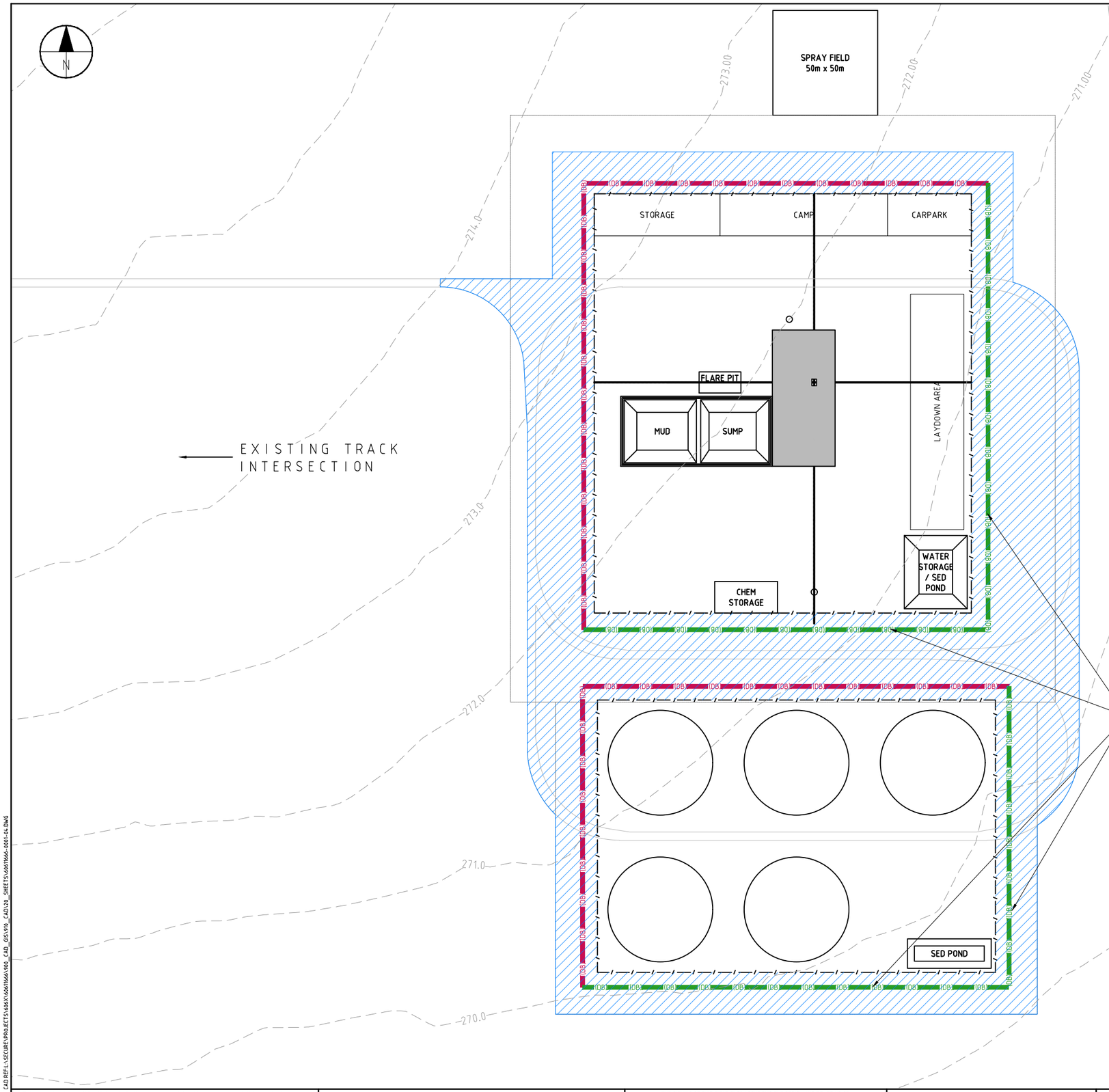
SWEETPEA EXPLORATION DRILL CAMPAIGN
WELL PAD 1
ACCESS ROAD INTERSECTION DETAIL

Status: ISSUED FOR INFORMATION

Drg No.: 60611666-0001-03

Rev.:

LAST MODIFIED:30/09/2021 5:04 PM
CAD REFL:\\SECURE\PROJECTS\60X\60611666\900_CAD_GIS\910_CAD\20_SHEETS\60611666-0001-03.DWG



LEGEND

- 278.00 — EXISTING SURFACE CONTOURS (1.0m INTERVALS - DTM)
- (DB) (DB) — 0.5m HIGH DIVERSION BUND (DIRTY WATER)
- (DB) (DB) — 0.5m HIGH DIVERSION BUND (CLEAN WATER)
- LIMIT OF CLEARING

EROSION AND SEDIMENTATION CONTROL NOTES

1. ALL WORK TO BE IN ACCORDANCE WITH THE BEST PRACTICE EROSION AND SEDIMENT CONTROL DOCUMENT (2008) PREPARED BY IECA.
2. TOPSOIL STRIPPING DEPTH ASSESSMENT MUST BE UNDERTAKEN IN ACCORDANCE WITH THE BEETALOO TOPSOIL STRIPPING TECHNICAL INSTRUCTION (NT-2050-15-TI-0001) AND AMELIORATION RATES AGREED WITH THE CONSTRUCTION SUPERVISOR. THE EXPECTED NOMINAL TOPSOIL DEPTH FOR THE SITE IS 150MM, FINAL STRIP DEPTH TO BE CONFIRMED IN THE FIELD.
3. MAINTENANCE OF ESC DEVICES:
   - THE CONTRACTOR SHALL INSPECT ALL ENVIRONMENTAL DEVICES ON A REGULAR BASIS. ANY RECTIFICATION OF DAMAGE TO THE ENVIRONMENTAL CONTROL DEVICES OR CLEANING OUT OF THE DEVICES IS TO BE CARRIED OUT BY THE CONTRACTOR AS REQUIRED.
   - REGULAR MAINTENANCE SHALL BE UNDERTAKEN UNTIL SUFFICIENT GROUND COVER IS ESTABLISHED TO PROVIDE STABILISATION TO ALL DISTURBED AREAS.
4. FILTER BERM DIMENSIONS IN ACCORDANCE WITH IECA FIGURE 1 ON STANDARD DRAWING MB-01. FILTER BERM MATERIAL TO BE CONSTRUCTED FROM AVAILABLE SITE MATERIAL.
5. ALL ESC DEVICES WILL BE DESIGN AND INSTALLED IN ACCORDANCE WITH THE NT LAND CLEARANCE GUIDELINES.
6. THE CONTRACTOR MUST SUBMIT AN EROSION AND SEDIMENT CONTROL PLAN WHICH WILL BE APPROVED BY TAMBORAN PRIOR TO MOBILISATION.
7. STOCKPILES SHOULD NOT BE LOCATED WITHIN AN OVERLAND FLOW PATH/DRAIN.
8. IF DIRECTED BY THE SUPERINTENDENT, TOPSOIL STOCKPILES ARE TO BE SOWN WITH A COVER CROP AS SOON AS PRACTICAL AFTER STOCKPILING.
9. NO DISTURBANCE TO VEGETATION IS TO TAKE PLACE BEYOND THE BOUNDARIES OF CURRENT STAGE OF DEVELOPMENT.
10. DURING CONSTRUCTION, TEMPORARY DIVERSION DRAINS, SEDIMENT FENCES AND, OR SEDIMENT TRAPS ARE TO BE CONSTRUCTED AT REGULAR INTERVALS DOWN SLOPE PRIOR TO ANY BREAKS IN CONSTRUCTION (SUCH AS A WEEKEND) OR IF RAIN IS IMMINENT.
11. INSTALL SEDIMENT FENCES TO CONTROL SHEET FLOW OR SEDIMENT TRAPS TO CONTROL CONCENTRATED FLOW.
12. SERVICE TRENCHES ARE TO BE CONTROL REVEGETATED WITH GRASS SODS AND TOPSOIL SAVED DURING EXCAVATION OF THE TRENCHES OR TURFED (AS APPROPRIATE) AND MAINTAINED UNTIL ESTABLISHED.
13. ALL AREAS DISTURBED BY CONSTRUCTION ACTIVITIES SHOULD BE PROMPTLY AND PROGRESSIVELY STABILISED WHERE APPROPRIATE.
14. WHERE ACCESS TRACKS CROSS DIVERSION BUNDS TRAFFICABLE WHOA BOYS TO BE INSTALLED. WHOA BOYS TO BE MAINTAINED FOR LIFE OF PROJECT TO ENSURE FLOW DIVERSION IS MAINTAINED.
15. LIMIT OF CLEARING 20m FROM LEASE BOUNDARY FENCELINE OR EDGE OF ACCESS TRACKS.

NOT FOR CONSTRUCTION

This drawing is confidential and shall only be used for the purposes of this project.

REVISIONS				
No.	BY	DATE	DESCRIPTION	APPD
A	G.T		ISSUED FOR INFORMATION	

Scale

SCALE A 0 10 20 30 40 50m
1 : 2000 (A3) 1 : 1000 (A1)

THE SIGNING OF THIS TITLE BLOCK CONFIRMS THE DESIGN AND DRAFTING OF THIS PROJECT HAVE BEEN PREPARED AND CHECKED IN ACCORDANCE WITH THE AECOM QUALITY ASSURANCE SYSTEM TO ISO 9001-2000

DESIGNED	B.F	CHECKED	
DRAWN	G.T	CHECKED	K.P
APPROVED		DATE	

AECOM

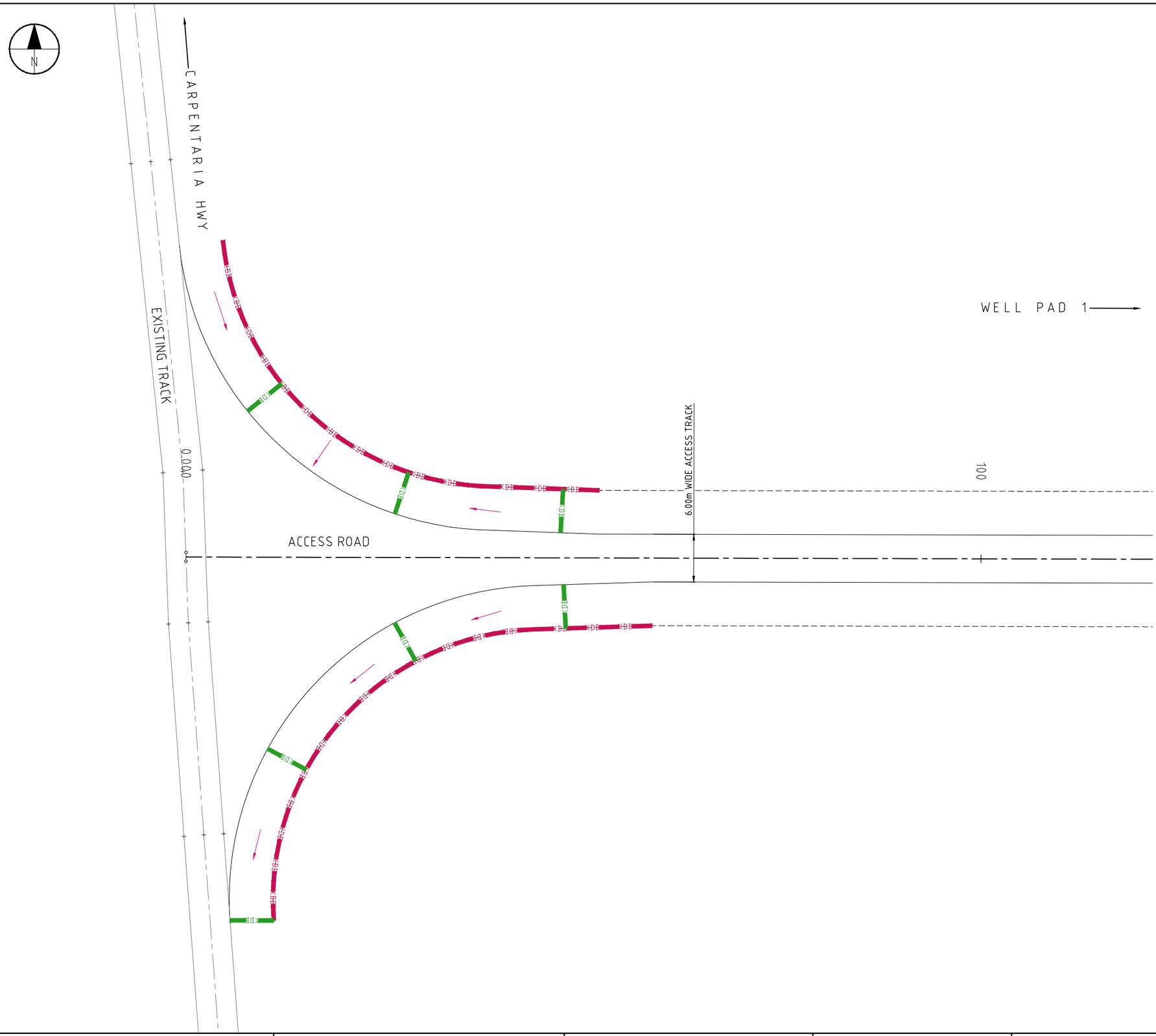
RPEQ No.
AECOM Australia Pty Ltd A.B.N. 20 093 846 925

SWEETPEA EXPLORATION DRILL CAMPAIGN

SWEETPEA EXPLORATION DRILL CAMPAIGN
WELL PAD 1
EROSION AND SEDIMENT CONTROL PLAN

Status: ISSUED FOR INFORMATION
Drg No.: 60611666-0001-04
Rev.:

LAST MODIFIED:31/10/2023 8:05 AM
CAD REF: I:\SECURE\PROJECTS\60611666\900_CAD_GIS\19_CAD\20_SHEETS\60611666-0001-04.DWG



LEGEND

- ACCESS ROAD CENTERLINE
- EDGE OF PAVEMENT
- EXTENT OF CLEARING - (EXTENT OF FIRE BREAK)
- FILTER BERM (DIRTY WATER)
- FILTER BERM (CLEAN WATER)
- FLOW DIRECTION

EROSION AND SEDIMENTATION CONTROL NOTES

1. ALL WORK TO BE IN ACCORDANCE WITH THE BEST PRACTICE EROSION AND SEDIMENT CONTROL DOCUMENT (2008) PREPARED BY IECA.
2. TOPSOIL STRIPPING DEPTH ASSESSMENT MUST BE UNDERTAKEN IN ACCORDANCE WITH THE BEETALOO TOPSOIL STRIPPING TECHNICAL INSTRUCTION (NT-2050-15-TI-0001) AND AMELIORATION RATES AGREED WITH THE CONSTRUCTION SUPERVISOR. THE EXPECTED NOMINAL TOPSOIL DEPTH FOR THE SITE IS 150MM, FINAL STRIP DEPTH TO BE CONFIRMED IN THE FIELD.
3. MAINTENANCE OF ESC DEVICES:
   - THE CONTRACTOR SHALL INSPECT ALL ENVIRONMENTAL DEVICES ON A REGULAR BASIS. ANY RECTIFICATION OF DAMAGE TO THE ENVIRONMENTAL CONTROL DEVICES OR CLEANING OUT OF THE DEVICES IS TO BE CARRIED OUT BY THE CONTRACTOR AS REQUIRED.
   - REGULAR MAINTENANCE SHALL BE UNDERTAKEN UNTIL SUFFICIENT GROUND COVER IS ESTABLISHED TO PROVIDE STABILISATION TO ALL DISTURBED AREAS.
4. FILTER BERM DIMENSIONS IN ACCORDANCE WITH IECA FIGURE 1 ON STANDARD DRAWING MB-01. FILTER BERM MATERIAL TO BE CONSTRUCTED FROM AVAILABLE SITE MATERIAL.
5. ALL ESC DEVICES WILL BE DESIGN AND INSTALLED IN ACCORDANCE WITH THE NT LAND CLEARANCE GUIDELINES.
6. THE CONTRACTOR MUST SUBMIT AN EROSION AND SEDIMENT CONTROL PLAN WHICH WILL BE APPROVED BY TAMBORAN PRIOR TO MOBILISATION.
7. STOCKPILES SHOULD NOT BE LOCATED WITHIN AN OVERLAND FLOW PATH/DRAIN.
8. IF DIRECTED BY THE SUPERINTENDENT, TOPSOIL STOCKPILES ARE TO BE SOWN WITH A COVER CROP AS SOON AS PRACTICAL AFTER STOCKPILING.
9. NO DISTURBANCE TO VEGETATION IS TO TAKE PLACE BEYOND THE BOUNDARIES OF CURRENT STAGE OF DEVELOPMENT.
10. DURING CONSTRUCTION, TEMPORARY DIVERSION DRAINS, SEDIMENT FENCES AND, OR SEDIMENT TRAPS ARE TO BE CONSTRUCTED AT REGULAR INTERVALS DOWN SLOPE PRIOR TO ANY BREAKS IN CONSTRUCTION (SUCH AS A WEEKEND) OR IF RAIN IS IMMINENT.
11. INSTALL SEDIMENT FENCES TO CONTROL SHEET FLOW OR SEDIMENT TRAPS TO CONTROL CONCENTRATED FLOW.
12. SERVICE TRENCHES ARE TO BE CONTROL REVEGETATED WITH GRASS SODS AND TOPSOIL SAVED DURING EXCAVATION OF THE TRENCHES OR TURFED (AS APPROPRIATE) AND MAINTAINED UNTIL ESTABLISHED.
13. ALL AREAS DISTURBED BY CONSTRUCTION ACTIVITIES SHOULD BE PROMPTLY AND PROGRESSIVELY STABILISED WHERE APPROPRIATE.
14. WHERE ACCESS TRACKS CROSS DIVERSION BUNDS TRAFFICABLE WHOA BOYS TO BE INSTALLED. WHOA BOYS TO BE MAINTAINED FOR LIFE OF PROJECT TO ENSURE FLOW DIVERSION IS MAINTAINED.
15. LIMIT OF CLEARING 20m FROM LEASE BOUNDARY FENCELINE OR EDGE OF ACCESS TRACKS.

NOT FOR CONSTRUCTION

CAD REF:L:\SECURE\PROJECTS\60X\60611666\90_CAD_GIS\99_CAD\20_SHEETS\60611666-0001-05.DWG

LAST MODIFIED:3/9/2021 5:05 PM

This drawing is confidential and shall only be used for the purposes of this project.

No.	BY	DATE	DESCRIPTION	APPD
A	G.T		ISSUED FOR INFORMATION	

REVISIONS

Scale

SCALE C 0 5 10 12.5m
1 : 500 (A3) 1 : 250 (A1)

THE SIGNING OF THIS TITLE BLOCK CONFIRMS THE DESIGN AND DRAFTING OF THIS PROJECT HAVE BEEN PREPARED AND CHECKED IN ACCORDANCE WITH THE AECOM QUALITY ASSURANCE SYSTEM TO ISO 9001-2000

DESIGNED	B.F	CHECKED	
DRAWN	G.T	CHECKED	K.P
APPROVED		DATE	

AECOM

RPEQ No.
AECOM Australia Pty Ltd A.B.N. 20 093 846 925

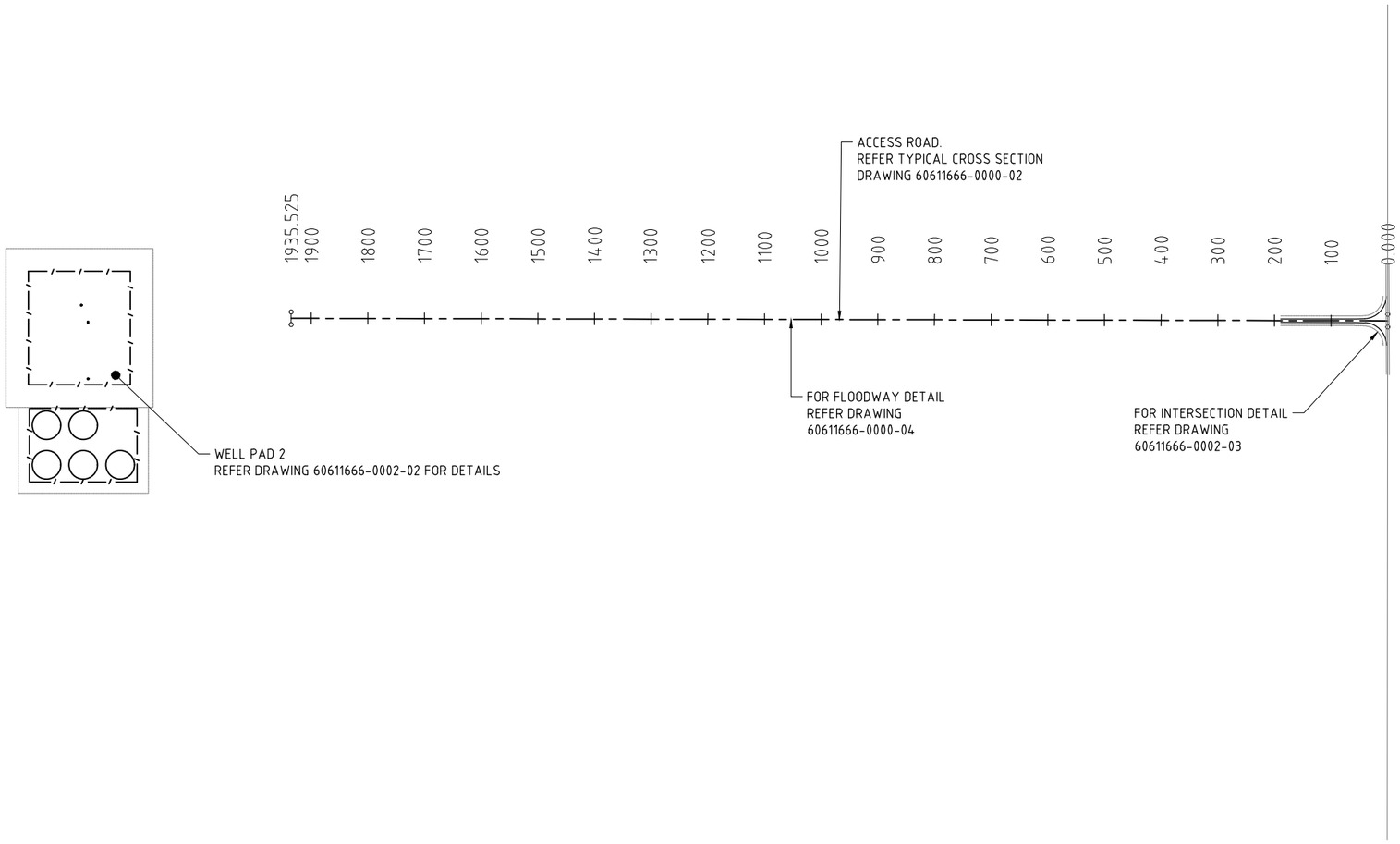
SWEETPEA EXPLORATION DRILL CAMPAIGN

SWEETPEA EXPLORATION DRILL CAMPAIGN
WELL PAD 1 ACCESS ROAD INTERSECTION
EROSION AND SEDIMENT CONTROL PLAN

Status: ISSUED FOR INFORMATION
Drg No.: 60611666-0001-05
Rev.:

LEGEND

ACCESS ROAD CENTERLINE



ACCESS ROAD MCA02 - SETOUT				
PT	CHAINAGE	X COORD	Y COORD	BEARING
IP	0.000	455172.402	8173735.275	270°07'55.67"
IP	1935.525	453236.882	8173739.739	270°07'55.67"

FLOODWAY LOCATION CHAINAGE
1470

NOTE:
FLOODWAY LOCATIONS ARE INDICATIVE ONLY. FINAL LOCATION OF FLOODWAYS TO BE DETERMINED ON SITE BY SUPERVISOR

NOT FOR CONSTRUCTION

This drawing is confidential and shall only be used for the purposes of this project.

REVISIONS

No.	BY	DATE	DESCRIPTION	APPD
A	G.T		ISSUED FOR INFORMATION	

Scale

SCALE W 0 100 200 250m
1 : 10000 (A3) 1 : 5000 (A1)

THE SIGNING OF THIS TITLE BLOCK CONFIRMS THE DESIGN AND DRAFTING OF THIS PROJECT HAVE BEEN PREPARED AND CHECKED IN ACCORDANCE WITH THE AECOM QUALITY ASSURANCE SYSTEM TO ISO 9001-2000			
DESIGNED	B.F	CHECKED	
DRAWN	G.T	CHECKED	K.P
APPROVED		DATE	

AECOM

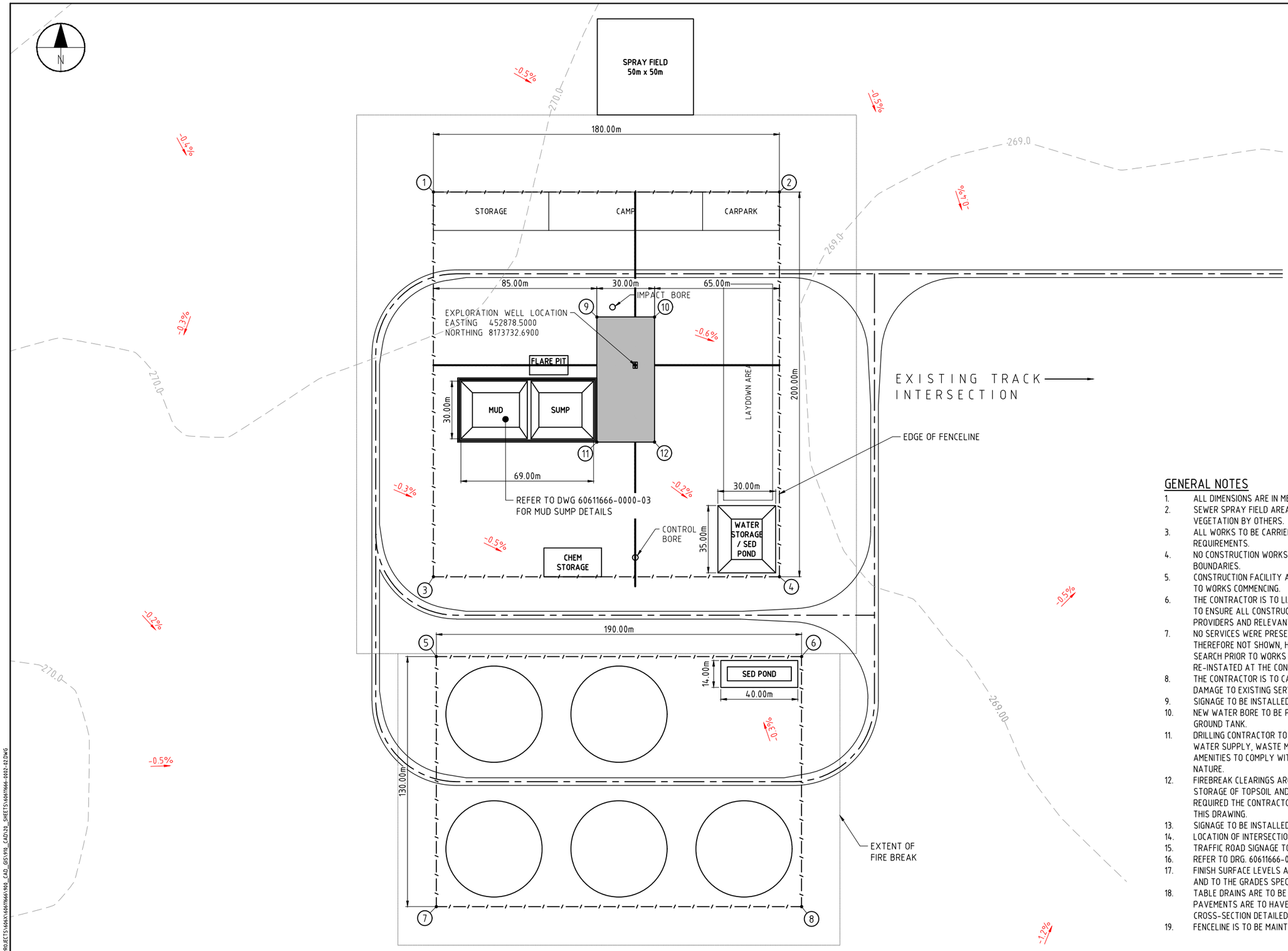
RPEQ No.
AECOM Australia Pty Ltd A.B.N. 20 093 846 925

SWEETPEA EXPLORATION DRILL CAMPAIGN

SWEETPEA EXPLORATION DRILL CAMPAIGN
WELL PAD 2
ACCESS ROAD DETAILS

Status: ISSUED FOR INFORMATION
Drg No.: 60611666-0002-01
Rev.:

LAST MODIFIED:19/10/2021 5:45 PM
CAD REF:L:\SECURE\PROJECTS\60611666\900_CAD_GIS\900_CAD\20_SHEETS\60611666-0002-01.DWG



LEGEND

278.00 — EXISTING SURFACE CONTOURS (1.0m INTERVALS - DTM)

-0.1% EXISTING SURFACE SLOPES

SETOUT POINTS

POINT No.	COORDINATES	
	EASTING	NORTHING
1	452773.500	8173822.690
2	452953.500	8173822.690
3	452773.500	8173622.690
4	452953.500	8173622.690
5	452775.000	8173581.190
6	452965.000	8173581.190
7	452775.000	8173451.190
8	452965.000	8173451.190
9	452858.500	8173757.690
10	452888.500	8173757.690
11	452858.500	8173692.690
12	452888.500	8173692.690

GENERAL NOTES

1. ALL DIMENSIONS ARE IN METRES UNLESS NOTED OTHERWISE.
2. SEWER SPRAY FIELD AREA IS NOT TO BE CLEARED. SPRAY PIPES LAID ON EXISTING VEGETATION BY OTHERS.
3. ALL WORKS TO BE CARRIED OUT IN ACCORDANCE WITH THE APPROVED MANAGEMENT PLAN REQUIREMENTS.
4. NO CONSTRUCTION WORKS ARE TO BE CARRIED OUT OUTSIDE THE APPROVED WORK CORRIDOR BOUNDARIES.
5. CONSTRUCTION FACILITY AREA LOCATIONS TO BE APPROVED BY THE SUPERINTENDENT PRIOR TO WORKS COMMENCING.
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7. NO SERVICES WERE PRESENT OR PROVIDED BY DBYD AT THE TIME OF DESIGN AND ARE THEREFORE NOT SHOWN, HOWEVER THE CONTRACTOR IS RESPONSIBLE FOR CONDUCTING A SEARCH PRIOR TO WORKS BEING CARRIED OUT. ANY DAMAGE TO EXISTING SERVICES IS TO BE RE-INSTATED AT THE CONTRACTORS EXPENSE.
8. THE CONTRACTOR IS TO CARRY OUT A DBYD AND LOCATE AND MARK SERVICES ON SITE. ANY DAMAGE TO EXISTING SERVICES IS TO BE RE-INSTATED AT THE CONTRACTORS EXPENSE.
9. SIGNAGE TO BE INSTALLED PRIOR TO ROAD USE.
10. NEW WATER BORE TO BE PROVIDED BY THE CONTRACTOR AND TO DISCHARGE TO ABOVE GROUND TANK.
11. DRILLING CONTRACTOR TO PROVIDE ALL AMENITIES INCLUDING ACCOMMODATION, ABLUTIONS, WATER SUPPLY, WASTE MANAGEMENT AND SEWAGE TREATMENT FOR THE CAMP AREA. AMENITIES TO COMPLY WITH NORTHERN TERRITORY REQUIREMENTS FOR FACILITIES OF THIS NATURE.
12. FIREBREAK CLEARINGS AROUND DRILLING LEASE AND CAMP PAD ARE TO BE USED FOR STORAGE OF TOPSOIL AND VEGETATION AS REQUIRED. IF ADDITIONAL STORAGE SPACE IS REQUIRED THE CONTRACTOR IS TO PROVIDE ADDITIONAL STORAGE AREA AS INDICATED ON THIS DRAWING.
13. SIGNAGE TO BE INSTALLED PRIOR TO ROAD USE.
14. LOCATION OF INTERSECTION IS TO BE CONFIRMED BY CONTRACTOR ON SITE.
15. TRAFFIC ROAD SIGNAGE TO COMPLY WITH AS1743 AND NORTHERN TERRITORY GUIDELINES.
16. REFER TO DRG. 60611666-0000-02 FOR ROAD PAVEMENT DETAILS.
17. FINISH SURFACE LEVELS ARE TO FOLLOW EXISTING SURFACE LEVELS AS NEAR AS POSSIBLE AND TO THE GRADES SPECIFIED ON THE DRAWINGS.
18. TABLE DRAINS ARE TO BE CUT ALONG THE LENGTH OF THE ROAD AND ALL ROAD PAVEMENTS ARE TO HAVE A 4% CROSSFALL IN ACCORDANCE WITH THE ROAD CROSS-SECTION DETAILED ON DRG. 60611666-0000-02.
19. FENCELINE IS TO BE MAINTAINED AT ALL TIMES.

NOT FOR CONSTRUCTION

This drawing is confidential and shall only be used for the purposes of this project.

REVISIONS				
No.	BY	DATE	DESCRIPTION	APPD
A	G.T		ISSUED FOR INFORMATION	

Scale

SCALE A 0 10 20 30 40 50m

1 : 2000 (A3) 1 : 1000 (A1)

THE SIGNING OF THIS TITLE BLOCK CONFIRMS THE DESIGN AND DRAFTING OF THIS PROJECT HAVE BEEN PREPARED AND CHECKED IN ACCORDANCE WITH THE AECOM QUALITY ASSURANCE SYSTEM TO ISO 9001-2000			
DESIGNED	B.F	CHECKED	
DRAWN	G.T	CHECKED	K.P
APPROVED		DATE	

AECOM

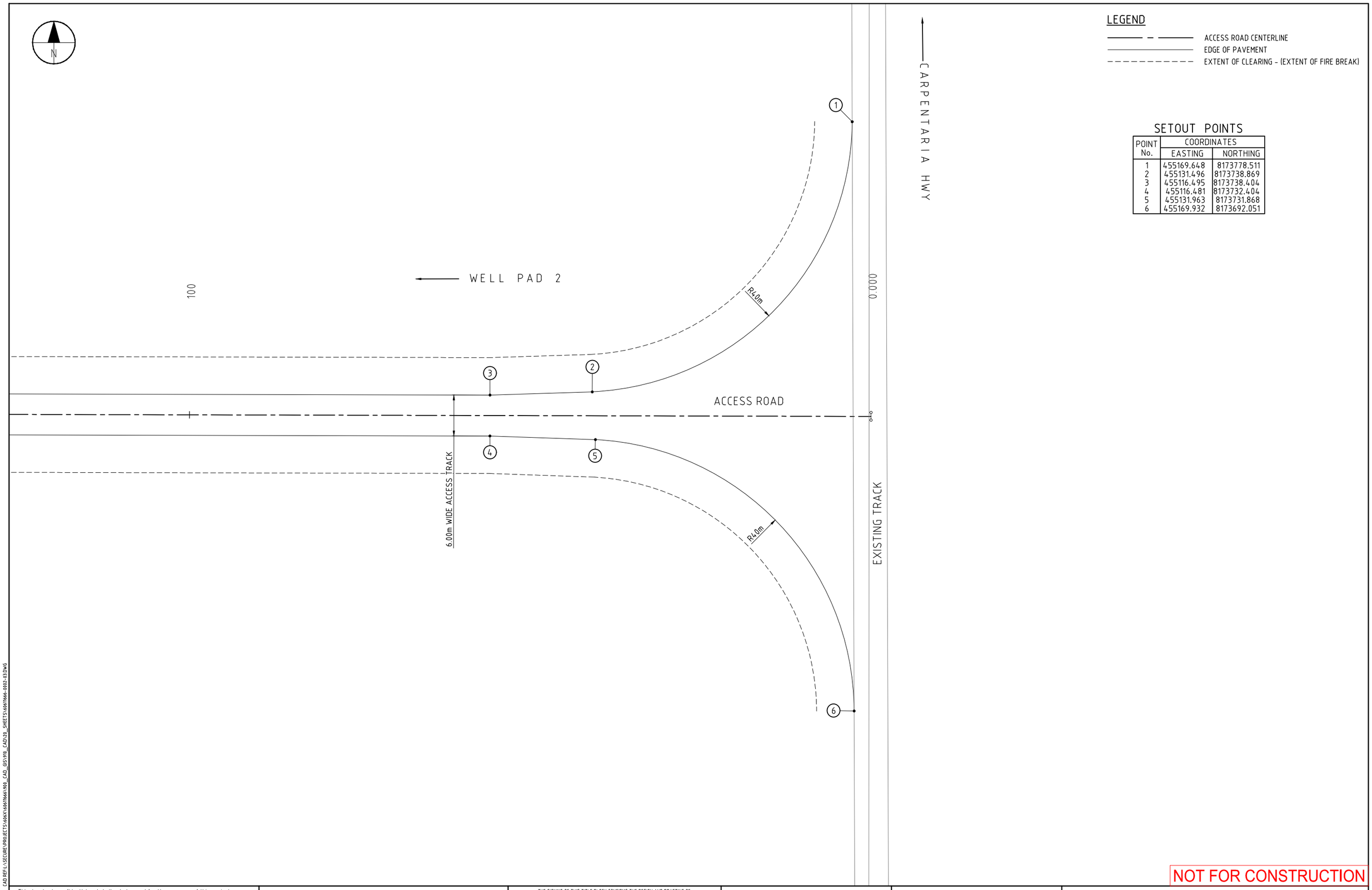
RPEQ No.
AECOM Australia Pty Ltd A.B.N. 20 093 846 925

SWEETPEA EXPLORATION DRILL CAMPAIGN

SWEETPEA EXPLORATION DRILL CAMPAIGN
WELL PAD 2
GENERAL ARRANGEMENT PLAN

Status: ISSUED FOR INFORMATION | Drg No. 60611666-0002-02 | Rev.

LAST MODIFIED:9/02/2021 5:05 PM CAD REF:L:\SECURE\PROJECTS\60611666\99A_CAD_GIS\99A_CAD\20_SHEETS\60611666-0002-02.DWG



LEGEND

- ACCESS ROAD CENTERLINE
- EDGE OF PAVEMENT
- EXTENT OF CLEARING - (EXTENT OF FIRE BREAK)

SETOUT POINTS

POINT No.	COORDINATES	
	EASTING	NORTHING
1	455169.648	8173778.511
2	455131.496	8173738.869
3	455116.495	8173738.404
4	455116.481	8173732.404
5	455131.963	8173731.868
6	455169.932	8173692.051

NOT FOR CONSTRUCTION

This drawing is confidential and shall only be used for the purposes of this project.

REVISIONS

No.	BY	DATE	DESCRIPTION	APPD
A	G.T		ISSUED FOR INFORMATION	

Scale

SCALE C 0 5 10 12.5m
1 : 500 (A3) 1 : 250 (A1)

THE SIGNING OF THIS TITLE BLOCK CONFIRMS THE DESIGN AND DRAFTING OF THIS PROJECT HAVE BEEN PREPARED AND CHECKED IN ACCORDANCE WITH THE AECOM QUALITY ASSURANCE SYSTEM TO ISO 9001:2000

DESIGNED	B.F	CHECKED	
DRAWN	G.T	CHECKED	K.P
APPROVED		DATE	

AECOM

RPEQ No.
AECOM Australia Pty Ltd A.B.N. 20 093 846 925

SWEETPEA EXPLORATION DRILL CAMPAIGN

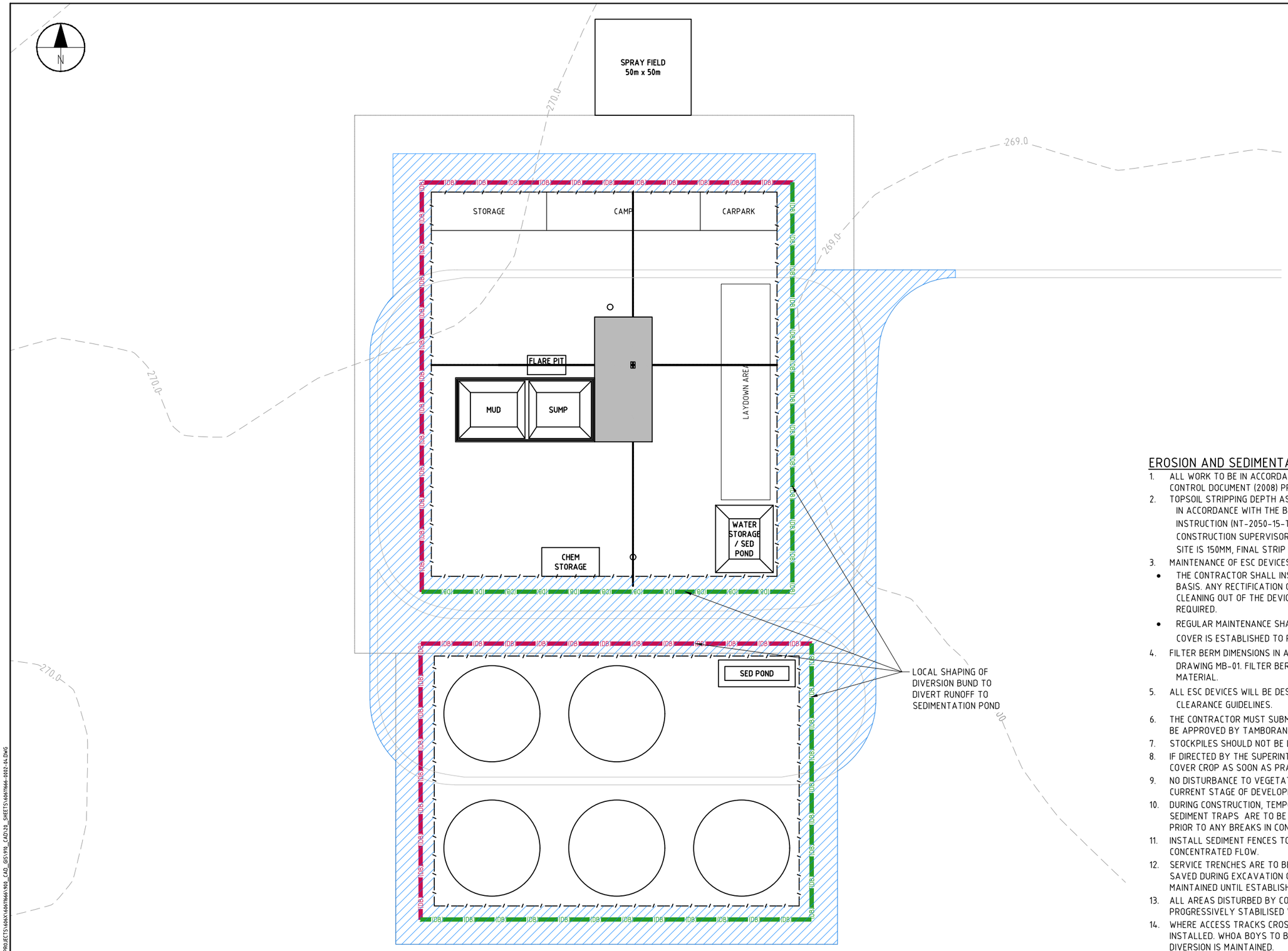
SWEETPEA EXPLORATION DRILL CAMPAIGN
WELL PAD 2
INTERSETION DETAILS

Status: ISSUED FOR INFORMATION

Drg No.: 60611666-0002-03

Rev.:

LAST MODIFIED:30/09/2021 5:05 PM CAD REFL:\SECURE\PROJECTS\60X\60611666\900_CAD_GIS\900_CAD\20_SHEETS\60611666-0002-03.DWG



LEGEND

- 278.00 — EXISTING SURFACE CONTOURS (1.0m INTERVALS - DTM)
- (DB) (DB) — 0.5m HIGH DIVERSION BUND (DIRTY WATER)
- (DB) (DB) — 0.5m HIGH DIVERSION BUND (CLEAN WATER)
- LIMIT OF CLEARING

EROSION AND SEDIMENTATION CONTROL NOTES

1. ALL WORK TO BE IN ACCORDANCE WITH THE BEST PRACTICE EROSION AND SEDIMENT CONTROL DOCUMENT (2008) PREPARED BY IECA.
2. TOPSOIL STRIPPING DEPTH ASSESSMENT MUST BE UNDERTAKEN IN ACCORDANCE WITH THE BEETALOO TOPSOIL STRIPPING TECHNICAL INSTRUCTION (NT-2050-15-TI-0001) AND AMELIORATION RATES AGREED WITH THE CONSTRUCTION SUPERVISOR. THE EXPECTED NOMINAL TOPSOIL DEPTH FOR THE SITE IS 150MM, FINAL STRIP DEPTH TO BE CONFIRMED IN THE FIELD.
3. MAINTENANCE OF ESC DEVICES:
   - THE CONTRACTOR SHALL INSPECT ALL ENVIRONMENTAL DEVICES ON A REGULAR BASIS. ANY RECTIFICATION OF DAMAGE TO THE ENVIRONMENTAL CONTROL DEVICES OR CLEANING OUT OF THE DEVICES IS TO BE CARRIED OUT BY THE CONTRACTOR AS REQUIRED.
   - REGULAR MAINTENANCE SHALL BE UNDERTAKEN UNTIL SUFFICIENT GROUND COVER IS ESTABLISHED TO PROVIDE STABILISATION TO ALL DISTURBED AREAS.
4. FILTER BERM DIMENSIONS IN ACCORDANCE WITH IECA FIGURE 1 ON STANDARD DRAWING MB-01. FILTER BERM MATERIAL TO BE CONSTRUCTED FROM AVAILABLE SITE MATERIAL.
5. ALL ESC DEVICES WILL BE DESIGN AND INSTALLED IN ACCORDANCE WITH THE NT LAND CLEARANCE GUIDELINES.
6. THE CONTRACTOR MUST SUBMIT AN EROSION AND SEDIMENT CONTROL PLAN WHICH WILL BE APPROVED BY TAMBORAN PRIOR TO MOBILISATION.
7. STOCKPILES SHOULD NOT BE LOCATED WITHIN AN OVERLAND FLOW PATH/DRAIN.
8. IF DIRECTED BY THE SUPERINTENDENT, TOPSOIL STOCKPILES ARE TO BE SOWN WITH A COVER CROP AS SOON AS PRACTICAL AFTER STOCKPILING.
9. NO DISTURBANCE TO VEGETATION IS TO TAKE PLACE BEYOND THE BOUNDARIES OF CURRENT STAGE OF DEVELOPMENT.
10. DURING CONSTRUCTION, TEMPORARY DIVERSION DRAINS, SEDIMENT FENCES AND, OR SEDIMENT TRAPS ARE TO BE CONSTRUCTED AT REGULAR INTERVALS DOWN SLOPE PRIOR TO ANY BREAKS IN CONSTRUCTION (SUCH AS A WEEKEND) OR IF RAIN IS IMMINENT.
11. INSTALL SEDIMENT FENCES TO CONTROL SHEET FLOW OR SEDIMENT TRAPS TO CONTROL CONCENTRATED FLOW.
12. SERVICE TRENCHES ARE TO BE CONTROL REVEGETATED WITH GRASS SODS AND TOPSOIL SAVED DURING EXCAVATION OF THE TRENCHES OR TURFED (AS APPROPRIATE) AND MAINTAINED UNTIL ESTABLISHED.
13. ALL AREAS DISTURBED BY CONSTRUCTION ACTIVITIES SHOULD BE PROMPTLY AND PROGRESSIVELY STABILISED WHERE APPROPRIATE.
14. WHERE ACCESS TRACKS CROSS DIVERSION BUNDS TRAFFICABLE WHOA BOYS TO BE INSTALLED. WHOA BOYS TO BE MAINTAINED FOR LIFE OF PROJECT TO ENSURE FLOW DIVERSION IS MAINTAINED.
15. LIMIT OF CLEARING 20m FROM LEASE BOUNDARY FENCELINE OR EDGE OF ACCESS TRACKS.

NOT FOR CONSTRUCTION

This drawing is confidential and shall only be used for the purposes of this project.

REVISIONS

No.	BY	DATE	DESCRIPTION	APPD
A	G.T		ISSUED FOR INFORMATION	

Scale

SCALE A 0 10 20 30 40 50m

1 : 2000 (A3) 1 : 1000 (A1)

THE SIGNING OF THIS TITLE BLOCK CONFIRMS THE DESIGN AND DRAFTING OF THIS PROJECT HAVE BEEN PREPARED AND CHECKED IN ACCORDANCE WITH THE AECOM QUALITY ASSURANCE SYSTEM TO ISO 9001:2000

DESIGNED	B.F	CHECKED	
DRAWN	G.T	CHECKED	K.P
APPROVED		DATE	

AECOM

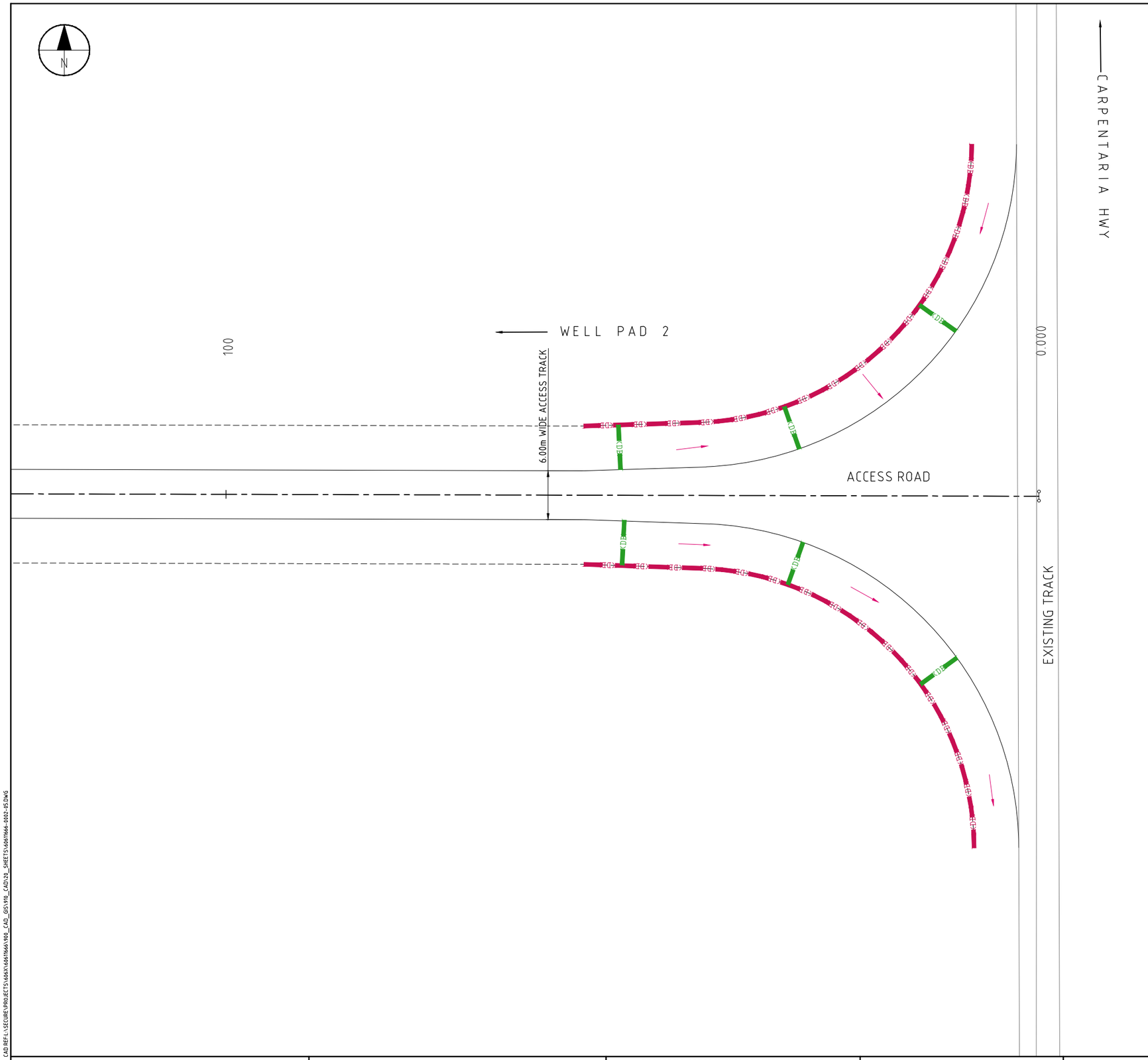
RPEQ No.
AECOM Australia Pty Ltd A.B.N. 20 093 846 925

SWEETPEA EXPLORATION DRILL CAMPAIGN

SWEETPEA EXPLORATION DRILL CAMPAIGN
WELL PAD 2
EROSION AND SEDIMENT CONTROL PLAN

Status: ISSUED FOR INFORMATION | Drg No. 60611666-0002-04 | Rev.

LAST MODIFIED:9/12/2021 5:45 PM
CAD REF:L:\SECURE\PROJECTS\60X\60611666\900_CAD_GIS\910_CAD\20_SHEETS\60611666-0002-A-DWG



LEGEND

- ACCESS ROAD CENTERLINE
- EDGE OF PAVEMENT
- EXTENT OF CLEARING - (EXTENT OF FIRE BREAK)
- FILTER BERM (DIRTY WATER)
- FILTER BERM (CLEAN WATER)
- FLOW DIRECTION

EROSION AND SEDIMENTATION CONTROL NOTES

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2. TOPSOIL STRIPPING DEPTH ASSESSMENT MUST BE UNDERTAKEN IN ACCORDANCE WITH THE BEETALOO TOPSOIL STRIPPING TECHNICAL INSTRUCTION (NT-2050-15-TI-0001) AND AMELIORATION RATES AGREED WITH THE CONSTRUCTION SUPERVISOR. THE EXPECTED NOMINAL TOPSOIL DEPTH FOR THE SITE IS 150MM, FINAL STRIP DEPTH TO BE CONFIRMED IN THE FIELD.
3. MAINTENANCE OF ESC DEVICES:
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   - REGULAR MAINTENANCE SHALL BE UNDERTAKEN UNTIL SUFFICIENT GROUND COVER IS ESTABLISHED TO PROVIDE STABILISATION TO ALL DISTURBED AREAS.
4. FILTER BERM DIMENSIONS IN ACCORDANCE WITH IECA FIGURE 1 ON STANDARD DRAWING MB-01. FILTER BERM MATERIAL TO BE CONSTRUCTED FROM AVAILABLE SITE MATERIAL.
5. ALL ESC DEVICES WILL BE DESIGN AND INSTALLED IN ACCORDANCE WITH THE NT LAND CLEARANCE GUIDELINES.
6. THE CONTRACTOR MUST SUBMIT AN EROSION AND SEDIMENT CONTROL PLAN WHICH WILL BE APPROVED BY TAMBORAN PRIOR TO MOBILISATION.
7. STOCKPILES SHOULD NOT BE LOCATED WITHIN AN OVERLAND FLOW PATH/DRAIN.
8. IF DIRECTED BY THE SUPERINTENDENT, TOPSOIL STOCKPILES ARE TO BE SOWN WITH A COVER CROP AS SOON AS PRACTICAL AFTER STOCKPILING.
9. NO DISTURBANCE TO VEGETATION IS TO TAKE PLACE BEYOND THE BOUNDARIES OF CURRENT STAGE OF DEVELOPMENT.
10. DURING CONSTRUCTION, TEMPORARY DIVERSION DRAINS, SEDIMENT FENCES AND, OR SEDIMENT TRAPS ARE TO BE CONSTRUCTED AT REGULAR INTERVALS DOWN SLOPE PRIOR TO ANY BREAKS IN CONSTRUCTION (SUCH AS A WEEKEND) OR IF RAIN IS IMMINENT.
11. INSTALL SEDIMENT FENCES TO CONTROL SHEET FLOW OR SEDIMENT TRAPS TO CONTROL CONCENTRATED FLOW.
12. SERVICE TRENCHES ARE TO BE CONTROL REVEGETATED WITH GRASS SODS AND TOPSOIL SAVED DURING EXCAVATION OF THE TRENCHES OR TURFED (AS APPROPRIATE) AND MAINTAINED UNTIL ESTABLISHED.
13. ALL AREAS DISTURBED BY CONSTRUCTION ACTIVITIES SHOULD BE PROMPTLY AND PROGRESSIVELY STABILISED WHERE APPROPRIATE.
14. WHERE ACCESS TRACKS CROSS DIVERSION BUNDS TRAFFICABLE WHOA BOYS TO BE INSTALLED. WHOA BOYS TO BE MAINTAINED FOR LIFE OF PROJECT TO ENSURE FLOW DIVERSION IS MAINTAINED.
15. LIMIT OF CLEARING 20m FROM LEASE BOUNDARY FENCELINE OR EDGE OF ACCESS TRACKS.

NOT FOR CONSTRUCTION

This drawing is confidential and shall only be used for the purposes of this project.

REVISIONS

No.	BY	DATE	DESCRIPTION	APPD
A	G.T		ISSUED FOR INFORMATION	

Scale

SCALE C 0 5 10 12.5m
1 : 500 (A3) 1 : 250 (A1)

THE SIGNING OF THIS TITLE BLOCK CONFIRMS THE DESIGN AND DRAFTING OF THIS PROJECT HAVE BEEN PREPARED AND CHECKED IN ACCORDANCE WITH THE AECOM QUALITY ASSURANCE SYSTEM TO ISO 9001-2000			
DESIGNED	B.F	CHECKED	
DRAWN	G.T	CHECKED	K.P
APPROVED		DATE	

AECOM

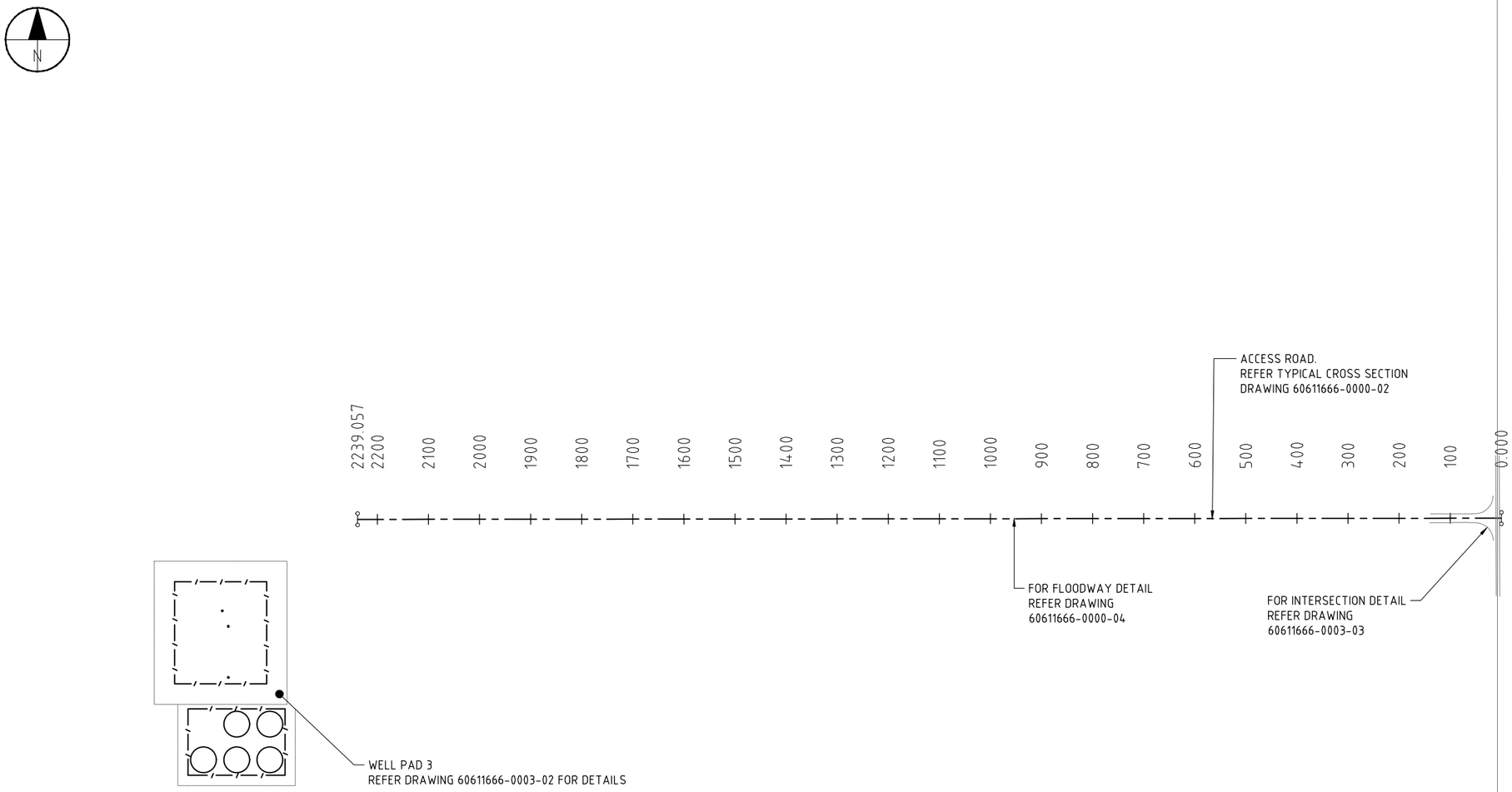
RPEQ No.
AECOM Australia Pty Ltd A.B.N. 20 093 846 925

SWEETPEA EXPLORATION DRILL CAMPAIGN

SWEETPEA EXPLORATION DRILL CAMPAIGN
WELL PAD 2 ACCESS ROAD INTERSECTION
EROSION AND SEDIMENT CONTROL PLAN

Status: ISSUED FOR INFORMATION
Drg No.: 60611666-0002-05
Rev.:

LAST MODIFIED:9/8/2021 5:56 PM
CAD REF:L:\SECURE\PROJECTS\60611666\900_CAD_GIS\910_CAD\20_SHEETS\60611666-0002-05.DWG



LEGEND

——— – ——— ACCESS ROAD CENTERLINE

ACCESS ROAD MCA03 - SETOUT				
PT	CHAINAGE	X COORD	Y COORD	BEARING
IP	0.000	455177.458	8169474.205	269°56'19.93"
IP	2239.057	452938.402	8169471.816	269°56'19.93"

FLOODWAY LOCATION CHAINAGE
410
995
2117

NOTE:
FLOODWAY LOCATIONS ARE INDICATIVE ONLY. FINAL LOCATION OF FLOODWAYS TO BE DETERMINED ON SITE BY SUPERVISOR

NOT FOR CONSTRUCTION

CAD REF:L:\SECURE\PROJECTS\60611666\Mod_CAD_GIS\99_CAD\20_SHEETS\60611666-0003-01.DWG

LAST MODIFIED:3/9/2021 5:56 PM

This drawing is confidential and shall only be used for the purposes of this project.

REVISIONS				
No.	BY	DATE	DESCRIPTION	APPD
A	G.T		ISSUED FOR INFORMATION	

Scale

SCALE W 0 100 200 250m
1 : 10000 (A3) 1 : 5000 (A1)

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DESIGNED	B.F	CHECKED	
DRAWN	G.T	CHECKED	K.P
APPROVED		DATE	

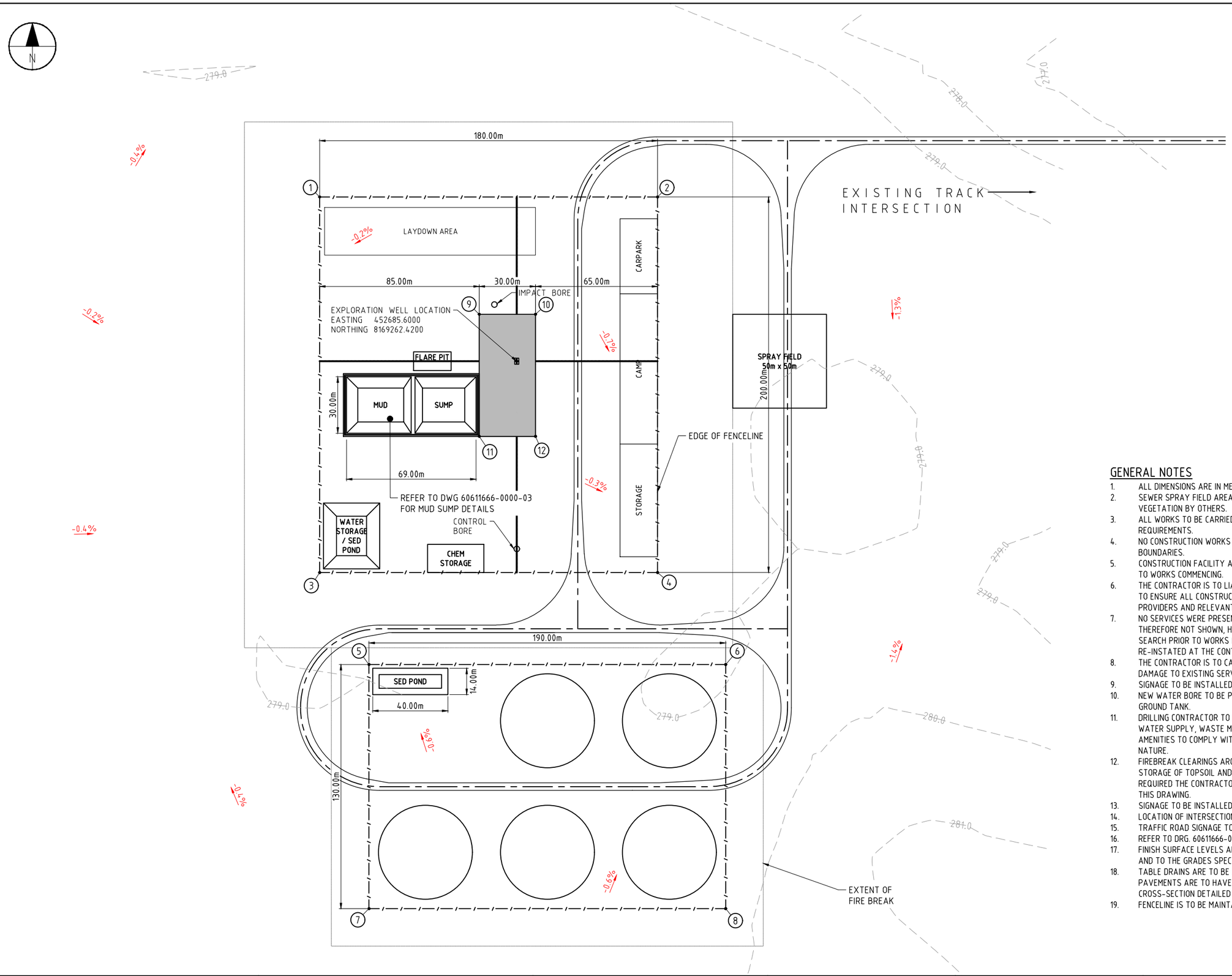
AECOM

RPEQ No.
AECOM Australia Pty Ltd A.B.N. 20 093 846 925

SWEETPEA EXPLORATION DRILL CAMPAIGN

SWEETPEA EXPLORATION DRILL CAMPAIGN
WELL PAD 3
ACCESS ROAD DETAILS

Status: ISSUED FOR INFORMATION | Drg No.: 60611666-0003-01 | Rev.:



LEGEND

278.0 — EXISTING SURFACE CONTOURS (1.0m INTERVALS - DTM)

-1.00% — EXISTING SURFACE SLOPES

SETOUT POINTS

POINT No.	COORDINATES	
	EASTING	NORTHING
1	452580.600	8169349.897
2	452760.600	8169349.897
3	452580.600	8169149.897
4	452760.600	8169149.897
5	452606.880	8169100.897
6	452796.880	8169100.897
7	452606.880	8168970.897
8	452796.880	8168970.897
9	452665.600	8169287.420
10	452695.600	8169287.420
11	452665.600	8169222.420
12	452695.600	8169222.420

GENERAL NOTES

1. ALL DIMENSIONS ARE IN METRES UNLESS NOTED OTHERWISE.
2. SEWER SPRAY FIELD AREA IS NOT TO BE CLEARED. SPRAY PIPES LAID ON EXISTING VEGETATION BY OTHERS.
3. ALL WORKS TO BE CARRIED OUT IN ACCORDANCE WITH THE APPROVED MANAGEMENT PLAN REQUIREMENTS.
4. NO CONSTRUCTION WORKS ARE TO BE CARRIED OUT OUTSIDE THE APPROVED WORK CORRIDOR BOUNDARIES.
5. CONSTRUCTION FACILITY AREA LOCATIONS TO BE APPROVED BY THE SUPERINTENDENT PRIOR TO WORKS COMMENCING.
6. THE CONTRACTOR IS TO LIAISE WITH SERVICE PROVIDERS AND THE RELEVANT AUTHORITIES TO ENSURE ALL CONSTRUCTION WORKS ARE CARRIED OUT IN ACCORDANCE WITH SERVICE PROVIDERS AND RELEVANT AUTHORITIES REQUIREMENTS.
7. NO SERVICES WERE PRESENT OR PROVIDED BY DBYD AT THE TIME OF DESIGN AND ARE THEREFORE NOT SHOWN, HOWEVER THE CONTRACTOR IS RESPONSIBLE FOR CONDUCTING A SEARCH PRIOR TO WORKS BEING CARRIED OUT. ANY DAMAGE TO EXISTING SERVICES IS TO BE RE-INSTATED AT THE CONTRACTORS EXPENSE.
8. THE CONTRACTOR IS TO CARRY OUT A DBYD AND LOCATE AND MARK SERVICES ON SITE. ANY DAMAGE TO EXISTING SERVICES IS TO BE RE-INSTATED AT THE CONTRACTORS EXPENSE.
9. SIGNAGE TO BE INSTALLED PRIOR TO ROAD USE.
10. NEW WATER BORE TO BE PROVIDED BY THE CONTRACTOR AND TO DISCHARGE TO ABOVE GROUND TANK.
11. DRILLING CONTRACTOR TO PROVIDE ALL AMENITIES INCLUDING ACCOMMODATION, ABLUTIONS, WATER SUPPLY, WASTE MANAGEMENT AND SEWAGE TREATMENT FOR THE CAMP AREA. AMENITIES TO COMPLY WITH NORTHERN TERRITORY REQUIREMENTS FOR FACILITIES OF THIS NATURE.
12. FIREBREAK CLEARINGS AROUND DRILLING LEASE AND CAMP PAD ARE TO BE USED FOR STORAGE OF TOPSOIL AND VEGETATION AS REQUIRED. IF ADDITIONAL STORAGE SPACE IS REQUIRED THE CONTRACTOR IS TO PROVIDE ADDITIONAL STORAGE AREA AS INDICATED ON THIS DRAWING.
13. SIGNAGE TO BE INSTALLED PRIOR TO ROAD USE.
14. LOCATION OF INTERSECTION IS TO BE CONFIRMED BY CONTRACTOR ON SITE.
15. TRAFFIC ROAD SIGNAGE TO COMPLY WITH AS1743 AND NORTHERN TERRITORY GUIDELINES.
16. REFER TO DRG. 60611666-0000-02 FOR ROAD PAVEMENT DETAILS.
17. FINISH SURFACE LEVELS ARE TO FOLLOW EXISTING SURFACE LEVELS AS NEAR AS POSSIBLE AND TO THE GRADES SPECIFIED ON THE DRAWINGS.
18. TABLE DRAINS ARE TO BE CUT ALONG THE LENGTH OF THE ROAD AND ALL ROAD PAVEMENTS ARE TO HAVE A 4% CROSSFALL IN ACCORDANCE WITH THE ROAD CROSS-SECTION DETAILED ON DRG. 60611666-0000-02.
19. FENCELINE IS TO BE MAINTAINED AT ALL TIMES.

NOT FOR CONSTRUCTION

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REVISIONS

No.	BY	DATE	DESCRIPTION	APPD
A	G.T		ISSUED FOR INFORMATION	

Scale

SCALE A 0 10 20 30 40 50m
1 : 2000 (A3) 1 : 1000 (A1)

THE SIGNING OF THIS TITLE BLOCK CONFIRMS THE DESIGN AND DRAFTING OF THIS PROJECT HAVE BEEN PREPARED AND CHECKED IN ACCORDANCE WITH THE AECOM QUALITY ASSURANCE SYSTEM TO ISO 9001-2000

DESIGNED	B.F	CHECKED	
DRAWN	G.T	CHECKED	K.P
APPROVED		DATE	

AECOM

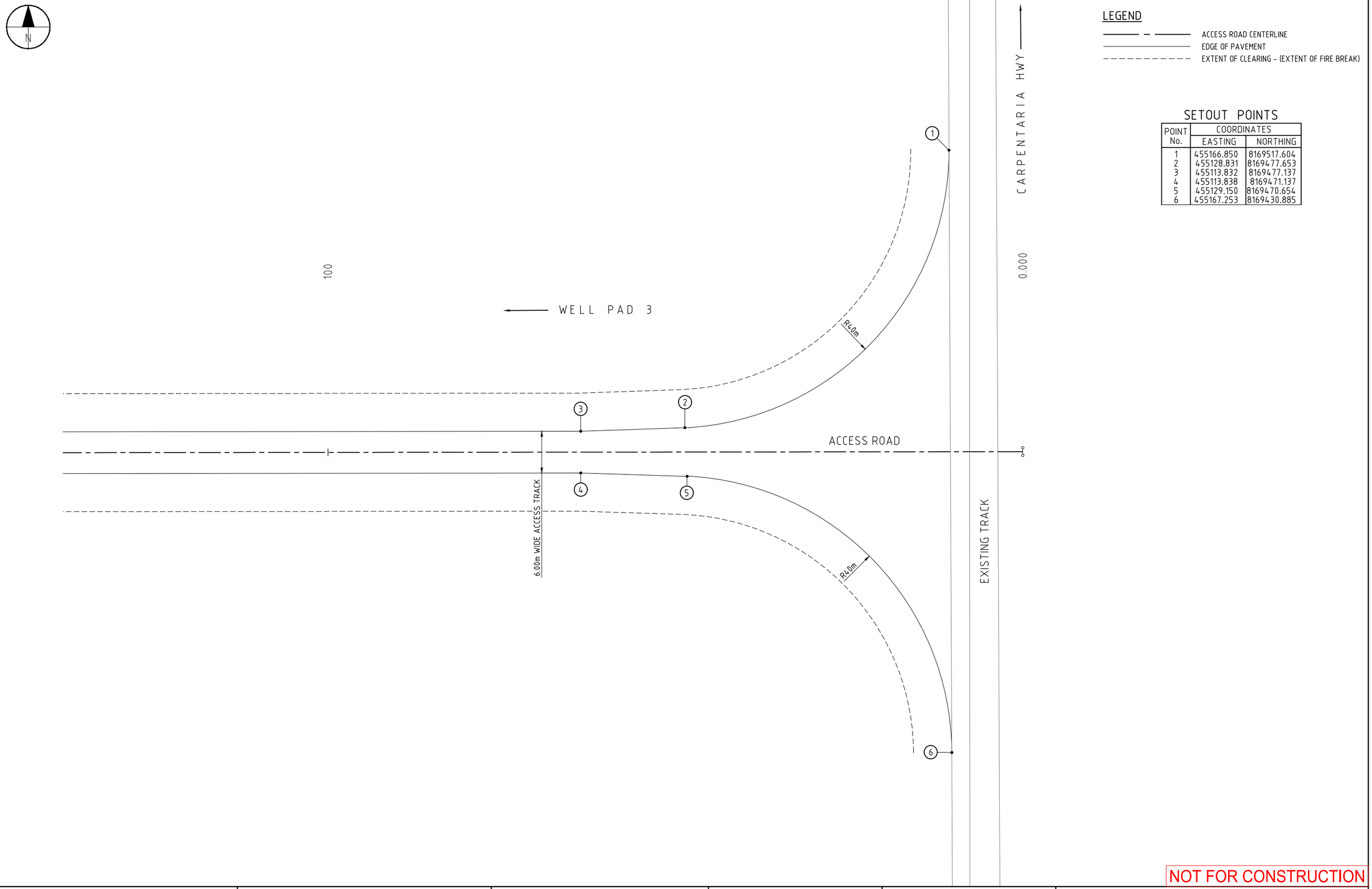
RPEQ No.
AECOM Australia Pty Ltd A.B.N. 20 093 846 925

SWEETPEA EXPLORATION DRILL CAMPAIGN

SWEETPEA EXPLORATION DRILL CAMPAIGN
WELL PAD 3
GENERAL ARRANGEMENT PLAN

Status: ISSUED FOR INFORMATION
Drg No.: 60611666-0003-02
Rev.:

LAST MODIFIED:19/10/2021 5:46 PM
CAD REF:L:\SECURE\PROJECTS\60611666\900_CAD_GIS\910_CAD\2D_SHEETS\60611666-0003-02.DWG



NOT FOR CONSTRUCTION

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LAST MODIFIED:3/9/2021 5:46 PM

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REVISIONS

No.	BY	DATE	DESCRIPTION	APPD
A	G.T		ISSUED FOR INFORMATION	

Scale

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1 : 500 (A3) 1 : 250 (A1)

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DRAWN	G.T	CHECKED	K.P
APPROVED		DATE	

AECOM

RPEQ No.
AECOM Australia Pty Ltd A.B.N. 20 093 846 925

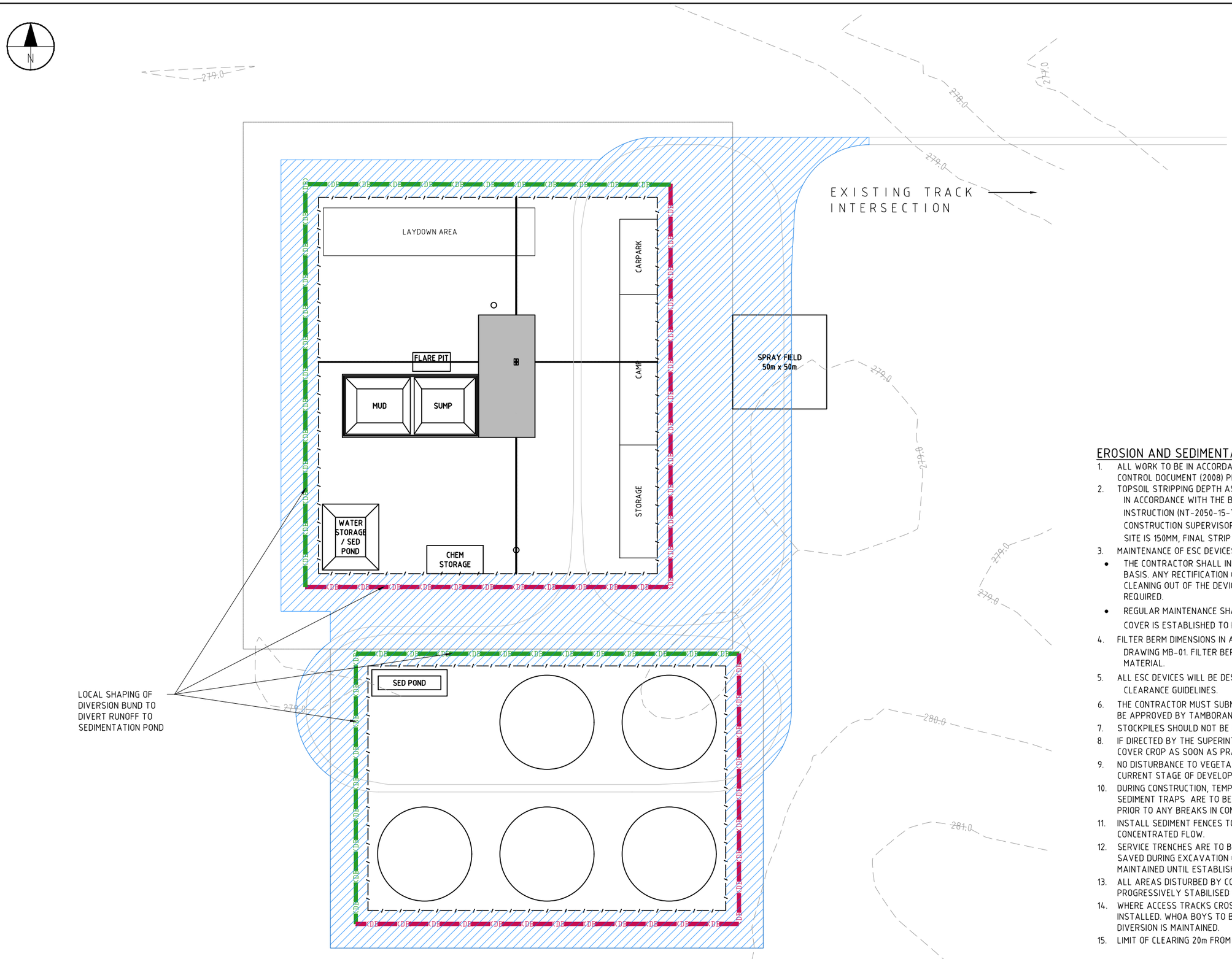
SWEETPEA EXPLORATION DRILL CAMPAIGN

SWEETPEA EXPLORATION DRILL CAMPAIGN
WELL PAD 3
INTERSETION DETAILS

Status: ISSUED FOR INFORMATION

Drg No.: 60611666-0003-03

Rev.



EROSION AND SEDIMENTATION CONTROL NOTES

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2. TOPSOIL STRIPPING DEPTH ASSESSMENT MUST BE UNDERTAKEN IN ACCORDANCE WITH THE BEETALOO TOPSOIL STRIPPING TECHNICAL INSTRUCTION (NT-2050-15-TI-0001) AND AMELIORATION RATES AGREED WITH THE CONSTRUCTION SUPERVISOR. THE EXPECTED NOMINAL TOPSOIL DEPTH FOR THE SITE IS 150MM, FINAL STRIP DEPTH TO BE CONFIRMED IN THE FIELD.
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13. ALL AREAS DISTURBED BY CONSTRUCTION ACTIVITIES SHOULD BE PROMPTLY AND PROGRESSIVELY STABILISED WHERE APPROPRIATE.
14. WHERE ACCESS TRACKS CROSS DIVERSION BUNDS TRAFFICABLE WHOA BOYS TO BE INSTALLED. WHOA BOYS TO BE MAINTAINED FOR LIFE OF PROJECT TO ENSURE FLOW DIVERSION IS MAINTAINED.
15. LIMIT OF CLEARING 20m FROM LEASE BOUNDARY FENCELINE OR EDGE OF ACCESS TRACKS.

NOT FOR CONSTRUCTION

This drawing is confidential and shall only be used for the purposes of this project.

REVISIONS

No.	BY	DATE	DESCRIPTION	APPD
A	G.T		ISSUED FOR INFORMATION	

Scale

SCALE A 0 10 20 30 40 50m
1 : 2000 (A3) 1 : 1000 (A1)

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DESIGNED	B.F	CHECKED	
DRAWN	G.T	CHECKED	K.P
APPROVED		DATE	

AECOM

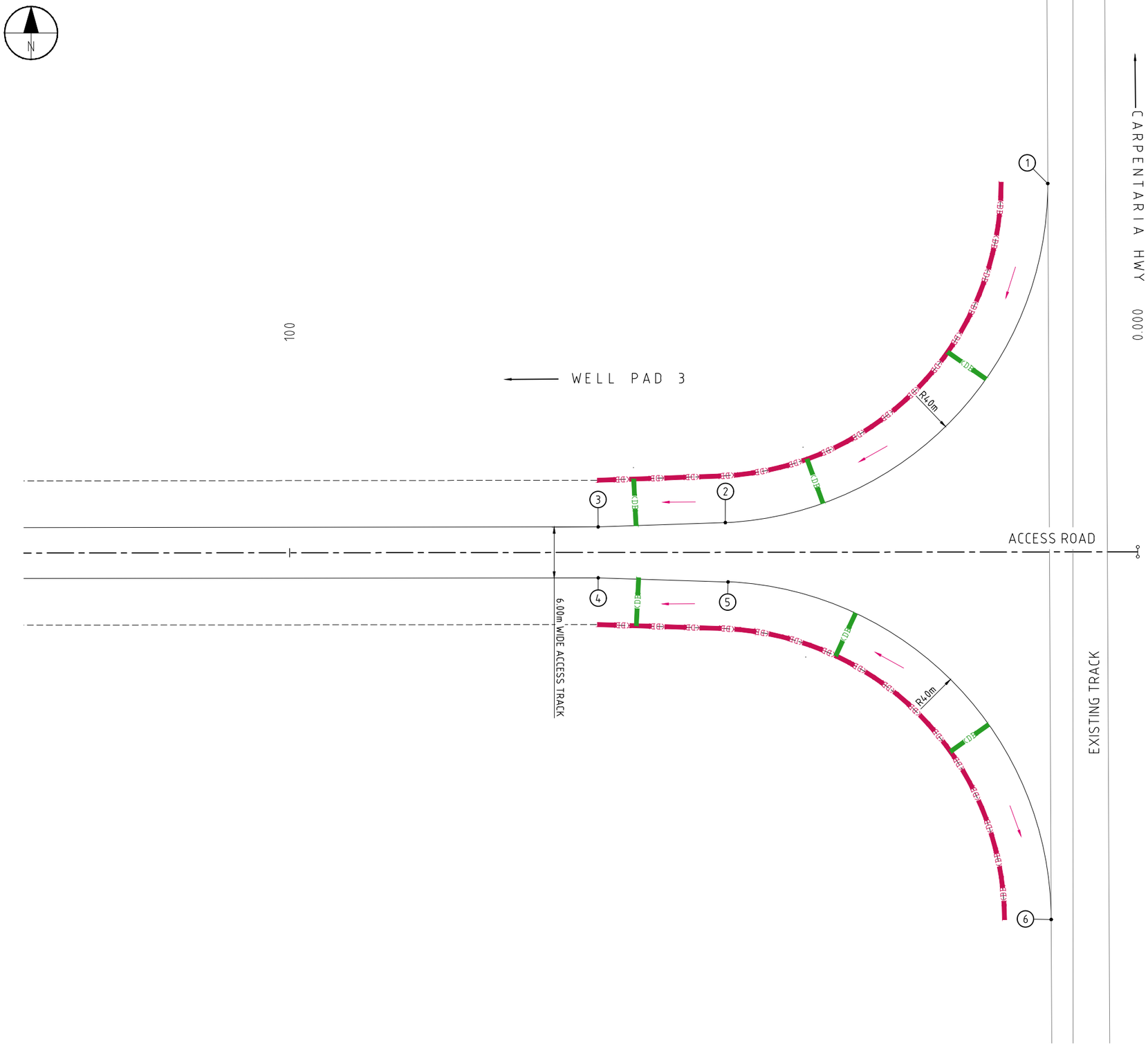
RPEQ No.
AECOM Australia Pty Ltd A.B.N. 20 093 846 925

SWEETPEA EXPLORATION DRILL CAMPAIGN

SWEETPEA EXPLORATION DRILL CAMPAIGN
WELL PAD 3
EROSION AND SEDIMENT CONTROL PLAN

Status: ISSUED FOR INFORMATION
Drg No.: 60611666-0003-04
Rev.:

LAST MODIFIED: 19/10/2021 5:07 PM
CAD REF: I:\SECURE\PROJECTS\60611666\900_CAD_GIS\910_CAD\20_SHEETS\60611666-0003-04.DWG



LEGEND

- ACCESS ROAD CENTERLINE
- EDGE OF PAVEMENT
- EXTENT OF CLEARING - (EXTENT OF FIRE BREAK)
- FILTER BERM (DIRTY WATER)
- FILTER BERM (CLEAN WATER)
- FLOW DIRECTION

EROSION AND SEDIMENTATION CONTROL NOTES

1. ALL WORK TO BE IN ACCORDANCE WITH THE BEST PRACTICE EROSION AND SEDIMENT CONTROL DOCUMENT (2008) PREPARED BY IECA.
2. TOPSOIL STRIPPING DEPTH ASSESSMENT MUST BE UNDERTAKEN IN ACCORDANCE WITH THE BEETALOO TOPSOIL STRIPPING TECHNICAL INSTRUCTION (NT-2050-15-TI-0001) AND AMELIORATION RATES AGREED WITH THE CONSTRUCTION SUPERVISOR. THE EXPECTED NOMINAL TOPSOIL DEPTH FOR THE SITE IS 150MM, FINAL STRIP DEPTH TO BE CONFIRMED IN THE FIELD.
3. MAINTENANCE OF ESC DEVICES:
   - THE CONTRACTOR SHALL INSPECT ALL ENVIRONMENTAL DEVICES ON A REGULAR BASIS. ANY RECTIFICATION OF DAMAGE TO THE ENVIRONMENTAL CONTROL DEVICES OR CLEANING OUT OF THE DEVICES IS TO BE CARRIED OUT BY THE CONTRACTOR AS REQUIRED.
   - REGULAR MAINTENANCE SHALL BE UNDERTAKEN UNTIL SUFFICIENT GROUND COVER IS ESTABLISHED TO PROVIDE STABILISATION TO ALL DISTURBED AREAS.
4. FILTER BERM DIMENSIONS IN ACCORDANCE WITH IECA FIGURE 1 ON STANDARD DRAWING MB-01. FILTER BERM MATERIAL TO BE CONSTRUCTED FROM AVAILABLE SITE MATERIAL.
5. ALL ESC DEVICES WILL BE DESIGN AND INSTALLED IN ACCORDANCE WITH THE NT LAND CLEARANCE GUIDELINES.
6. THE CONTRACTOR MUST SUBMIT AN EROSION AND SEDIMENT CONTROL PLAN WHICH WILL BE APPROVED BY TAMBORAN PRIOR TO MOBILISATION.
7. STOCKPILES SHOULD NOT BE LOCATED WITHIN AN OVERLAND FLOW PATH/DRAIN.
8. IF DIRECTED BY THE SUPERINTENDENT, TOPSOIL STOCKPILES ARE TO BE SOWN WITH A COVER CROP AS SOON AS PRACTICAL AFTER STOCKPILING.
9. NO DISTURBANCE TO VEGETATION IS TO TAKE PLACE BEYOND THE BOUNDARIES OF CURRENT STAGE OF DEVELOPMENT.
10. DURING CONSTRUCTION, TEMPORARY DIVERSION DRAINS, SEDIMENT FENCES AND, OR SEDIMENT TRAPS ARE TO BE CONSTRUCTED AT REGULAR INTERVALS DOWN SLOPE PRIOR TO ANY BREAKS IN CONSTRUCTION (SUCH AS A WEEKEND) OR IF RAIN IS IMMINENT.
11. INSTALL SEDIMENT FENCES TO CONTROL SHEET FLOW OR SEDIMENT TRAPS TO CONTROL CONCENTRATED FLOW.
12. SERVICE TRENCHES ARE TO BE CONTROL REVEGETATED WITH GRASS SODS AND TOPSOIL SAVED DURING EXCAVATION OF THE TRENCHES OR TURFED (AS APPROPRIATE) AND MAINTAINED UNTIL ESTABLISHED.
13. ALL AREAS DISTURBED BY CONSTRUCTION ACTIVITIES SHOULD BE PROMPTLY AND PROGRESSIVELY STABILISED WHERE APPROPRIATE.
14. WHERE ACCESS TRACKS CROSS DIVERSION BUNDS TRAFFICABLE WHOA BOYS TO BE INSTALLED. WHOA BOYS TO BE MAINTAINED FOR LIFE OF PROJECT TO ENSURE FLOW DIVERSION IS MAINTAINED.
15. LIMIT OF CLEARING 20m FROM LEASE BOUNDARY FENCELINE OR EDGE OF ACCESS TRACKS.

NOT FOR CONSTRUCTION

This drawing is confidential and shall only be used for the purposes of this project.

No.	BY	DATE	DESCRIPTION	APPD
A	G.T		ISSUED FOR INFORMATION	

REVISIONS

Scale

SCALE C 0 5 10 12.5m
1 : 500 (A3) 1 : 250 (A1)

THE SIGNING OF THIS TITLE BLOCK CONFIRMS THE DESIGN AND DRAFTING OF THIS PROJECT HAVE BEEN PREPARED AND CHECKED IN ACCORDANCE WITH THE AECOM QUALITY ASSURANCE SYSTEM TO ISO 9001-2000

DESIGNED	B.F	CHECKED	
DRAWN	G.T	CHECKED	K.P
APPROVED		DATE	

AECOM

RPEQ No.
AECOM Australia Pty Ltd A.B.N. 20 093 846 925

SWEETPEA EXPLORATION DRILL CAMPAIGN

SWEETPEA EXPLORATION DRILL CAMPAIGN
WELL PAD 3 ACCESS ROAD INTERSECTION
EROSION AND SEDIMENT CONTROL PLAN

Status: ISSUED FOR INFORMATION
Drg No.: 60611666-0003-05
Rev.:

LAST MODIFIED:3/9/2015 5:17 PM
CAD REF:\\SECURE\PROJECTS\60611666\1666_CAD_GIS\19_CAD\20_SHEETS\60611666-0003-05.DWG

N

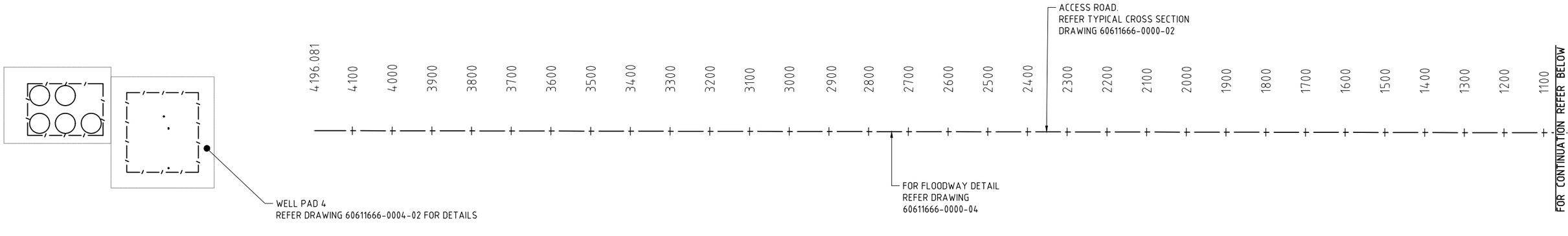
LEGEND

—— – —— ACCESS ROAD CENTERLINE

ACCESS ROAD MCA04 - SETOUT				
PT	CHAINAGE	X COORD	Y COORD	BEARING
IP	0.000	452872.939	8164565.506	270°05'54.31"
IP	4196.081	448676.864	8164572.714	270°05'54.31"

FLOODWAY LOCATION CHAINAGE
600
1385
1685
1950
2455
3295
3745

NOTE:
FLOODWAY LOCATIONS ARE INDICATIVE ONLY. FINAL LOCATION OF FLOODWAYS TO BE DETERMINED ON SITE BY SUPERVISOR



NOT FOR CONSTRUCTION

This drawing is confidential and shall only be used for the purposes of this project.

REVISIONS

No.	BY	DATE	DESCRIPTION	APPD
A	G.T		ISSUED FOR INFORMATION	

Scale

SCALE W 0 100 200 250m
1 : 10000 (A3) 1 : 5000 (A1)

THE SIGNING OF THIS TITLE BLOCK CONFIRMS THE DESIGN AND DRAFTING OF THIS PROJECT HAVE BEEN PREPARED AND CHECKED IN ACCORDANCE WITH THE AECOM QUALITY ASSURANCE SYSTEM TO ISO 9001-2000

DESIGNED	B.F	CHECKED	
DRAWN	G.T	CHECKED	K.P
APPROVED		DATE	

AECOM

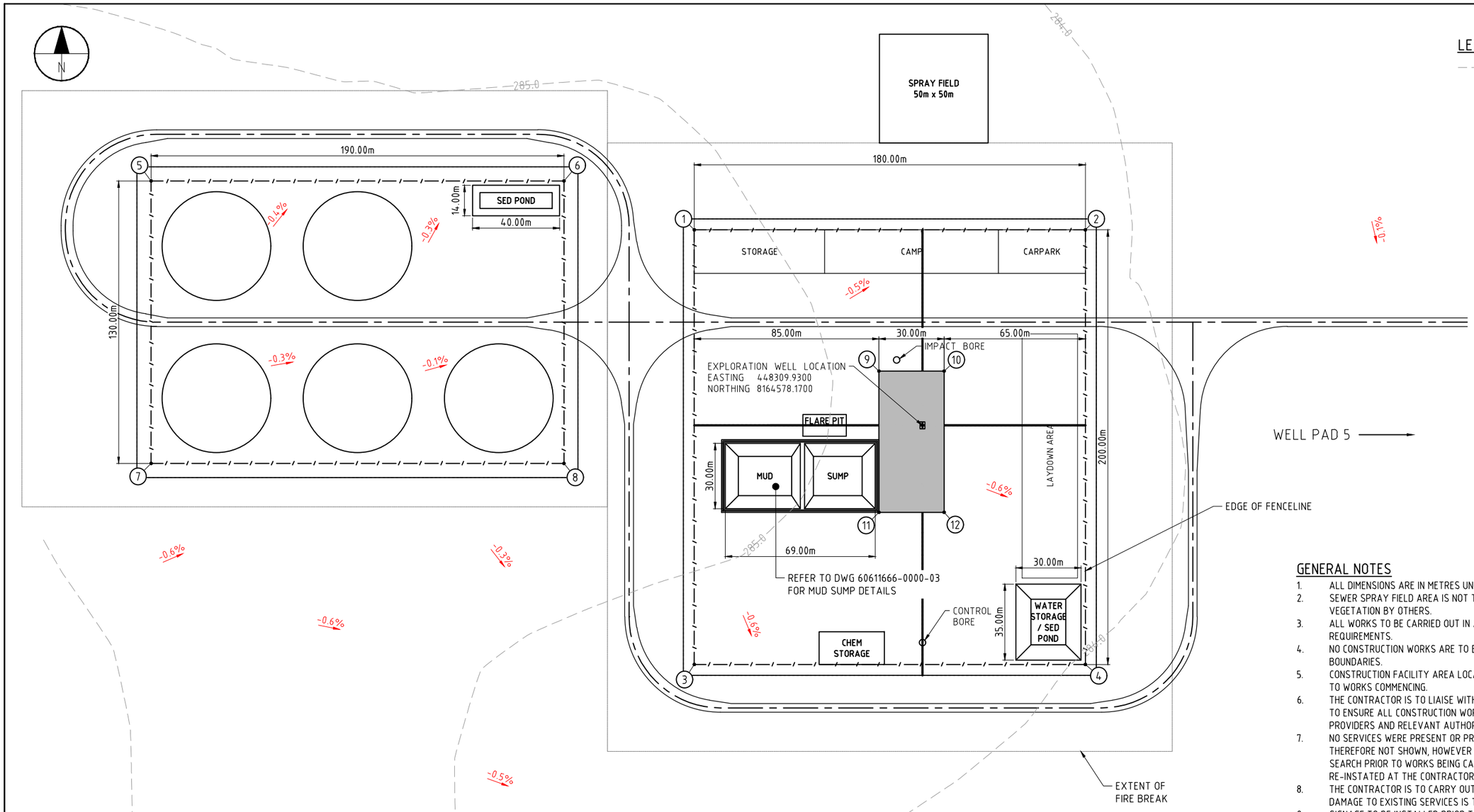
RPEQ No.
AECOM Australia Pty Ltd A.B.N. 20 093 846 925

SWEETPEA EXPLORATION DRILL CAMPAIGN

SWEETPEA EXPLORATION DRILL CAMPAIGN
WELL PAD 4
ACCESS ROAD DETAILS

Status: ISSUED FOR INFORMATION
Drg No.: 60611666-0004-01
Rev.:

LAST MODIFIED:19/10/2021 5:07 PM
CAD REF:L:\SECURE\PROJECTS\606X\60611666\900_CAD_GIS\900_CAD\20_SHEETS\60611666-0004-01.DWG



LEGEND

278.00 — EXISTING SURFACE CONTOURS (1.0m INTERVALS - DTM)

-0.1% EXISTING SURFACE SLOPES

SETOUT POINTS

POINT No.	COORDINATES	
	EASTING	NORTHING
1	448204.930	8164668.170
2	448384.930	8164668.170
3	448204.930	8164468.170
4	448384.930	8164468.170
5	447954.930	8164690.670
6	448144.930	8164690.670
7	447954.930	8164560.670
8	448144.930	8164560.670
9	448289.930	8164603.170
10	448319.930	8164603.170
11	448289.930	8164538.170
12	448319.930	8164538.170

GENERAL NOTES

1. ALL DIMENSIONS ARE IN METRES UNLESS NOTED OTHERWISE.
2. SEWER SPRAY FIELD AREA IS NOT TO BE CLEARED. SPRAY PIPES LAID ON EXISTING VEGETATION BY OTHERS.
3. ALL WORKS TO BE CARRIED OUT IN ACCORDANCE WITH THE APPROVED MANAGEMENT PLAN REQUIREMENTS.
4. NO CONSTRUCTION WORKS ARE TO BE CARRIED OUT OUTSIDE THE APPROVED WORK CORRIDOR BOUNDARIES.
5. CONSTRUCTION FACILITY AREA LOCATIONS TO BE APPROVED BY THE SUPERINTENDENT PRIOR TO WORKS COMMENCING.
6. THE CONTRACTOR IS TO LIAISE WITH SERVICE PROVIDERS AND THE RELEVANT AUTHORITIES TO ENSURE ALL CONSTRUCTION WORKS ARE CARRIED OUT IN ACCORDANCE WITH SERVICE PROVIDERS AND RELEVANT AUTHORITIES REQUIREMENTS.
7. NO SERVICES WERE PRESENT OR PROVIDED BY DBYD AT THE TIME OF DESIGN AND ARE THEREFORE NOT SHOWN, HOWEVER THE CONTRACTOR IS RESPONSIBLE FOR CONDUCTING A SEARCH PRIOR TO WORKS BEING CARRIED OUT. ANY DAMAGE TO EXISTING SERVICES IS TO BE RE-INSTATED AT THE CONTRACTORS EXPENSE.
8. THE CONTRACTOR IS TO CARRY OUT A DBYD AND LOCATE AND MARK SERVICES ON SITE. ANY DAMAGE TO EXISTING SERVICES IS TO BE RE-INSTATED AT THE CONTRACTORS EXPENSE.
9. SIGNAGE TO BE INSTALLED PRIOR TO ROAD USE.
10. NEW WATER BORE TO BE PROVIDED BY THE CONTRACTOR AND TO DISCHARGE TO ABOVE GROUND TANK.
11. DRILLING CONTRACTOR TO PROVIDE ALL AMENITIES INCLUDING ACCOMMODATION, ABLUTIONS, WATER SUPPLY, WASTE MANAGEMENT AND SEWAGE TREATMENT FOR THE CAMP AREA. AMENITIES TO COMPLY WITH NORTHERN TERRITORY REQUIREMENTS FOR FACILITIES OF THIS NATURE.
12. FIREBREAK CLEARINGS AROUND DRILLING LEASE AND CAMP PAD ARE TO BE USED FOR STORAGE OF TOPSOIL AND VEGETATION AS REQUIRED. IF ADDITIONAL STORAGE SPACE IS REQUIRED THE CONTRACTOR IS TO PROVIDE ADDITIONAL STORAGE AREA AS INDICATED ON THIS DRAWING.
13. SIGNAGE TO BE INSTALLED PRIOR TO ROAD USE.
14. LOCATION OF INTERSECTION IS TO BE CONFIRMED BY CONTRACTOR ON SITE.
15. TRAFFIC ROAD SIGNAGE TO COMPLY WITH AS1743 AND NORTHERN TERRITORY GUIDELINES.
16. REFER TO DRG. 60611666-0000-02 FOR ROAD PAVEMENT DETAILS.
17. FINISH SURFACE LEVELS ARE TO FOLLOW EXISTING SURFACE LEVELS AS NEAR AS POSSIBLE AND TO THE GRADES SPECIFIED ON THE DRAWINGS.
18. TABLE DRAINS ARE TO BE CUT ALONG THE LENGTH OF THE ROAD AND ALL ROAD PAVEMENTS ARE TO HAVE A 4% CROSSFALL IN ACCORDANCE WITH THE ROAD CROSS-SECTION DETAILED ON DRG. 60611666-0000-02.
19. FENCELINE IS TO BE MAINTAINED AT ALL TIMES.

NOT FOR CONSTRUCTION

This drawing is confidential and shall only be used for the purposes of this project.

REVISIONS				
No.	BY	DATE	DESCRIPTION	APPD
A	G.T		ISSUED FOR INFORMATION	

Scale

SCALE A 0 10 20 30 40 50m

1 : 2000 (A3) 1 : 1000 (A1)

THE SIGNING OF THIS TITLE BLOCK CONFIRMS THE DESIGN AND DRAFTING OF THIS PROJECT HAVE BEEN PREPARED AND CHECKED IN ACCORDANCE WITH THE AECOM QUALITY ASSURANCE SYSTEM TO ISO 9001-2000			
DESIGNED	B.F	CHECKED	
DRAWN	G.T	CHECKED	K.P
APPROVED		DATE	

AECOM

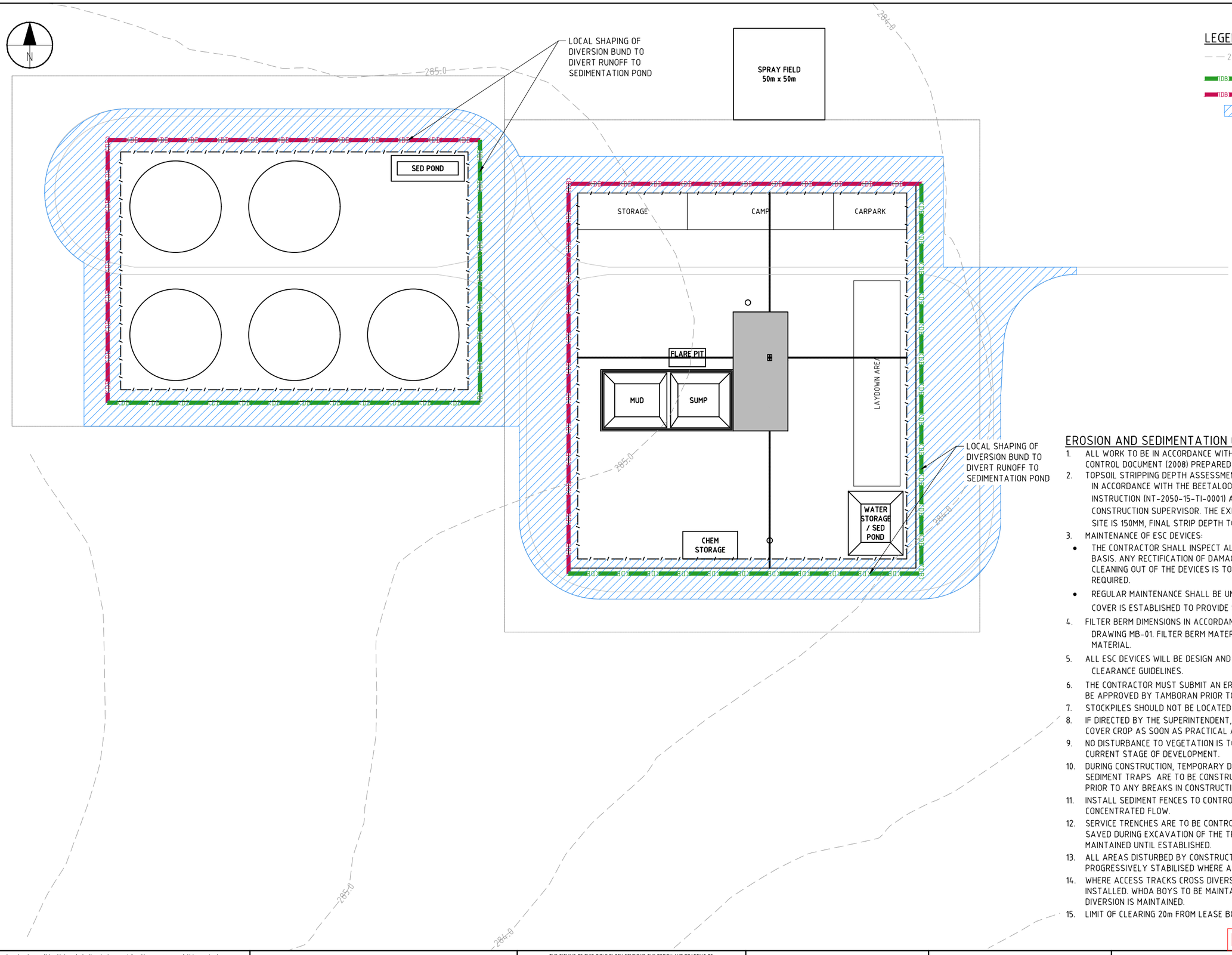
RPEQ No.
AECOM Australia Pty Ltd A.B.N. 20 093 846 925

SWEETPEA EXPLORATION DRILL CAMPAIGN

SWEETPEA EXPLORATION DRILL CAMPAIGN
WELL PAD 4
GENERAL ARRANGEMENT PLAN

Status	Drg No.	Rev.
ISSUED FOR INFORMATION	60611666-0004-02	

LAST MODIFIED:19/10/2021 5:07 PM
CAD REF: L:\SECURE\PROJECTS\60611666\900_CAD_GIS\900_CAD\20_SHEETS\60611666-0004-02.DWG



LEGEND

- EXISTING SURFACE CONTOURS (1.0m INTERVALS - DTM)
- 0.5m HIGH DIVERSION BUND (DIRTY WATER)
- 0.5m HIGH DIVERSION BUND (CLEAN WATER)
- LIMIT OF CLEARING

EROSION AND SEDIMENTATION CONTROL NOTES

1. ALL WORK TO BE IN ACCORDANCE WITH THE BEST PRACTICE EROSION AND SEDIMENT CONTROL DOCUMENT (2008) PREPARED BY IECA.
2. TOPSOIL STRIPPING DEPTH ASSESSMENT MUST BE UNDERTAKEN IN ACCORDANCE WITH THE BEETALOO TOPSOIL STRIPPING TECHNICAL INSTRUCTION (NT-2050-15-TI-0001) AND AMELIORATION RATES AGREED WITH THE CONSTRUCTION SUPERVISOR. THE EXPECTED NOMINAL TOPSOIL DEPTH FOR THE SITE IS 150MM, FINAL STRIP DEPTH TO BE CONFIRMED IN THE FIELD.
3. MAINTENANCE OF ESC DEVICES:
   - THE CONTRACTOR SHALL INSPECT ALL ENVIRONMENTAL DEVICES ON A REGULAR BASIS. ANY RECTIFICATION OF DAMAGE TO THE ENVIRONMENTAL CONTROL DEVICES OR CLEANING OUT OF THE DEVICES IS TO BE CARRIED OUT BY THE CONTRACTOR AS REQUIRED.
   - REGULAR MAINTENANCE SHALL BE UNDERTAKEN UNTIL SUFFICIENT GROUND COVER IS ESTABLISHED TO PROVIDE STABILISATION TO ALL DISTURBED AREAS.
4. FILTER BERM DIMENSIONS IN ACCORDANCE WITH IECA FIGURE 1 ON STANDARD DRAWING MB-01. FILTER BERM MATERIAL TO BE CONSTRUCTED FROM AVAILABLE SITE MATERIAL.
5. ALL ESC DEVICES WILL BE DESIGN AND INSTALLED IN ACCORDANCE WITH THE NT LAND CLEARANCE GUIDELINES.
6. THE CONTRACTOR MUST SUBMIT AN EROSION AND SEDIMENT CONTROL PLAN WHICH WILL BE APPROVED BY TAMBORAN PRIOR TO MOBILISATION.
7. STOCKPILES SHOULD NOT BE LOCATED WITHIN AN OVERLAND FLOW PATH/DRAIN.
8. IF DIRECTED BY THE SUPERINTENDENT, TOPSOIL STOCKPILES ARE TO BE SOWN WITH A COVER CROP AS SOON AS PRACTICAL AFTER STOCKPILING.
9. NO DISTURBANCE TO VEGETATION IS TO TAKE PLACE BEYOND THE BOUNDARIES OF CURRENT STAGE OF DEVELOPMENT.
10. DURING CONSTRUCTION, TEMPORARY DIVERSION DRAINS, SEDIMENT FENCES AND, OR SEDIMENT TRAPS ARE TO BE CONSTRUCTED AT REGULAR INTERVALS DOWN SLOPE PRIOR TO ANY BREAKS IN CONSTRUCTION (SUCH AS A WEEKEND) OR IF RAIN IS IMMINENT.
11. INSTALL SEDIMENT FENCES TO CONTROL SHEET FLOW OR SEDIMENT TRAPS TO CONTROL CONCENTRATED FLOW.
12. SERVICE TRENCHES ARE TO BE CONTROL REVEGETATED WITH GRASS SODS AND TOPSOIL SAVED DURING EXCAVATION OF THE TRENCHES OR TURFED (AS APPROPRIATE) AND MAINTAINED UNTIL ESTABLISHED.
13. ALL AREAS DISTURBED BY CONSTRUCTION ACTIVITIES SHOULD BE PROMPTLY AND PROGRESSIVELY STABILISED WHERE APPROPRIATE.
14. WHERE ACCESS TRACKS CROSS DIVERSION BUNDS TRAFFICABLE WHOA BOYS TO BE INSTALLED. WHOA BOYS TO BE MAINTAINED FOR LIFE OF PROJECT TO ENSURE FLOW DIVERSION IS MAINTAINED.
15. LIMIT OF CLEARING 20m FROM LEASE BOUNDARY FENCELINE OR EDGE OF ACCESS TRACKS.

NOT FOR CONSTRUCTION

This drawing is confidential and shall only be used for the purposes of this project.

No.	BY	DATE	DESCRIPTION	APPD
A	G.T		ISSUED FOR INFORMATION	

REVISIONS

Scale

SCALE A 0 10 20 30 40 50m
1 : 2000 (A3) 1 : 1000 (A1)

THE SIGNING OF THIS TITLE BLOCK CONFIRMS THE DESIGN AND DRAFTING OF THIS PROJECT HAVE BEEN PREPARED AND CHECKED IN ACCORDANCE WITH THE AECOM QUALITY ASSURANCE SYSTEM TO ISO 9001-2000

DESIGNED	B.F	CHECKED	
DRAWN	G.T	CHECKED	K.P
APPROVED		DATE	

AECOM

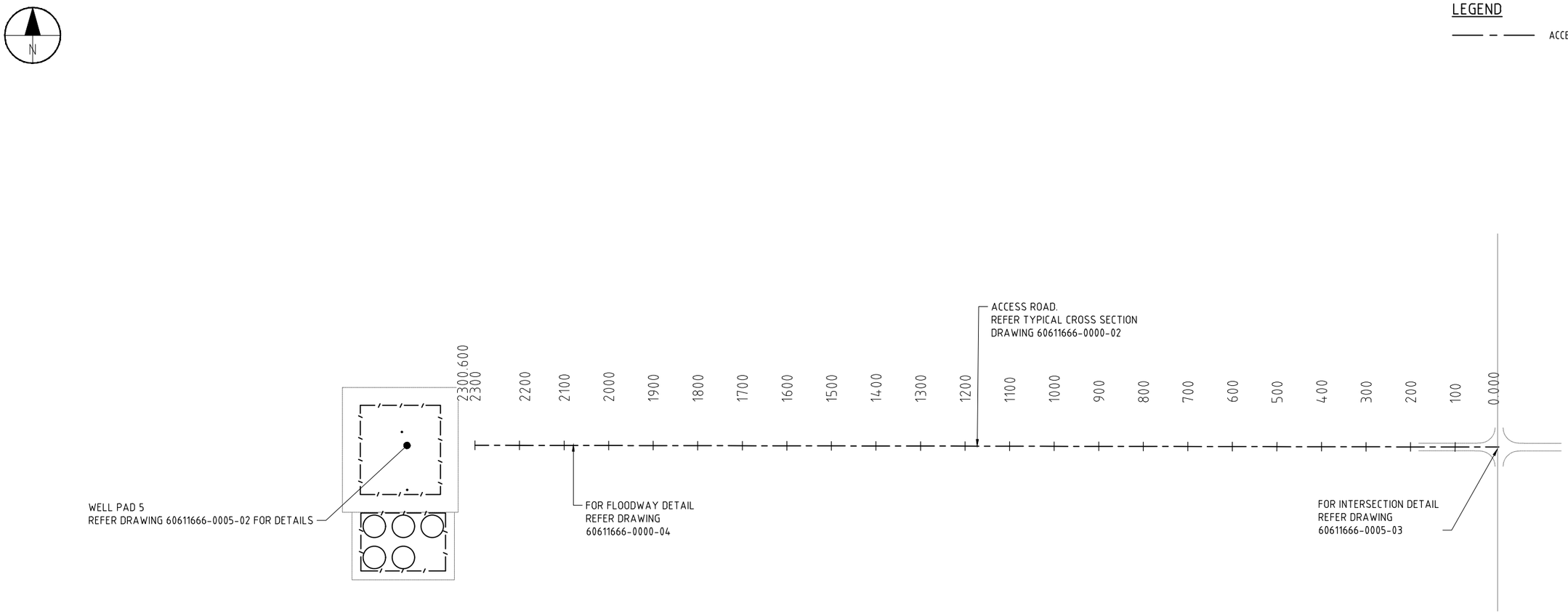
RPEQ No.
AECOM Australia Pty Ltd A.B.N. 20 093 846 925

SWEETPEA EXPLORATION DRILL CAMPAIGN

SWEETPEA EXPLORATION DRILL CAMPAIGN
WELL PAD 4
EROSION AND SEDIMENT CONTROL PLAN

Status	Drg No.	Rev.
ISSUED FOR INFORMATION	60611666-0004-03	

LAST MODIFIED:2/9/2021 5:07 PM
CAD REF:\\SECURE\PROJECTS\60X\60611666\900_CAD_GIS\910_CAD\30_SHEETS\60611666-0004-03.DWG



ACCESS ROAD MCA05 - SETOUT				
PT	CHAINAGE	X COORD	Y COORD	BEARING
IP	0.000	455173.536	8164561.555	270°05'54.31"
IP	2300.600	452872.939	8164565.506	270°05'54.31"

FLOODWAY LOCATION CHAINAGE
930
1470
2090

NOTE:
FLOODWAY LOCATIONS ARE INDICATIVE ONLY. FINAL LOCATION OF FLOODWAYS TO BE DETERMINED ON SITE BY SUPERVISOR

NOT FOR CONSTRUCTION

This drawing is confidential and shall only be used for the purposes of this project.

REVISIONS				
No.	BY	DATE	DESCRIPTION	APPD
A	G.T		ISSUED FOR INFORMATION	

Scale
SCALE W 0 100 200 250m
1 : 10000 (A3) 1 : 5000 (A1)

THE SIGNING OF THIS TITLE BLOCK CONFIRMS THE DESIGN AND DRAFTING OF THIS PROJECT HAVE BEEN PREPARED AND CHECKED IN ACCORDANCE WITH THE AECOM QUALITY ASSURANCE SYSTEM TO ISO 9001-2000

DESIGNED	B.F	CHECKED	
DRAWN	G.T	CHECKED	K.P
APPROVED		DATE	

AECOM

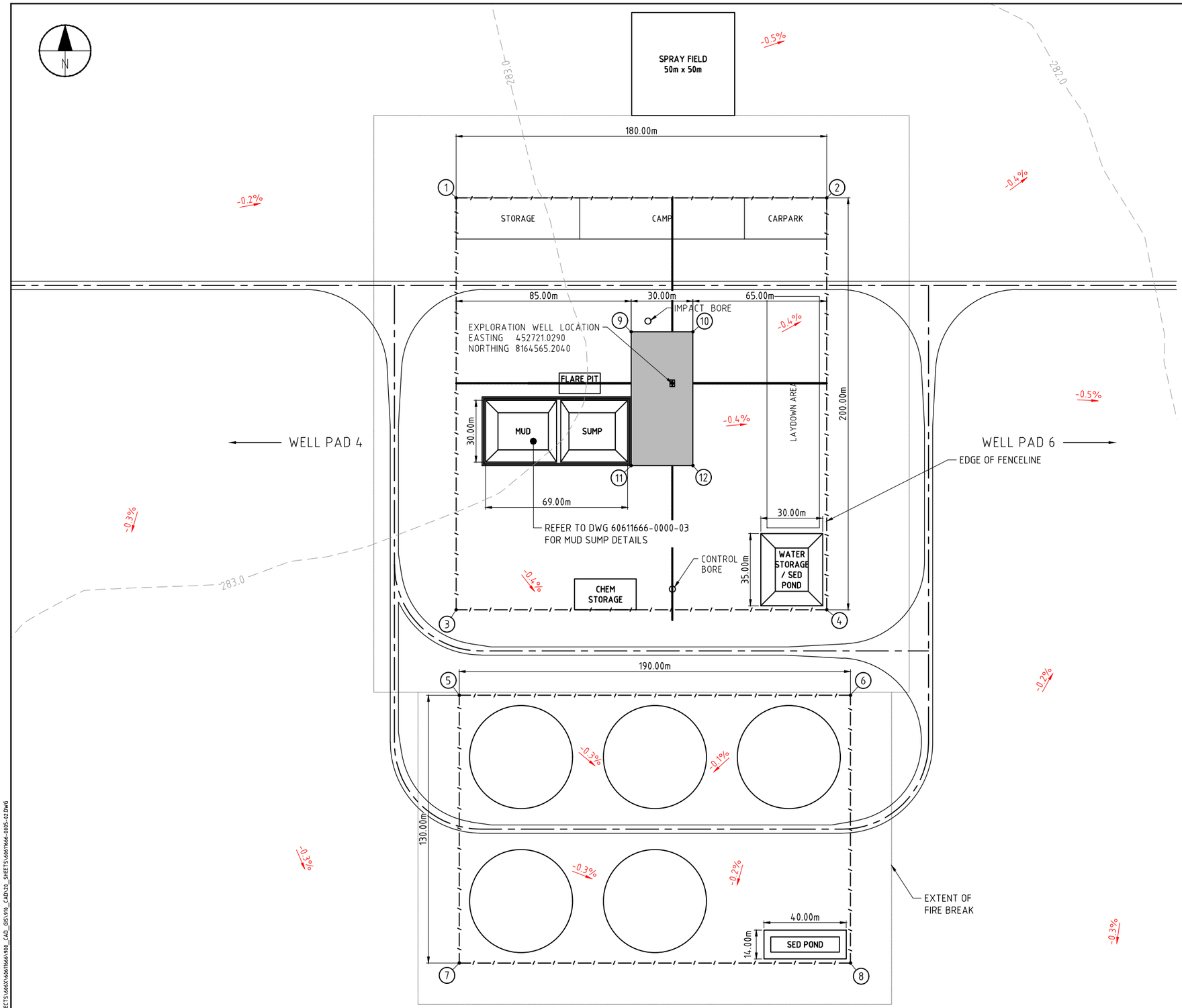
RPEQ No.
AECOM Australia Pty Ltd A.B.N. 20 093 846 925

SWEETPEA EXPLORATION DRILL CAMPAIGN

SWEETPEA EXPLORATION DRILL CAMPAIGN
WELL PAD 5
ACCESS ROAD DETAILS

Status: ISSUED FOR INFORMATION
Drg No.: 60611666-0005-01
Rev.:

LAST MODIFIED:19/10/2021 5:08 PM
CAD REF:\\SECURE\PROJECTS\60611666\900_CAD_GIS\910_CAD\20_SHEETS\60611666-0005-01.DWG



LEGEND

278.00 — EXISTING SURFACE CONTOURS (1.0m INTERVALS - DTM)

-0.1% EXISTING SURFACE SLOPES

SETOUT POINTS

POINT No.	COORDINATES	
	EASTING	NORTHING
1	452616.029	8164655.204
2	452796.029	8164655.204
3	452616.029	8164455.204
4	452796.029	8164455.204
5	452617.529	8164413.704
6	452807.529	8164413.704
7	452617.529	8164283.704
8	452807.529	8164283.704
9	452701.029	8164590.204
10	452731.029	8164590.204
11	452701.029	8164525.204
12	452731.029	8164525.204

GENERAL NOTES

1. ALL DIMENSIONS ARE IN METRES UNLESS NOTED OTHERWISE.
2. SEWER SPRAY FIELD AREA IS NOT TO BE CLEARED. SPRAY PIPES LAID ON EXISTING VEGETATION BY OTHERS.
3. ALL WORKS TO BE CARRIED OUT IN ACCORDANCE WITH THE APPROVED MANAGEMENT PLAN REQUIREMENTS.
4. NO CONSTRUCTION WORKS ARE TO BE CARRIED OUT OUTSIDE THE APPROVED WORK CORRIDOR BOUNDARIES.
5. CONSTRUCTION FACILITY AREA LOCATIONS TO BE APPROVED BY THE SUPERINTENDENT PRIOR TO WORKS COMMENCING.
6. THE CONTRACTOR IS TO LIAISE WITH SERVICE PROVIDERS AND THE RELEVANT AUTHORITIES TO ENSURE ALL CONSTRUCTION WORKS ARE CARRIED OUT IN ACCORDANCE WITH SERVICE PROVIDERS AND RELEVANT AUTHORITIES REQUIREMENTS.
7. NO SERVICES WERE PRESENT OR PROVIDED BY DBYD AT THE TIME OF DESIGN AND ARE THEREFORE NOT SHOWN, HOWEVER THE CONTRACTOR IS RESPONSIBLE FOR CONDUCTING A SEARCH PRIOR TO WORKS BEING CARRIED OUT. ANY DAMAGE TO EXISTING SERVICES IS TO BE RE-INSTATED AT THE CONTRACTORS EXPENSE.
8. THE CONTRACTOR IS TO CARRY OUT A DBYD AND LOCATE AND MARK SERVICES ON SITE. ANY DAMAGE TO EXISTING SERVICES IS TO BE RE-INSTATED AT THE CONTRACTORS EXPENSE.
9. SIGNAGE TO BE INSTALLED PRIOR TO ROAD USE.
10. NEW WATER BORE TO BE PROVIDED BY THE CONTRACTOR AND TO DISCHARGE TO ABOVE GROUND TANK.
11. DRILLING CONTRACTOR TO PROVIDE ALL AMENITIES INCLUDING ACCOMMODATION, ABLUTIONS, WATER SUPPLY, WASTE MANAGEMENT AND SEWAGE TREATMENT FOR THE CAMP AREA. AMENITIES TO COMPLY WITH NORTHERN TERRITORY REQUIREMENTS FOR FACILITIES OF THIS NATURE.
12. FIREBREAK CLEARINGS AROUND DRILLING LEASE AND CAMP PAD ARE TO BE USED FOR STORAGE OF TOPSOIL AND VEGETATION AS REQUIRED. IF ADDITIONAL STORAGE SPACE IS REQUIRED THE CONTRACTOR IS TO PROVIDE ADDITIONAL STORAGE AREA AS INDICATED ON THIS DRAWING.
13. SIGNAGE TO BE INSTALLED PRIOR TO ROAD USE.
14. LOCATION OF INTERSECTION IS TO BE CONFIRMED BY CONTRACTOR ON SITE.
15. TRAFFIC ROAD SIGNAGE TO COMPLY WITH AS1743 AND NORTHERN TERRITORY GUIDELINES.
16. REFER TO DRG. 60611666-0000-02 FOR ROAD PAVEMENT DETAILS.
17. FINISH SURFACE LEVELS ARE TO FOLLOW EXISTING SURFACE LEVELS AS NEAR AS POSSIBLE AND TO THE GRADES SPECIFIED ON THE DRAWINGS.
18. TABLE DRAINS ARE TO BE CUT ALONG THE LENGTH OF THE ROAD AND ALL ROAD PAVEMENTS ARE TO HAVE A 4% CROSSFALL IN ACCORDANCE WITH THE ROAD CROSS-SECTION DETAILED ON DRG. 60611666-0000-02.
19. FENCELINE IS TO BE MAINTAINED AT ALL TIMES.

NOT FOR CONSTRUCTION

This drawing is confidential and shall only be used for the purposes of this project.

REVISIONS				
No.	BY	DATE	DESCRIPTION	APPD
A	G.T		ISSUED FOR INFORMATION	

Scale

SCALE A 0 10 20 30 40 50m
1: 2000 (A3) 1: 1000 (A1)

THE SIGNING OF THIS TITLE BLOCK CONFIRMS THE DESIGN AND DRAFTING OF THIS PROJECT HAVE BEEN PREPARED AND CHECKED IN ACCORDANCE WITH THE AECOM QUALITY ASSURANCE SYSTEM TO ISO 9001-2000			
DESIGNED	B.F	CHECKED	
DRAWN	G.T	CHECKED	K.P
APPROVED		DATE	

AECOM

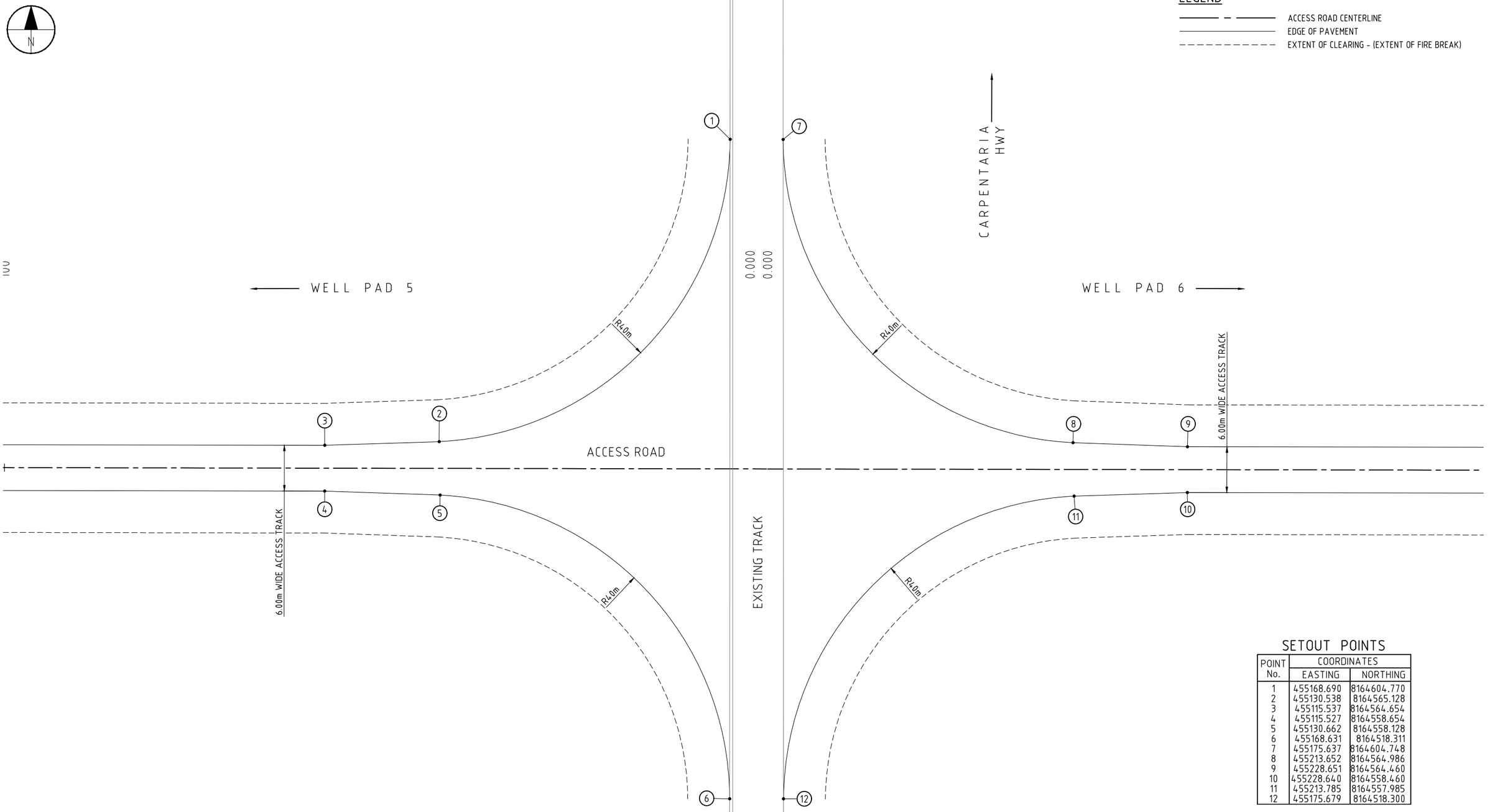
RPEQ No.
AECOM Australia Pty Ltd A.B.N. 20 093 846 925

SWEETPEA EXPLORATION DRILL CAMPAIGN

SWEETPEA EXPLORATION DRILL CAMPAIGN
WELL PAD 5
GENERAL ARRANGEMENT PLAN

Status	Drg No.	Rev.
ISSUED FOR INFORMATION	60611666-0005-02	

LAST MODIFIED:3/9/2021 5:08 PM
CAD REF:L:\SECURE\PROJECTS\60611666\999_CAD_GIS\99_CAD\20_SHEETS\60611666-0005-02.DWG



SETOUT POINTS

POINT No.	COORDINATES	
	EASTING	NORTHING
1	455168.690	8164604.770
2	455130.538	8164565.128
3	455115.537	8164564.654
4	455115.527	8164558.654
5	455130.662	8164558.128
6	455168.631	8164518.311
7	455175.637	8164604.748
8	455213.652	8164564.986
9	455228.651	8164564.460
10	455228.640	8164558.460
11	455213.785	8164557.985
12	455175.679	8164518.300

NOT FOR CONSTRUCTION

This drawing is confidential and shall only be used for the purposes of this project.

REVISIONS

No.	BY	DATE	DESCRIPTION	APPD
A	G.T		ISSUED FOR INFORMATION	

Scale

SCALE C 0 5 10 12.5m
1 : 500 (A3) 1 : 250 (A1)

THE SIGNING OF THIS TITLE BLOCK CONFIRMS THE DESIGN AND DRAFTING OF THIS PROJECT HAVE BEEN PREPARED AND CHECKED IN ACCORDANCE WITH THE AECOM QUALITY ASSURANCE SYSTEM TO ISO 9001-2000

DESIGNED	B.F	CHECKED	
DRAWN	G.T	CHECKED	K.P
APPROVED		DATE	

AECOM

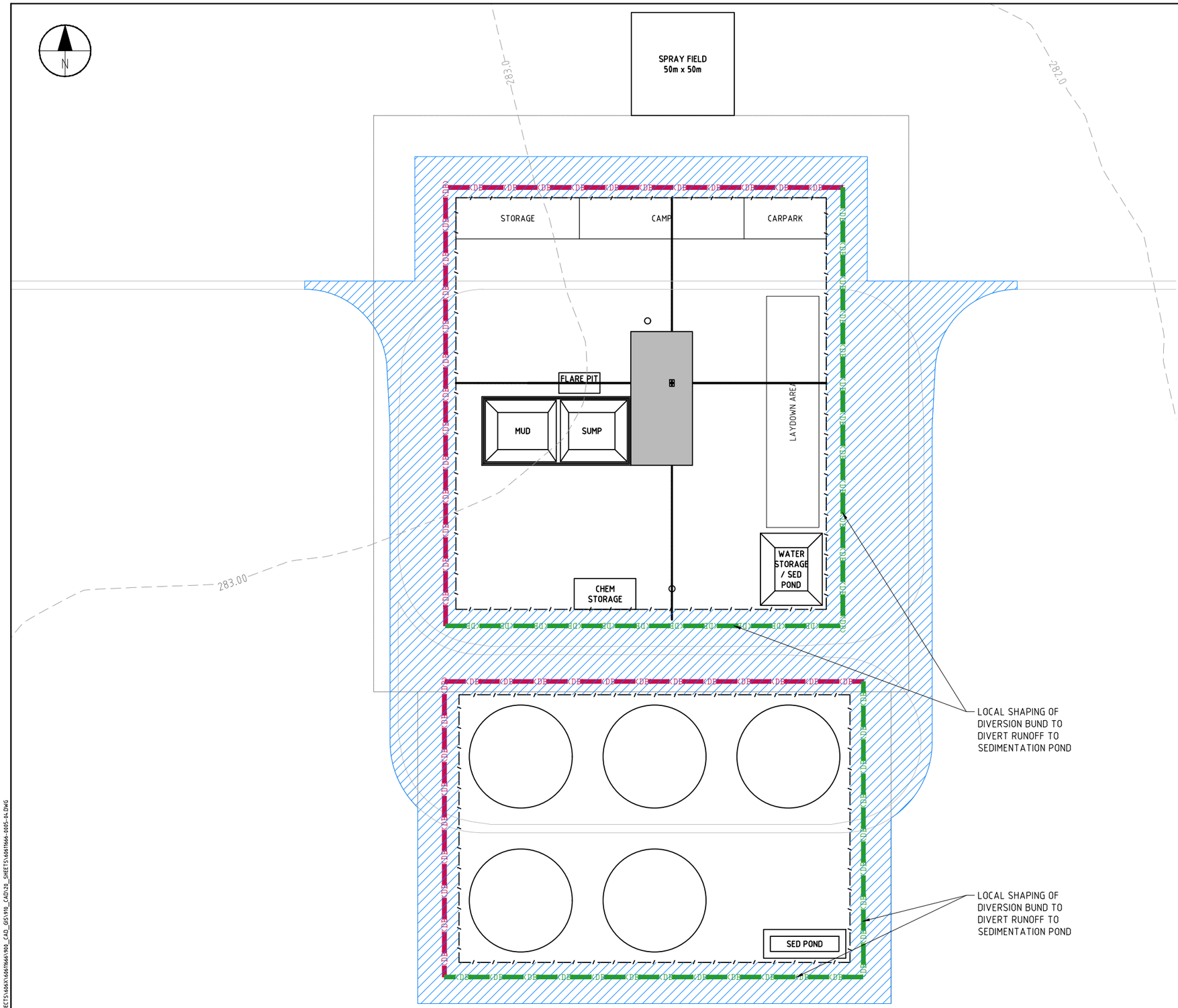
RPEQ No.
AECOM Australia Pty Ltd A.B.N. 20 093 846 925

SWEETPEA EXPLORATION DRILL CAMPAIGN

SWEETPEA EXPLORATION DRILL CAMPAIGN
WELL PAD 5 & 6
INTERSETION DETAILS

Status: ISSUED FOR INFORMATION
Drg No.: 60611666-0005-03
Rev.:

LAST MODIFIED:19/10/2021 5:08 PM
CAD REF:\\SECURE\PROJECTS\60611666\900_CAD_GIS\910_CAD\20_SHEETS\60611666-0005-03.DWG



LEGEND

- 278.00 — EXISTING SURFACE CONTOURS (1.0m INTERVALS - DTM)
- (DB) (DB) — 0.5m HIGH DIVERSION BUND (DIRTY WATER)
- (DB) (DB) — 0.5m HIGH DIVERSION BUND (CLEAN WATER)
- LIMIT OF CLEARING

EROSION AND SEDIMENTATION CONTROL NOTES

1. ALL WORK TO BE IN ACCORDANCE WITH THE BEST PRACTICE EROSION AND SEDIMENT CONTROL DOCUMENT (2008) PREPARED BY IECA.
2. TOPSOIL STRIPPING DEPTH ASSESSMENT MUST BE UNDERTAKEN IN ACCORDANCE WITH THE BEETALOO TOPSOIL STRIPPING TECHNICAL INSTRUCTION (NT-2050-15-TI-0001) AND AMELIORATION RATES AGREED WITH THE CONSTRUCTION SUPERVISOR. THE EXPECTED NOMINAL TOPSOIL DEPTH FOR THE SITE IS 150MM, FINAL STRIP DEPTH TO BE CONFIRMED IN THE FIELD.
3. MAINTENANCE OF ESC DEVICES:
   - THE CONTRACTOR SHALL INSPECT ALL ENVIRONMENTAL DEVICES ON A REGULAR BASIS. ANY RECTIFICATION OF DAMAGE TO THE ENVIRONMENTAL CONTROL DEVICES OR CLEANING OUT OF THE DEVICES IS TO BE CARRIED OUT BY THE CONTRACTOR AS REQUIRED.
   - REGULAR MAINTENANCE SHALL BE UNDERTAKEN UNTIL SUFFICIENT GROUND COVER IS ESTABLISHED TO PROVIDE STABILISATION TO ALL DISTURBED AREAS.
4. FILTER BERM DIMENSIONS IN ACCORDANCE WITH IECA FIGURE 1 ON STANDARD DRAWING MB-01. FILTER BERM MATERIAL TO BE CONSTRUCTED FROM AVAILABLE SITE MATERIAL.
5. ALL ESC DEVICES WILL BE DESIGN AND INSTALLED IN ACCORDANCE WITH THE NT LAND CLEARANCE GUIDELINES.
6. THE CONTRACTOR MUST SUBMIT AN EROSION AND SEDIMENT CONTROL PLAN WHICH WILL BE APPROVED BY TAMBORAN PRIOR TO MOBILISATION.
7. STOCKPILES SHOULD NOT BE LOCATED WITHIN AN OVERLAND FLOW PATH/DRAIN.
8. IF DIRECTED BY THE SUPERINTENDENT, TOPSOIL STOCKPILES ARE TO BE SOWN WITH A COVER CROP AS SOON AS PRACTICAL AFTER STOCKPILING.
9. NO DISTURBANCE TO VEGETATION IS TO TAKE PLACE BEYOND THE BOUNDARIES OF CURRENT STAGE OF DEVELOPMENT.
10. DURING CONSTRUCTION, TEMPORARY DIVERSION DRAINS, SEDIMENT FENCES AND, OR SEDIMENT TRAPS ARE TO BE CONSTRUCTED AT REGULAR INTERVALS DOWN SLOPE PRIOR TO ANY BREAKS IN CONSTRUCTION (SUCH AS A WEEKEND) OR IF RAIN IS IMMINENT.
11. INSTALL SEDIMENT FENCES TO CONTROL SHEET FLOW OR SEDIMENT TRAPS TO CONTROL CONCENTRATED FLOW.
12. SERVICE TRENCHES ARE TO BE CONTROL REVEGETATED WITH GRASS SODS AND TOPSOIL SAVED DURING EXCAVATION OF THE TRENCHES OR TURFED (AS APPROPRIATE) AND MAINTAINED UNTIL ESTABLISHED.
13. ALL AREAS DISTURBED BY CONSTRUCTION ACTIVITIES SHOULD BE PROMPTLY AND PROGRESSIVELY STABILISED WHERE APPROPRIATE.
14. WHERE ACCESS TRACKS CROSS DIVERSION BUNDS TRAFFICABLE WHOA BOYS TO BE INSTALLED. WHOA BOYS TO BE MAINTAINED FOR LIFE OF PROJECT TO ENSURE FLOW DIVERSION IS MAINTAINED.
15. LIMIT OF CLEARING 20m FROM LEASE BOUNDARY FENCELINE OR EDGE OF ACCESS TRACKS.

NOT FOR CONSTRUCTION

CAD REF:L:\SECURE\PROJECTS\66XY\66611666\90A_CAD_GIS\99_CAD\20_SHEETS\66611666-0005-04.DWG

LAST MODIFIED:3/9/2021 5:58 PM

This drawing is confidential and shall only be used for the purposes of this project.

REVISIONS

No.	BY	DATE	DESCRIPTION	APPD
A	G.T		ISSUED FOR INFORMATION	

Scale

SCALE A 0 10 20 30 40 50m
1 : 2000 (A3) 1 : 1000 (A1)

THE SIGNING OF THIS TITLE BLOCK CONFIRMS THE DESIGN AND DRAFTING OF THIS PROJECT HAVE BEEN PREPARED AND CHECKED IN ACCORDANCE WITH THE AECOM QUALITY ASSURANCE SYSTEM TO ISO 9001-2000

DESIGNED	B.F	CHECKED	
DRAWN	G.T	CHECKED	K.P
APPROVED		DATE	

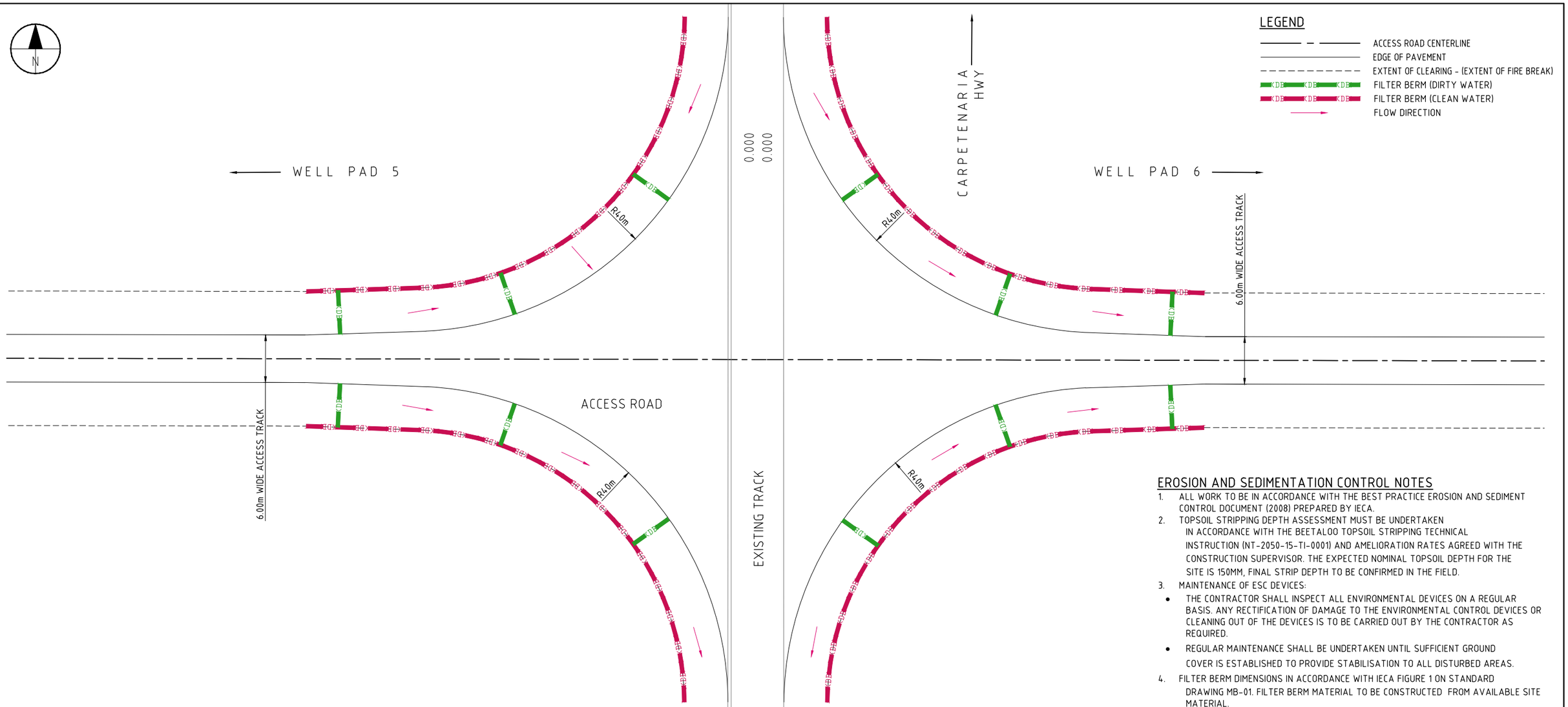
AECOM

RPEQ No.
AECOM Australia Pty Ltd A.B.N. 20 093 846 925

SWEETPEA EXPLORATION DRILL CAMPAIGN

SWEETPEA EXPLORATION DRILL CAMPAIGN
WELL PAD 5
EROSION AND SEDIMENT CONTROL PLAN

Status: ISSUED FOR INFORMATION
Drg No.: 60611666-0005-04
Rev.:



EROSION AND SEDIMENTATION CONTROL NOTES

1. ALL WORK TO BE IN ACCORDANCE WITH THE BEST PRACTICE EROSION AND SEDIMENT CONTROL DOCUMENT (2008) PREPARED BY IECA.
2. TOPSOIL STRIPPING DEPTH ASSESSMENT MUST BE UNDERTAKEN IN ACCORDANCE WITH THE BEETALOO TOPSOIL STRIPPING TECHNICAL INSTRUCTION (NT-2050-15-TI-0001) AND AMELIORATION RATES AGREED WITH THE CONSTRUCTION SUPERVISOR. THE EXPECTED NOMINAL TOPSOIL DEPTH FOR THE SITE IS 150MM, FINAL STRIP DEPTH TO BE CONFIRMED IN THE FIELD.
3. MAINTENANCE OF ESC DEVICES:
   - THE CONTRACTOR SHALL INSPECT ALL ENVIRONMENTAL DEVICES ON A REGULAR BASIS. ANY RECTIFICATION OF DAMAGE TO THE ENVIRONMENTAL CONTROL DEVICES OR CLEANING OUT OF THE DEVICES IS TO BE CARRIED OUT BY THE CONTRACTOR AS REQUIRED.
   - REGULAR MAINTENANCE SHALL BE UNDERTAKEN UNTIL SUFFICIENT GROUND COVER IS ESTABLISHED TO PROVIDE STABILISATION TO ALL DISTURBED AREAS.
4. FILTER BERM DIMENSIONS IN ACCORDANCE WITH IECA FIGURE 1 ON STANDARD DRAWING MB-01. FILTER BERM MATERIAL TO BE CONSTRUCTED FROM AVAILABLE SITE MATERIAL.
5. ALL ESC DEVICES WILL BE DESIGN AND INSTALLED IN ACCORDANCE WITH THE NT LAND CLEARANCE GUIDELINES.
6. THE CONTRACTOR MUST SUBMIT AN EROSION AND SEDIMENT CONTROL PLAN WHICH WILL BE APPROVED BY TAMBORAN PRIOR TO MOBILISATION.
7. STOCKPILES SHOULD NOT BE LOCATED WITHIN AN OVERLAND FLOW PATH/DRAIN.
8. IF DIRECTED BY THE SUPERINTENDENT, TOPSOIL STOCKPILES ARE TO BE SOWN WITH A COVER CROP AS SOON AS PRACTICAL AFTER STOCKPILING.
9. NO DISTURBANCE TO VEGETATION IS TO TAKE PLACE BEYOND THE BOUNDARIES OF CURRENT STAGE OF DEVELOPMENT.
10. DURING CONSTRUCTION, TEMPORARY DIVERSION DRAINS, SEDIMENT FENCES AND, OR SEDIMENT TRAPS ARE TO BE CONSTRUCTED AT REGULAR INTERVALS DOWN SLOPE PRIOR TO ANY BREAKS IN CONSTRUCTION (SUCH AS A WEEKEND) OR IF RAIN IS IMMINENT.
11. INSTALL SEDIMENT FENCES TO CONTROL SHEET FLOW OR SEDIMENT TRAPS TO CONTROL CONCENTRATED FLOW.
12. SERVICE TRENCHES ARE TO BE CONTROL REVEGETATED WITH GRASS SODS AND TOPSOIL SAVED DURING EXCAVATION OF THE TRENCHES OR TURFED (AS APPROPRIATE) AND MAINTAINED UNTIL ESTABLISHED.
13. ALL AREAS DISTURBED BY CONSTRUCTION ACTIVITIES SHOULD BE PROMPTLY AND PROGRESSIVELY STABILISED WHERE APPROPRIATE.
14. WHERE ACCESS TRACKS CROSS DIVERSION BUNDS TRAFFICABLE WHOA BOYS TO BE INSTALLED. WHOA BOYS TO BE MAINTAINED FOR LIFE OF PROJECT TO ENSURE FLOW DIVERSION IS MAINTAINED.
15. LIMIT OF CLEARING 20m FROM LEASE BOUNDARY FENCELINE OR EDGE OF ACCESS TRACKS.

NOT FOR CONSTRUCTION

This drawing is confidential and shall only be used for the purposes of this project.

REVISIONS

No.	BY	DATE	DESCRIPTION	APPD
A	G.T		ISSUED FOR INFORMATION	

Scale

SCALE C 0 5 10 12.5m

1 : 500 (A3) 1 : 250 (A1)

THE SIGNING OF THIS TITLE BLOCK CONFIRMS THE DESIGN AND DRAFTING OF THIS PROJECT HAVE BEEN PREPARED AND CHECKED IN ACCORDANCE WITH THE AECOM QUALITY ASSURANCE SYSTEM TO ISO 9001-2000

DESIGNED	B.F	CHECKED	
DRAWN	G.T	CHECKED	K.P
APPROVED		DATE	

AECOM

RPEQ No.
AECOM Australia Pty Ltd A.B.N. 20 093 846 925

SWEETPEA EXPLORATION DRILL CAMPAIGN

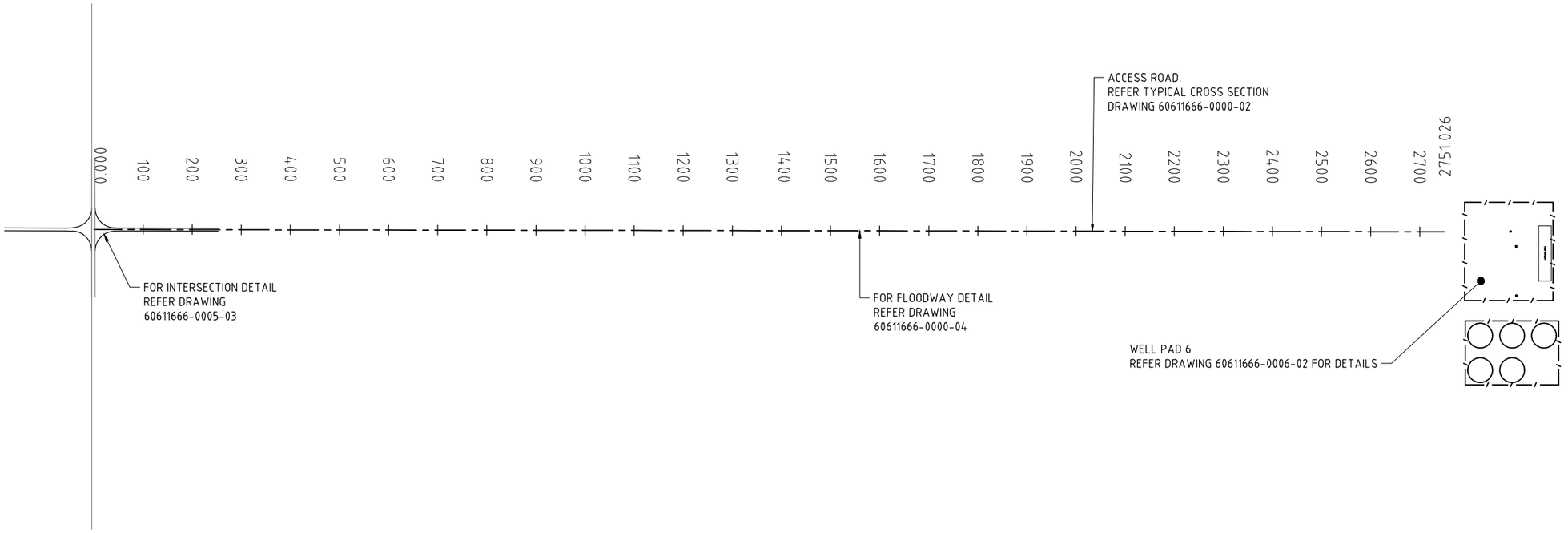
SWEETPEA EXPLORATION DRILL CAMPAIGN
WELL PAD 5 & 6 ACCESS ROAD INTERSECTION
EROSION AND SEDIMENT CONTROL PLAN

Status	Drg No.	Rev.
ISSUED FOR INFORMATION	60611666-0005-05	

LAST MODIFIED:3/9/2015 5:08 PM
CAD REF:L:\SECURE\PROJECTS\60611666\99A_CAD_GIS\99A_CAD\20_SHEETS\60611666-0005-05.DWG

LEGEND

ACCESS ROAD CENTERLINE



ACCESS ROAD MCA06 - SETOUT				
PT	CHAINAGE	X COORD	Y COORD	BEARING
IP	0.000	455173.536	8164561.555	90°05'54.31"
IP	2751.026	457924.558	8164556.829	90°05'54.31"

FLOODWAY LOCATION CHAINAGE
185
730
990
1635
2675

NOTE:
FLOODWAY LOCATIONS ARE INDICATIVE ONLY. FINAL LOCATION OF FLOODWAYS TO BE DETERMINED ON SITE BY SUPERVISOR

NOT FOR CONSTRUCTION

CAD REF: I:\SECURE\PROJECTS\60611666\900_CAD_GIS\99_CAD\20_SHEETS\60611666-0006-01.DWG
LAST MODIFIED 3/8/2021 5:09 PM

This drawing is confidential and shall only be used for the purposes of this project.

REVISIONS

No.	BY	DATE	DESCRIPTION	APPD
A	G.T		ISSUED FOR INFORMATION	

Scale

SCALE W 0 100 200 250m
1 : 10000 (A3) 1 : 5000 (A1)

THE SIGNING OF THIS TITLE BLOCK CONFIRMS THE DESIGN AND DRAFTING OF THIS PROJECT HAVE BEEN PREPARED AND CHECKED IN ACCORDANCE WITH THE AECOM QUALITY ASSURANCE SYSTEM TO ISO 9001:2000

DESIGNED	B.F	CHECKED	
DRAWN	G.T	CHECKED	K.P
APPROVED		DATE	

AECOM

RPEQ No.
AECOM Australia Pty Ltd A.B.N. 20 093 846 925

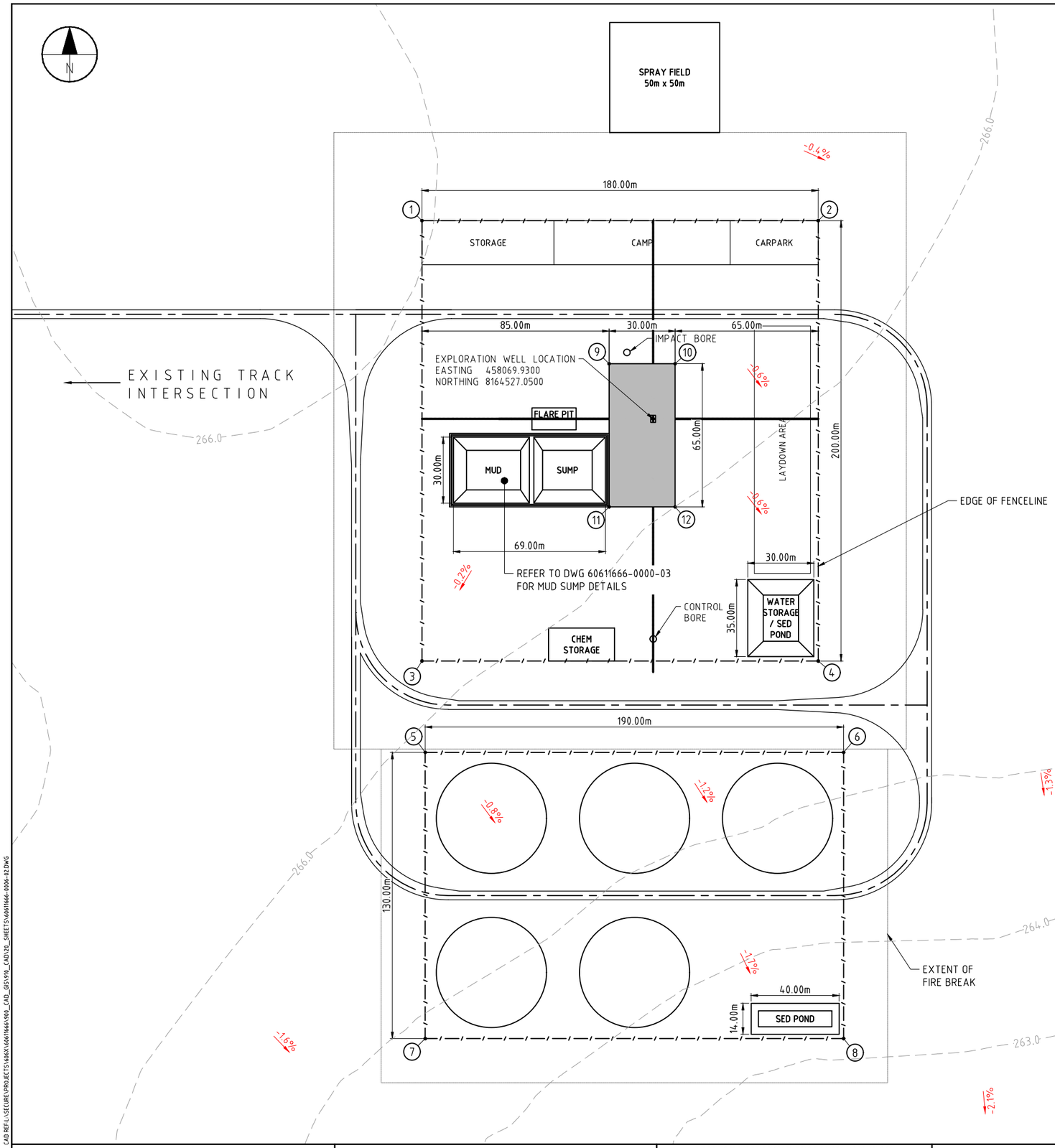
SWEETPEA EXPLORATION DRILL CAMPAIGN

SWEETPEA EXPLORATION DRILL CAMPAIGN
WELL PAD 6
ACCESS ROAD DETAILS

Status: ISSUED FOR INFORMATION

Drg No.: 60611666-0006-01

Rev.



LEGEND

278.00 — EXISTING SURFACE CONTOURS (1.0m INTERVALS - DTM)

-0.1% — EXISTING SURFACE SLOPES

SETOUT POINTS

POINT No.	COORDINATES	
	EASTING	NORTHING
1	457964.930	8164617.050
2	458144.930	8164617.050
3	457964.930	8164417.050
4	458144.930	8164417.050
5	457966.430	8164375.550
6	458156.430	8164375.550
7	457966.430	8164245.550
8	458156.430	8164245.550
9	458049.930	8164552.050
10	458079.930	8164552.050
11	458049.930	8164487.050
12	458079.930	8164487.050

GENERAL NOTES

1. ALL DIMENSIONS ARE IN METRES UNLESS NOTED OTHERWISE.
2. SEWER SPRAY FIELD AREA IS NOT TO BE CLEARED. SPRAY PIPES LAID ON EXISTING VEGETATION BY OTHERS.
3. ALL WORKS TO BE CARRIED OUT IN ACCORDANCE WITH THE APPROVED MANAGEMENT PLAN REQUIREMENTS.
4. NO CONSTRUCTION WORKS ARE TO BE CARRIED OUT OUTSIDE THE APPROVED WORK CORRIDOR BOUNDARIES.
5. CONSTRUCTION FACILITY AREA LOCATIONS TO BE APPROVED BY THE SUPERINTENDENT PRIOR TO WORKS COMMENCING.
6. THE CONTRACTOR IS TO LIAISE WITH SERVICE PROVIDERS AND THE RELEVANT AUTHORITIES TO ENSURE ALL CONSTRUCTION WORKS ARE CARRIED OUT IN ACCORDANCE WITH SERVICE PROVIDERS AND RELEVANT AUTHORITIES REQUIREMENTS.
7. NO SERVICES WERE PRESENT OR PROVIDED BY DBYD AT THE TIME OF DESIGN AND ARE THEREFORE NOT SHOWN, HOWEVER THE CONTRACTOR IS RESPONSIBLE FOR CONDUCTING A SEARCH PRIOR TO WORKS BEING CARRIED OUT. ANY DAMAGE TO EXISTING SERVICES IS TO BE RE-INSTATED AT THE CONTRACTORS EXPENSE.
8. THE CONTRACTOR IS TO CARRY OUT A DBYD AND LOCATE AND MARK SERVICES ON SITE. ANY DAMAGE TO EXISTING SERVICES IS TO BE RE-INSTATED AT THE CONTRACTORS EXPENSE.
9. SIGNAGE TO BE INSTALLED PRIOR TO ROAD USE.
10. NEW WATER BORE TO BE PROVIDED BY THE CONTRACTOR AND TO DISCHARGE TO ABOVE GROUND TANK.
11. DRILLING CONTRACTOR TO PROVIDE ALL AMENITIES INCLUDING ACCOMMODATION, ABLUTIONS, WATER SUPPLY, WASTE MANAGEMENT AND SEWAGE TREATMENT FOR THE CAMP AREA. AMENITIES TO COMPLY WITH NORTHERN TERRITORY REQUIREMENTS FOR FACILITIES OF THIS NATURE.
12. FIREBREAK CLEARINGS AROUND DRILLING LEASE AND CAMP PAD ARE TO BE USED FOR STORAGE OF TOPSOIL AND VEGETATION AS REQUIRED. IF ADDITIONAL STORAGE SPACE IS REQUIRED THE CONTRACTOR IS TO PROVIDE ADDITIONAL STORAGE AREA AS INDICATED ON THIS DRAWING.
13. SIGNAGE TO BE INSTALLED PRIOR TO ROAD USE.
14. LOCATION OF INTERSECTION IS TO BE CONFIRMED BY CONTRACTOR ON SITE.
15. TRAFFIC ROAD SIGNAGE TO COMPLY WITH AS1743 AND NORTHERN TERRITORY GUIDELINES.
16. REFER TO DRG. 60611666-0000-02 FOR ROAD PAVEMENT DETAILS.
17. FINISH SURFACE LEVELS ARE TO FOLLOW EXISTING SURFACE LEVELS AS NEAR AS POSSIBLE AND TO THE GRADES SPECIFIED ON THE DRAWINGS.
18. TABLE DRAINS ARE TO BE CUT ALONG THE LENGTH OF THE ROAD AND ALL ROAD PAVEMENTS ARE TO HAVE A 4% CROSSFALL IN ACCORDANCE WITH THE ROAD CROSS-SECTION DETAILED ON DRG. 60611666-0000-02.
19. FENCELINE IS TO BE MAINTAINED AT ALL TIMES.

NOT FOR CONSTRUCTION

This drawing is confidential and shall only be used for the purposes of this project.

REVISIONS

No.	BY	DATE	DESCRIPTION	APPD
A	G.T		ISSUED FOR INFORMATION	

Scale

SCALE A 0 10 20 30 40 50m
1 : 2000 (A3) 1 : 1000 (A1)

DESIGNED	B.F	CHECKED	
DRAWN	G.T	CHECKED	K.P
APPROVED		DATE	

THE SIGNING OF THIS TITLE BLOCK CONFIRMS THE DESIGN AND DRAFTING OF THIS PROJECT HAVE BEEN PREPARED AND CHECKED IN ACCORDANCE WITH THE AECOM QUALITY ASSURANCE SYSTEM TO ISO 9001-2000

AECOM

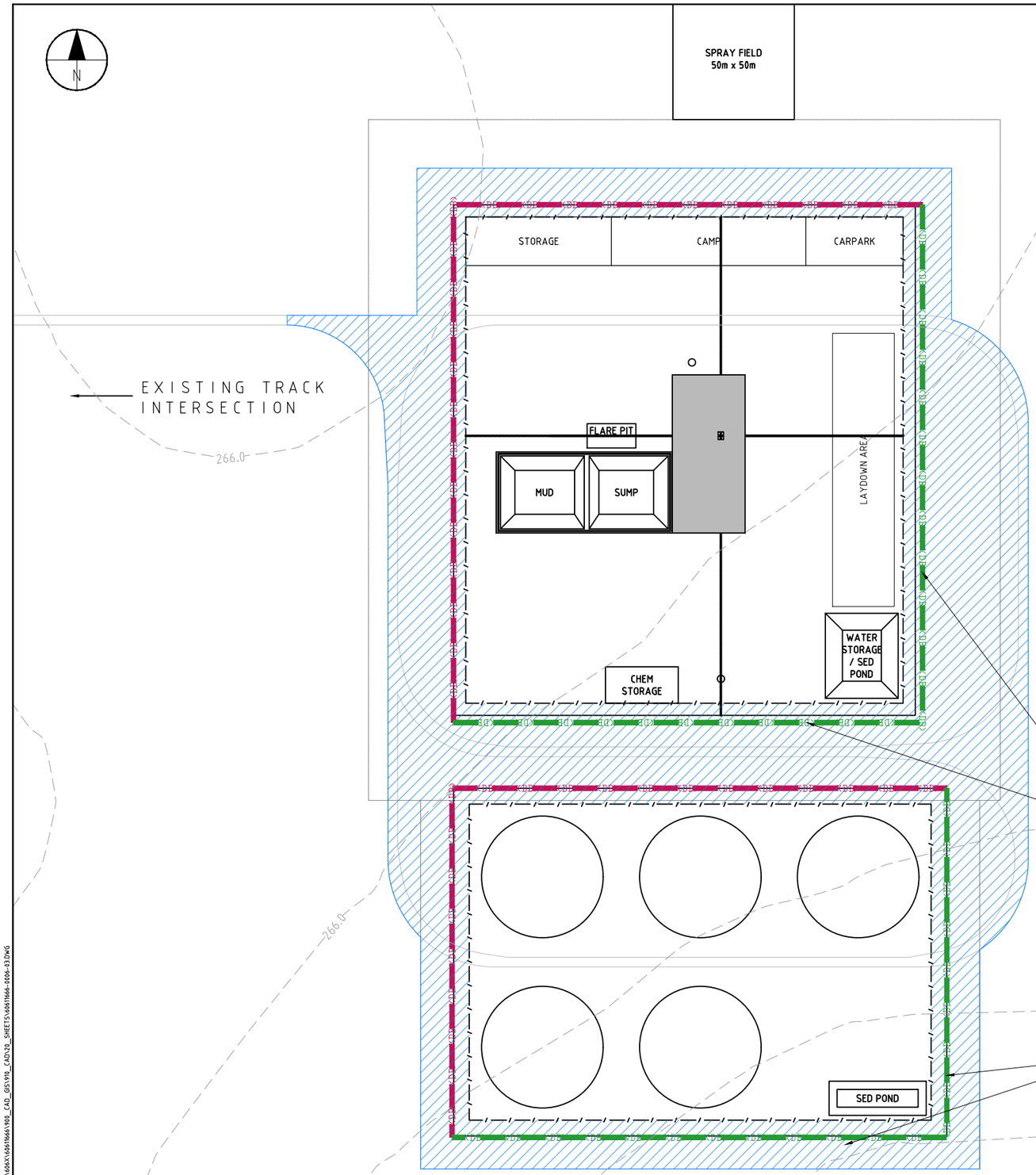
RPEQ No.
AECOM Australia Pty Ltd A.B.N. 20 093 846 925

SWEETPEA EXPLORATION DRILL CAMPAIGN

SWEETPEA EXPLORATION DRILL CAMPAIGN
WELL PAD 6
GENERAL ARRANGEMENT PLAN

Status: ISSUED FOR INFORMATION | Drg No.: 60611666-0006-02 | Rev.:

LAST MODIFIED:3/9/2021 5:59 PM
CAD REF:L:\SECURE\PROJECTS\60611666\IWA_CAD_GIS\FIL_CAD\20_SHEETS\60611666-0006-02.DWG



LEGEND

- 278.00 — EXISTING SURFACE CONTOURS (1.0m INTERVALS - DTM)
- (DB) (DB) — 0.5m HIGH DIVERSION BUND (DIRTY WATER)
- (DB) (DB) — 0.5m HIGH DIVERSION BUND (CLEAN WATER)
- LIMIT OF CLEARING

EROSION AND SEDIMENTATION CONTROL NOTES

1. ALL WORK TO BE IN ACCORDANCE WITH THE BEST PRACTICE EROSION AND SEDIMENT CONTROL DOCUMENT (2008) PREPARED BY IECA.
2. TOPSOIL STRIPPING DEPTH ASSESSMENT MUST BE UNDERTAKEN IN ACCORDANCE WITH THE BEETALOO TOPSOIL STRIPPING TECHNICAL INSTRUCTION (NT-2050-15-TI-0001) AND AMELIORATION RATES AGREED WITH THE CONSTRUCTION SUPERVISOR. THE EXPECTED NOMINAL TOPSOIL DEPTH FOR THE SITE IS 150MM, FINAL STRIP DEPTH TO BE CONFIRMED IN THE FIELD.
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   - THE CONTRACTOR SHALL INSPECT ALL ENVIRONMENTAL DEVICES ON A REGULAR BASIS. ANY RECTIFICATION OF DAMAGE TO THE ENVIRONMENTAL CONTROL DEVICES OR CLEANING OUT OF THE DEVICES IS TO BE CARRIED OUT BY THE CONTRACTOR AS REQUIRED.
   - REGULAR MAINTENANCE SHALL BE UNDERTAKEN UNTIL SUFFICIENT GROUND COVER IS ESTABLISHED TO PROVIDE STABILISATION TO ALL DISTURBED AREAS.
4. FILTER BERM DIMENSIONS IN ACCORDANCE WITH IECA FIGURE 1 ON STANDARD DRAWING MB-01. FILTER BERM MATERIAL TO BE CONSTRUCTED FROM AVAILABLE SITE MATERIAL.
5. ALL ESC DEVICES WILL BE DESIGN AND INSTALLED IN ACCORDANCE WITH THE NT LAND CLEARANCE GUIDELINES.
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8. IF DIRECTED BY THE SUPERINTENDENT, TOPSOIL STOCKPILES ARE TO BE SOWN WITH A COVER CROP AS SOON AS PRACTICAL AFTER STOCKPILING.
9. NO DISTURBANCE TO VEGETATION IS TO TAKE PLACE BEYOND THE BOUNDARIES OF CURRENT STAGE OF DEVELOPMENT.
10. DURING CONSTRUCTION, TEMPORARY DIVERSION DRAINS, SEDIMENT FENCES AND, OR SEDIMENT TRAPS ARE TO BE CONSTRUCTED AT REGULAR INTERVALS DOWN SLOPE PRIOR TO ANY BREAKS IN CONSTRUCTION (SUCH AS A WEEKEND) OR IF RAIN IS IMMINENT.
11. INSTALL SEDIMENT FENCES TO CONTROL SHEET FLOW OR SEDIMENT TRAPS TO CONTROL CONCENTRATED FLOW.
12. SERVICE TRENCHES ARE TO BE CONTROL REVEGETATED WITH GRASS SODS AND TOPSOIL SAVED DURING EXCAVATION OF THE TRENCHES OR TURFED (AS APPROPRIATE) AND MAINTAINED UNTIL ESTABLISHED.
13. ALL AREAS DISTURBED BY CONSTRUCTION ACTIVITIES SHOULD BE PROMPTLY AND PROGRESSIVELY STABILISED WHERE APPROPRIATE.
14. WHERE ACCESS TRACKS CROSS DIVERSION BUNDS TRAFFICABLE WHOA BOYS TO BE INSTALLED. WHOA BOYS TO BE MAINTAINED FOR LIFE OF PROJECT TO ENSURE FLOW DIVERSION IS MAINTAINED.
15. LIMIT OF CLEARING 20m FROM LEASE BOUNDARY FENCELINE OR EDGE OF ACCESS TRACKS.

NOT FOR CONSTRUCTION

This drawing is confidential and shall only be used for the purposes of this project.

REVISIONS				
No.	BY	DATE	DESCRIPTION	APPD
A	G.T		ISSUED FOR INFORMATION	

Scale

SCALE A 0 10 20 30 40 50m
1 : 2000 (A3) 1 : 1000 (A1)

THE SIGNING OF THIS TITLE BLOCK CONFIRMS THE DESIGN AND DRAFTING OF THIS PROJECT HAVE BEEN PREPARED AND CHECKED IN ACCORDANCE WITH THE AECOM QUALITY ASSURANCE SYSTEM TO ISO 9001-2000

DESIGNED	B.F	CHECKED	
DRAWN	G.T	CHECKED	K.P
APPROVED		DATE	

AECOM

RPEQ No.
AECOM Australia Pty Ltd A.B.N. 20 093 846 925

SWEETPEA EXPLORATION DRILL CAMPAIGN

SWEETPEA EXPLORATION DRILL CAMPAIGN
WELL PAD 6
EROSION AND SEDIMENT CONTROL PLAN

Status: ISSUED FOR INFORMATION | Drg No.: 60611666-0006-03 | Rev.:

LAST MODIFIED:3/9/2015 5:09 PM
CAD REF:L:\SECURE\PROJECTS\60611666\90A_CAD_GIS\9A_CAD\20_SHEETS\60611666-0006-03.DWG

N

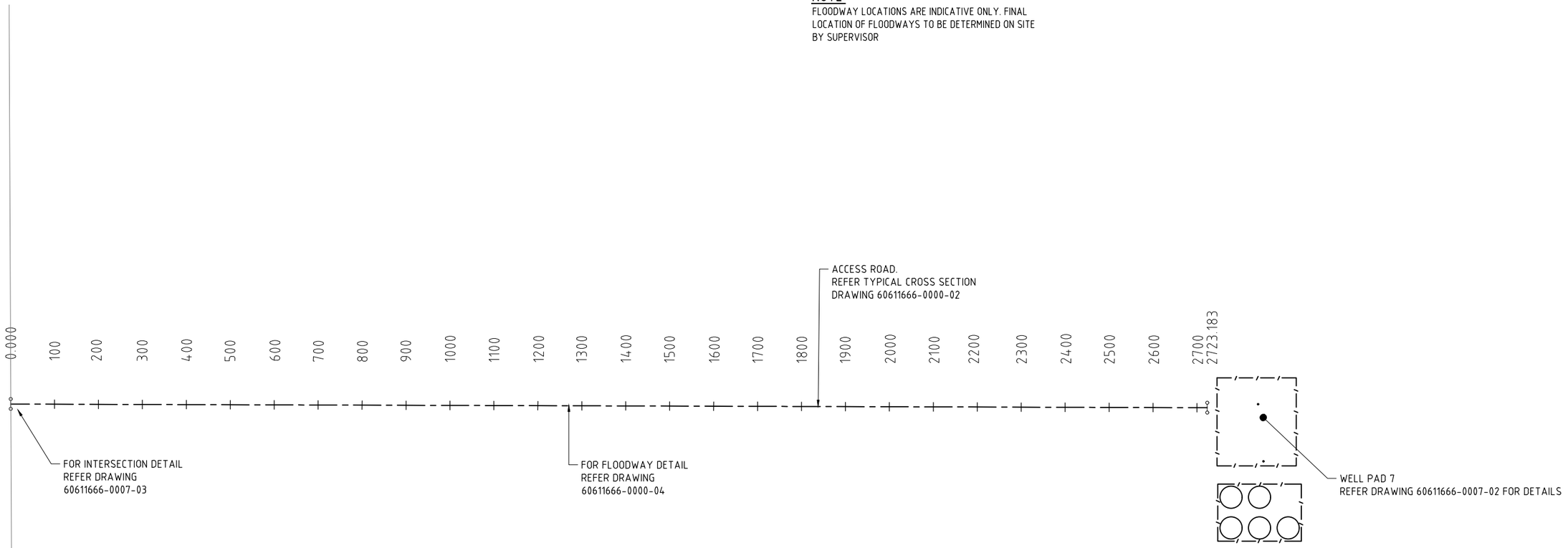
LEGEND

——— – ——— ACCESS ROAD CENTERLINE

ACCESS ROAD MCA07 - SETOUT				
PT	CHAINAGE	X COORD	Y COORD	BEARING
IP	0.000	455172.282	8160231.433	90°10'29.46"
IP	2723.183	457895.453	8160223.123	90°10'29.46"

FLOODWAY LOCATION CHAINAGE
440
1270
2130
2675

NOTE:
FLOODWAY LOCATIONS ARE INDICATIVE ONLY. FINAL LOCATION OF FLOODWAYS TO BE DETERMINED ON SITE BY SUPERVISOR



NOT FOR CONSTRUCTION

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REVISIONS

No.	BY	DATE	DESCRIPTION	APPD
A	G.T		ISSUED FOR INFORMATION	

Scale

SCALE W 0 100 200 250m
1 : 10000 (A3) 1 : 5000 (A1)

THE SIGNING OF THIS TITLE BLOCK CONFIRMS THE DESIGN AND DRAFTING OF THIS PROJECT HAVE BEEN PREPARED AND CHECKED IN ACCORDANCE WITH THE AECOM QUALITY ASSURANCE SYSTEM TO ISO 9001-2000

DESIGNED	B.F	CHECKED	
DRAWN	G.T	CHECKED	K.P
APPROVED		DATE	

AECOM

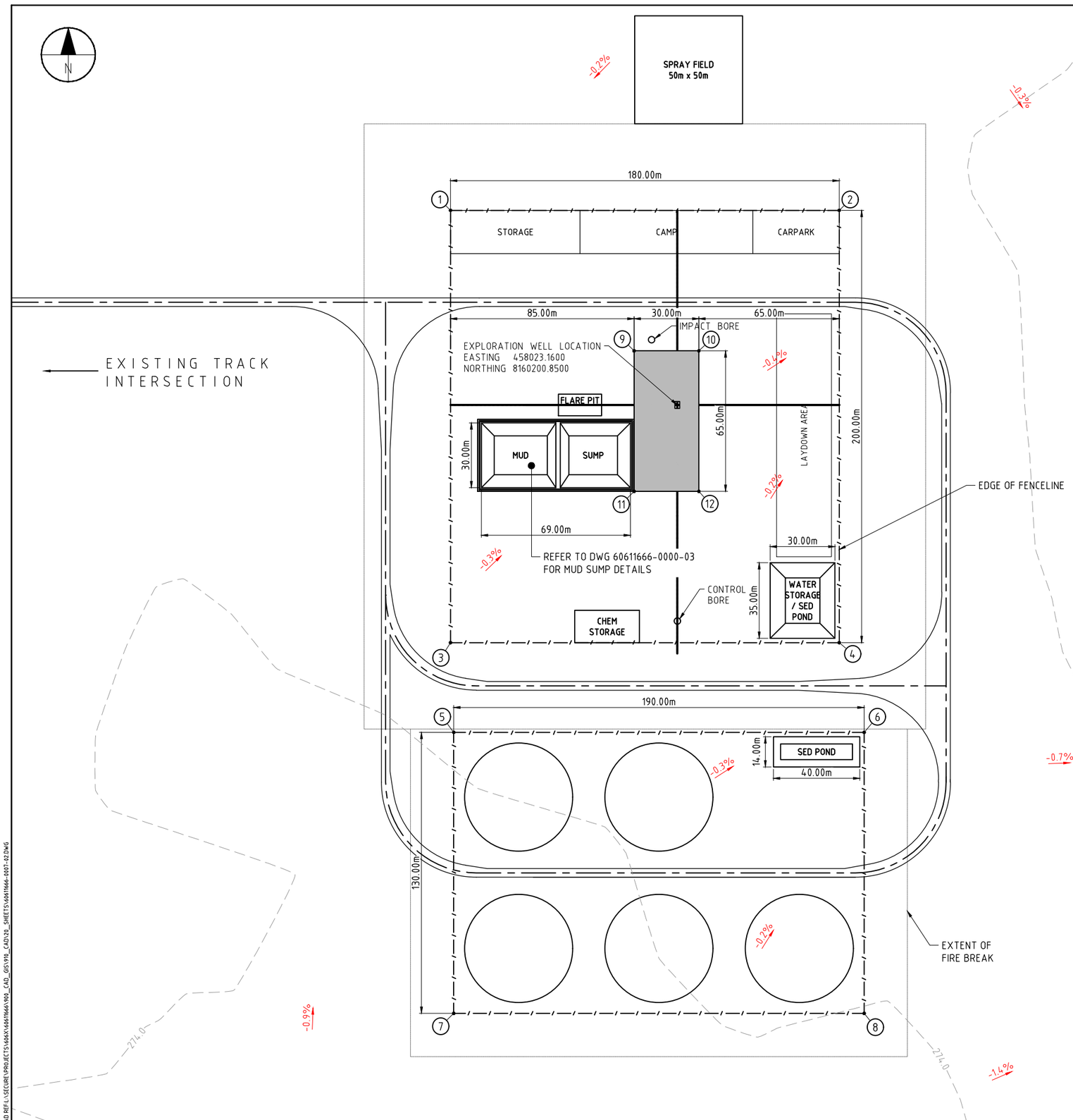
RPEQ No.
AECOM Australia Pty Ltd A.B.N. 20 093 846 925

SWEETPEA EXPLORATION DRILL CAMPAIGN

SWEETPEA EXPLORATION DRILL CAMPAIGN
WELL PAD 7
ACCESS ROAD DETAILS

Status: ISSUED FOR INFORMATION
Drg No.: 60611666-0007-01
Rev.:

LAST MODIFIED:2/9/2021 5:09 PM
CAD REF:I:\SECURE\PROJECTS\60611666\900_CAD_GIS\910_CAD\30_SHEETS\60611666-0007-01.DWG



LEGEND

278.00 — EXISTING SURFACE CONTOURS (1.0m INTERVALS - DTM)

-0.1% — EXISTING SURFACE SLOPES

SETOUT POINTS

POINT No.	COORDINATES	
	EASTING	NORTHING
1	457918.160	8160290.850
2	458098.160	8160290.850
3	457918.160	8160090.850
4	458098.160	8160090.850
5	457919.660	8160049.350
6	458109.660	8160049.350
7	457919.660	8159919.350
8	458109.660	8159919.350
9	458003.160	8160225.850
10	458033.160	8160225.850
11	458003.160	8160160.850
12	458033.160	8160160.850

GENERAL NOTES

1. ALL DIMENSIONS ARE IN METRES UNLESS NOTED OTHERWISE.
2. SEWER SPRAY FIELD AREA IS NOT TO BE CLEARED. SPRAY PIPES LAID ON EXISTING VEGETATION BY OTHERS.
3. ALL WORKS TO BE CARRIED OUT IN ACCORDANCE WITH THE APPROVED MANAGEMENT PLAN REQUIREMENTS.
4. NO CONSTRUCTION WORKS ARE TO BE CARRIED OUT OUTSIDE THE APPROVED WORK CORRIDOR BOUNDARIES.
5. CONSTRUCTION FACILITY AREA LOCATIONS TO BE APPROVED BY THE SUPERINTENDENT PRIOR TO WORKS COMMENCING.
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8. THE CONTRACTOR IS TO CARRY OUT A DBYD AND LOCATE AND MARK SERVICES ON SITE. ANY DAMAGE TO EXISTING SERVICES IS TO BE RE-INSTATED AT THE CONTRACTORS EXPENSE.
9. SIGNAGE TO BE INSTALLED PRIOR TO ROAD USE.
10. NEW WATER BORE TO BE PROVIDED BY THE CONTRACTOR AND TO DISCHARGE TO ABOVE GROUND TANK.
11. DRILLING CONTRACTOR TO PROVIDE ALL AMENITIES INCLUDING ACCOMMODATION, ABLUTIONS, WATER SUPPLY, WASTE MANAGEMENT AND SEWAGE TREATMENT FOR THE CAMP AREA. AMENITIES TO COMPLY WITH NORTHERN TERRITORY REQUIREMENTS FOR FACILITIES OF THIS NATURE.
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14. LOCATION OF INTERSECTION IS TO BE CONFIRMED BY CONTRACTOR ON SITE.
15. TRAFFIC ROAD SIGNAGE TO COMPLY WITH AS1743 AND NORTHERN TERRITORY GUIDELINES.
16. REFER TO DRG. 60611666-0000-02 FOR ROAD PAVEMENT DETAILS.
17. FINISH SURFACE LEVELS ARE TO FOLLOW EXISTING SURFACE LEVELS AS NEAR AS POSSIBLE AND TO THE GRADES SPECIFIED ON THE DRAWINGS.
18. TABLE DRAINS ARE TO BE CUT ALONG THE LENGTH OF THE ROAD AND ALL ROAD PAVEMENTS ARE TO HAVE A 4% CROSSFALL IN ACCORDANCE WITH THE ROAD CROSS-SECTION DETAILED ON DRG. 60611666-0000-02.
19. FENCELINE IS TO BE MAINTAINED AT ALL TIMES.

NOT FOR CONSTRUCTION

This drawing is confidential and shall only be used for the purposes of this project.

REVISIONS

No.	BY	DATE	DESCRIPTION	APPD
A	G.T		ISSUED FOR INFORMATION	

Scale

SCALE A 0 10 20 30 40 50m

1 : 2000 (A3) 1 : 1000 (A1)

THE SIGNING OF THIS TITLE BLOCK CONFIRMS THE DESIGN AND DRAFTING OF THIS PROJECT HAVE BEEN PREPARED AND CHECKED IN ACCORDANCE WITH THE AECOM QUALITY ASSURANCE SYSTEM TO ISO 9001-2000

DESIGNED	B.F	CHECKED	
DRAWN	G.T	CHECKED	K.P
APPROVED		DATE	

AECOM

RPEQ No.
AECOM Australia Pty Ltd A.B.N. 20 093 846 925

SWEETPEA EXPLORATION DRILL CAMPAIGN

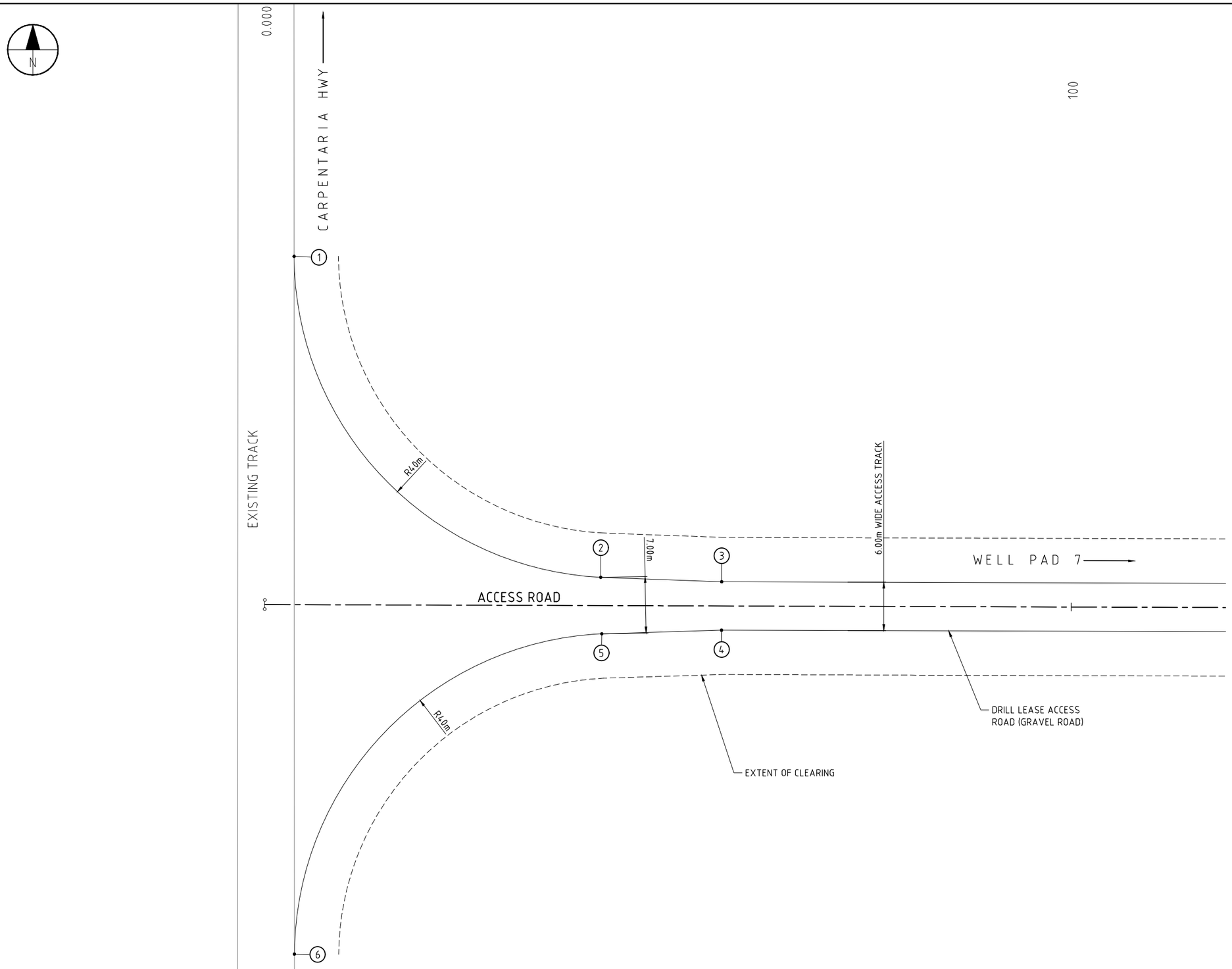
SWEETPEA EXPLORATION DRILL CAMPAIGN
WELL PAD 7
GENERAL ARRANGEMENT PLAN

Status: ISSUED FOR INFORMATION

Drg No.: 60611666-0007-02

Rev.

LAST MODIFIED:21/9/2021 5:09 PM
CAD REF: I:\SECURE\PROJECTS\606X\60611666\900_CAD_GIS\910_CAD\20_SHEETS\60611666-0007-02.DWG



LEGEND

- ACCESS ROAD CENTERLINE
- EDGE OF PAVEMENT
- EXTENT OF CLEARING - (EXTENT OF FIRE BREAK)

SETOUT POINTS

POINT No.	COORDINATES	
	EASTING	NORTHING
1	455175.923	8160274.579
2	455213.938	8160234.806
3	455228.936	8160234.260
4	455228.918	8160228.260
5	455214.071	8160227.805
6	455175.965	8160188.120

NOT FOR CONSTRUCTION

This drawing is confidential and shall only be used for the purposes of this project.

REVISIONS

No.	BY	DATE	DESCRIPTION	APPD
A	G.T		ISSUED FOR INFORMATION	

Scale

SCALE C 0 5 10 12.5m
1 : 500 (A3) 1 : 250 (A1)

THE SIGNING OF THIS TITLE BLOCK CONFIRMS THE DESIGN AND DRAFTING OF THIS PROJECT HAVE BEEN PREPARED AND CHECKED IN ACCORDANCE WITH THE AECOM QUALITY ASSURANCE SYSTEM TO ISO 9001-2000

DESIGNED	B.F	CHECKED	
DRAWN	G.T	CHECKED	K.P
APPROVED		DATE	

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AECOM Australia Pty Ltd A.B.N. 20 093 846 925

SWEETPEA EXPLORATION DRILL CAMPAIGN

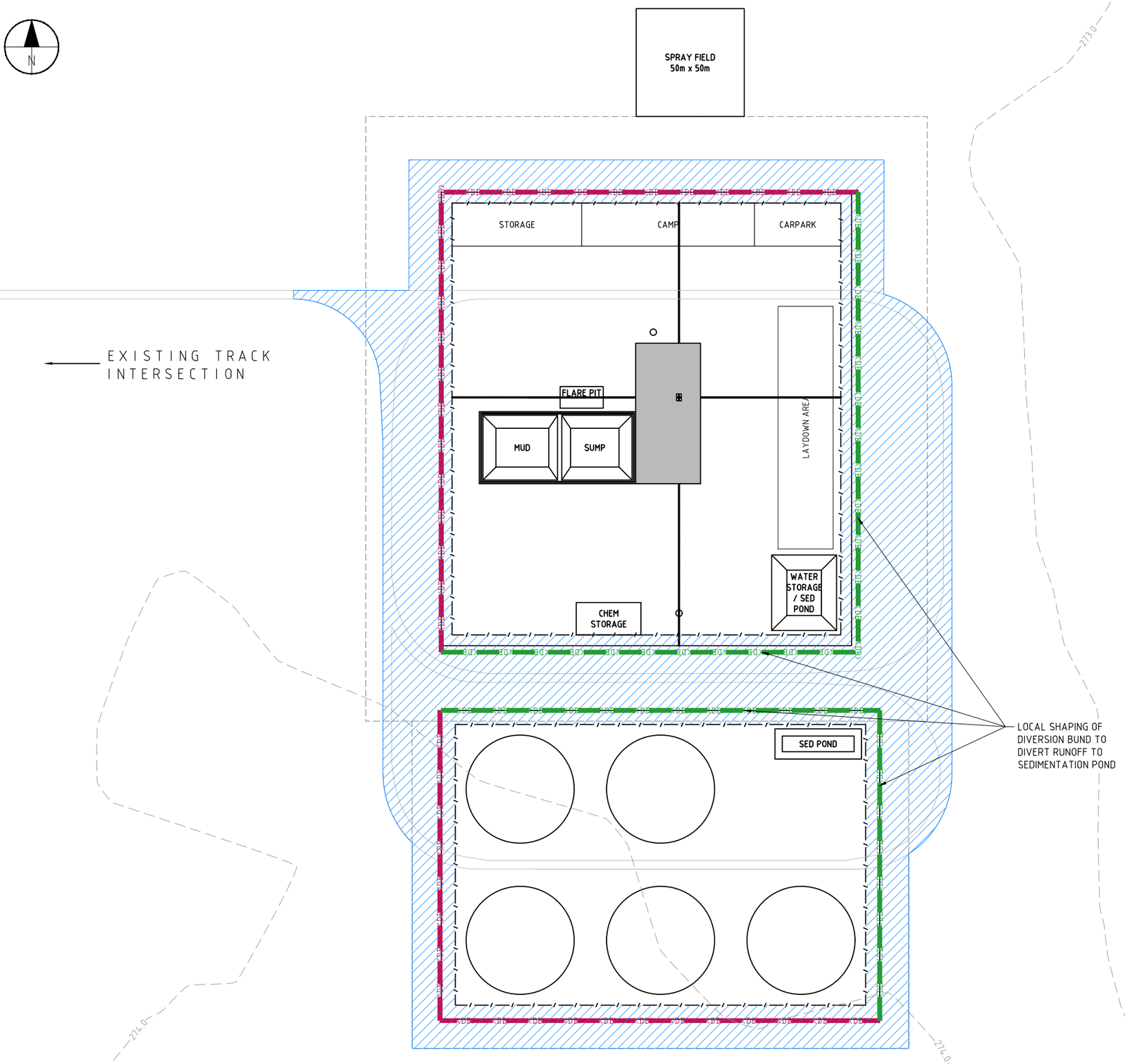
SWEETPEA EXPLORATION DRILL CAMPAIGN
WELL PAD 7
INTERSETION DETAILS

Status: ISSUED FOR INFORMATION

Drg No.: 60611666-0007-03

Rev.:

LAST MODIFIED: 7/07/2021 5:18 PM
CAD REF: L:\SECURE\PROJECTS\606\60611666\99A_CAD_GIS\99_CAD\2D_SHEETS\60611666-0007-03.DWG



LEGEND

- 278.00 — EXISTING SURFACE CONTOURS (1.0m INTERVALS - DTM)
- (DB) (DB) 0.5m HIGH DIVERSION BUND (DIRTY WATER)
- (DB) (DB) 0.5m HIGH DIVERSION BUND (CLEAN WATER)
- LIMIT OF CLEARING

EROSION AND SEDIMENTATION CONTROL NOTES

1. ALL WORK TO BE IN ACCORDANCE WITH THE BEST PRACTICE EROSION AND SEDIMENT CONTROL DOCUMENT (2008) PREPARED BY IECA.
2. TOPSOIL STRIPPING DEPTH ASSESSMENT MUST BE UNDERTAKEN IN ACCORDANCE WITH THE BEETALOO TOPSOIL STRIPPING TECHNICAL INSTRUCTION (NT-2050-15-TI-0001) AND AMELIORATION RATES AGREED WITH THE CONSTRUCTION SUPERVISOR. THE EXPECTED NOMINAL TOPSOIL DEPTH FOR THE SITE IS 150MM, FINAL STRIP DEPTH TO BE CONFIRMED IN THE FIELD.
3. MAINTENANCE OF ESC DEVICES:
   - THE CONTRACTOR SHALL INSPECT ALL ENVIRONMENTAL DEVICES ON A REGULAR BASIS. ANY RECTIFICATION OF DAMAGE TO THE ENVIRONMENTAL CONTROL DEVICES OR CLEANING OUT OF THE DEVICES IS TO BE CARRIED OUT BY THE CONTRACTOR AS REQUIRED.
   - REGULAR MAINTENANCE SHALL BE UNDERTAKEN UNTIL SUFFICIENT GROUND COVER IS ESTABLISHED TO PROVIDE STABILISATION TO ALL DISTURBED AREAS.
4. FILTER BERM DIMENSIONS IN ACCORDANCE WITH IECA FIGURE 1 ON STANDARD DRAWING MB-01. FILTER BERM MATERIAL TO BE CONSTRUCTED FROM AVAILABLE SITE MATERIAL.
5. ALL ESC DEVICES WILL BE DESIGN AND INSTALLED IN ACCORDANCE WITH THE NT LAND CLEARANCE GUIDELINES.
6. THE CONTRACTOR MUST SUBMIT AN EROSION AND SEDIMENT CONTROL PLAN WHICH WILL BE APPROVED BY TAMBORAN PRIOR TO MOBILISATION.
7. STOCKPILES SHOULD NOT BE LOCATED WITHIN AN OVERLAND FLOW PATH/DRAIN.
8. IF DIRECTED BY THE SUPERINTENDENT, TOPSOIL STOCKPILES ARE TO BE SOWN WITH A COVER CROP AS SOON AS PRACTICAL AFTER STOCKPILING.
9. NO DISTURBANCE TO VEGETATION IS TO TAKE PLACE BEYOND THE BOUNDARIES OF CURRENT STAGE OF DEVELOPMENT.
10. DURING CONSTRUCTION, TEMPORARY DIVERSION DRAINS, SEDIMENT FENCES AND, OR SEDIMENT TRAPS ARE TO BE CONSTRUCTED AT REGULAR INTERVALS DOWN SLOPE PRIOR TO ANY BREAKS IN CONSTRUCTION (SUCH AS A WEEKEND) OR IF RAIN IS IMMINENT.
11. INSTALL SEDIMENT FENCES TO CONTROL SHEET FLOW OR SEDIMENT TRAPS TO CONTROL CONCENTRATED FLOW.
12. SERVICE TRENCHES ARE TO BE CONTROL REVEGETATED WITH GRASS SODS AND TOPSOIL SAVED DURING EXCAVATION OF THE TRENCHES OR TURFED (AS APPROPRIATE) AND MAINTAINED UNTIL ESTABLISHED.
13. ALL AREAS DISTURBED BY CONSTRUCTION ACTIVITIES SHOULD BE PROMPTLY AND PROGRESSIVELY STABILISED WHERE APPROPRIATE.
14. WHERE ACCESS TRACKS CROSS DIVERSION BUNDS TRAFFICABLE WHOA BOYS TO BE INSTALLED. WHOA BOYS TO BE MAINTAINED FOR LIFE OF PROJECT TO ENSURE FLOW DIVERSION IS MAINTAINED.
15. LIMIT OF CLEARING 20m FROM LEASE BOUNDARY FENCELINE OR EDGE OF ACCESS TRACKS.

NOT FOR CONSTRUCTION

This drawing is confidential and shall only be used for the purposes of this project.

No.	BY	DATE	DESCRIPTION	APPD
A	G.T		ISSUED FOR INFORMATION	

REVISIONS

Scale

SCALE C 0 5 10 12.5m
1 : 500 (A3) 1 : 250 (A1)

THE SIGNING OF THIS TITLE BLOCK CONFIRMS THE DESIGN AND DRAFTING OF THIS PROJECT HAVE BEEN PREPARED AND CHECKED IN ACCORDANCE WITH THE AECOM QUALITY ASSURANCE SYSTEM TO ISO 9001-2000

DESIGNED	B.F	CHECKED	
DRAWN	G.T	CHECKED	K.P
APPROVED		DATE	

AECOM

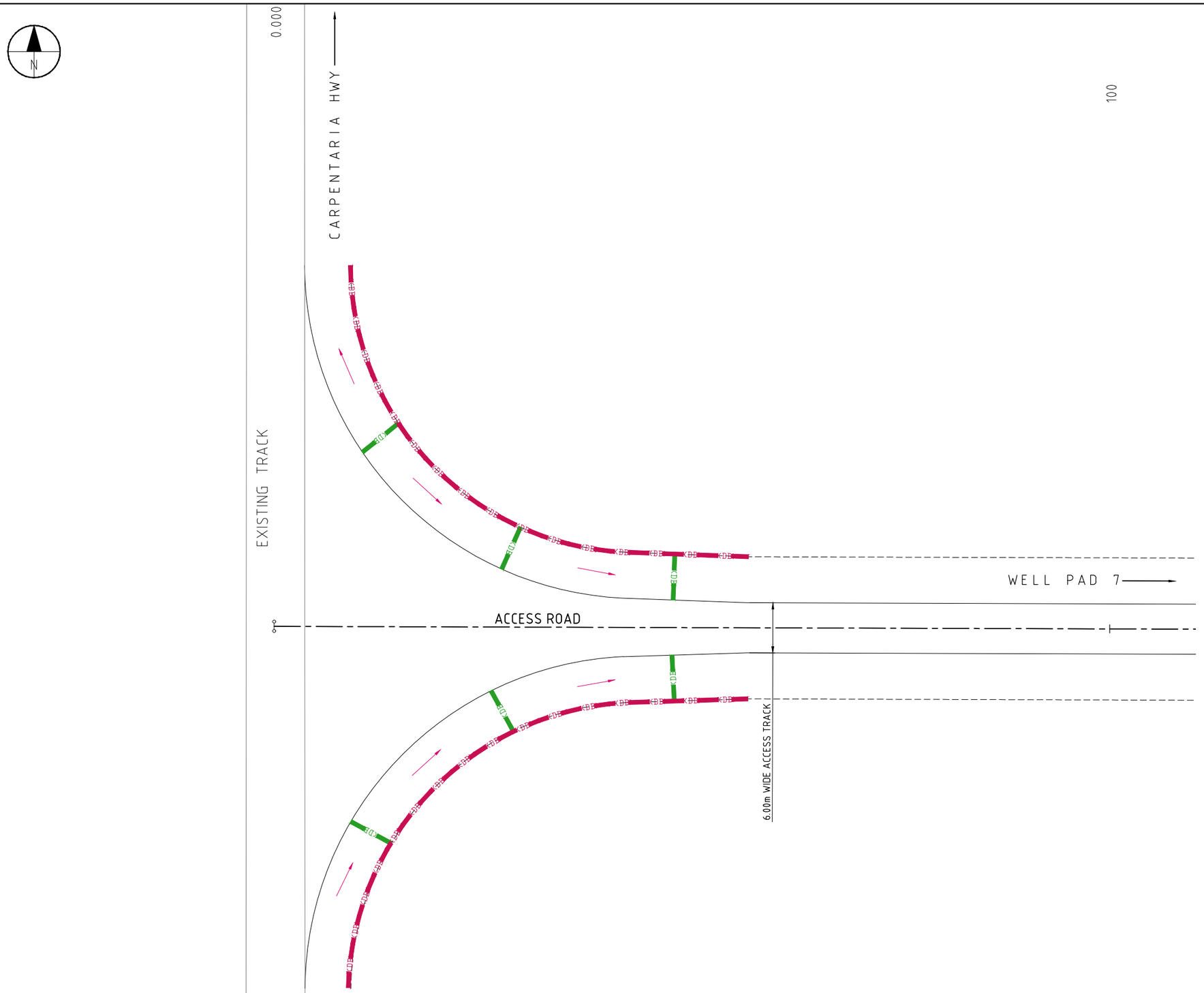
RPEQ No.
AECOM Australia Pty Ltd A.B.N. 20 093 846 925

SWEETPEA EXPLORATION DRILL CAMPAIGN

SWEETPEA EXPLORATION DRILL CAMPAIGN
WELL PAD 7
EROSION AND SEDIMENT CONTROL PLAN

Status: ISSUED FOR INFORMATION
Drg No.: 60611666-0007-04
Rev.:

LAST MODIFIED:19/10/2021 5:18 PM
CAD REF:\\SECURE\PROJECTS\60611666\900_CAD_GIS\910_CAD\20_SHEETS\60611666-0007-04.DWG



LEGEND

- ACCESS ROAD CENTERLINE
- EDGE OF PAVEMENT
- EXTENT OF CLEARING - (EXTENT OF FIRE BREAK)
- FILTER BERM (DIRTY WATER)
- FILTER BERM (CLEAN WATER)
- FLOW DIRECTION

EROSION AND SEDIMENTATION CONTROL NOTES

1. ALL WORK TO BE IN ACCORDANCE WITH THE BEST PRACTICE EROSION AND SEDIMENT CONTROL DOCUMENT (2008) PREPARED BY IECA.
2. TOPSOIL STRIPPING DEPTH ASSESSMENT MUST BE UNDERTAKEN IN ACCORDANCE WITH THE BEETALOO TOPSOIL STRIPPING TECHNICAL INSTRUCTION (NT-2050-15-TI-0001) AND AMELIORATION RATES AGREED WITH THE CONSTRUCTION SUPERVISOR. THE EXPECTED NOMINAL TOPSOIL DEPTH FOR THE SITE IS 150MM, FINAL STRIP DEPTH TO BE CONFIRMED IN THE FIELD.
3. MAINTENANCE OF ESC DEVICES:
   - THE CONTRACTOR SHALL INSPECT ALL ENVIRONMENTAL DEVICES ON A REGULAR BASIS. ANY RECTIFICATION OF DAMAGE TO THE ENVIRONMENTAL CONTROL DEVICES OR CLEANING OUT OF THE DEVICES IS TO BE CARRIED OUT BY THE CONTRACTOR AS REQUIRED.
   - REGULAR MAINTENANCE SHALL BE UNDERTAKEN UNTIL SUFFICIENT GROUND COVER IS ESTABLISHED TO PROVIDE STABILISATION TO ALL DISTURBED AREAS.
4. FILTER BERM DIMENSIONS IN ACCORDANCE WITH IECA FIGURE 1 ON STANDARD DRAWING MB-01. FILTER BERM MATERIAL TO BE CONSTRUCTED FROM AVAILABLE SITE MATERIAL.
5. ALL ESC DEVICES WILL BE DESIGN AND INSTALLED IN ACCORDANCE WITH THE NT LAND CLEARANCE GUIDELINES.
6. THE CONTRACTOR MUST SUBMIT AN EROSION AND SEDIMENT CONTROL PLAN WHICH WILL BE APPROVED BY TAMBORAN PRIOR TO MOBILISATION.
7. STOCKPILES SHOULD NOT BE LOCATED WITHIN AN OVERLAND FLOW PATH/DRAIN.
8. IF DIRECTED BY THE SUPERINTENDENT, TOPSOIL STOCKPILES ARE TO BE SOWN WITH A COVER CROP AS SOON AS PRACTICAL AFTER STOCKPILING.
9. NO DISTURBANCE TO VEGETATION IS TO TAKE PLACE BEYOND THE BOUNDARIES OF CURRENT STAGE OF DEVELOPMENT.
10. DURING CONSTRUCTION, TEMPORARY DIVERSION DRAINS, SEDIMENT FENCES AND, OR SEDIMENT TRAPS ARE TO BE CONSTRUCTED AT REGULAR INTERVALS DOWN SLOPE PRIOR TO ANY BREAKS IN CONSTRUCTION (SUCH AS A WEEKEND) OR IF RAIN IS IMMINENT.
11. INSTALL SEDIMENT FENCES TO CONTROL SHEET FLOW OR SEDIMENT TRAPS TO CONTROL CONCENTRATED FLOW.
12. SERVICE TRENCHES ARE TO BE CONTROL REVEGETATED WITH GRASS SODS AND TOPSOIL SAVED DURING EXCAVATION OF THE TRENCHES OR TURFED (AS APPROPRIATE) AND MAINTAINED UNTIL ESTABLISHED.
13. ALL AREAS DISTURBED BY CONSTRUCTION ACTIVITIES SHOULD BE PROMPTLY AND PROGRESSIVELY STABILISED WHERE APPROPRIATE.
14. WHERE ACCESS TRACKS CROSS DIVERSION BUNDS TRAFFICABLE WHOA BOYS TO BE INSTALLED. WHOA BOYS TO BE MAINTAINED FOR LIFE OF PROJECT TO ENSURE FLOW DIVERSION IS MAINTAINED.
15. LIMIT OF CLEARING 20m FROM LEASE BOUNDARY FENCELINE OR EDGE OF ACCESS TRACKS.

NOT FOR CONSTRUCTION

CAD REF: I:\SECURE\PROJECTS\60X\60611666\900_CAD_GIS\910_CAD\20_SHEETS\60611666-0007-05.DWG

LAST MODIFIED 2/9/2021 5:18 PM

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REVISIONS

No.	BY	DATE	DESCRIPTION	APPD
A	G.T		ISSUED FOR INFORMATION	

Scale

SCALE C 0 5 10 12.5m
1 : 500 (A3) 1 : 250 (A1)

THE SIGNING OF THIS TITLE BLOCK CONFIRMS THE DESIGN AND DRAFTING OF THIS PROJECT HAVE BEEN PREPARED AND CHECKED IN ACCORDANCE WITH THE AECOM QUALITY ASSURANCE SYSTEM TO ISO 9001-2000

DESIGNED	B.F	CHECKED	
DRAWN	G.T	CHECKED	K.P
APPROVED		DATE	

AECOM

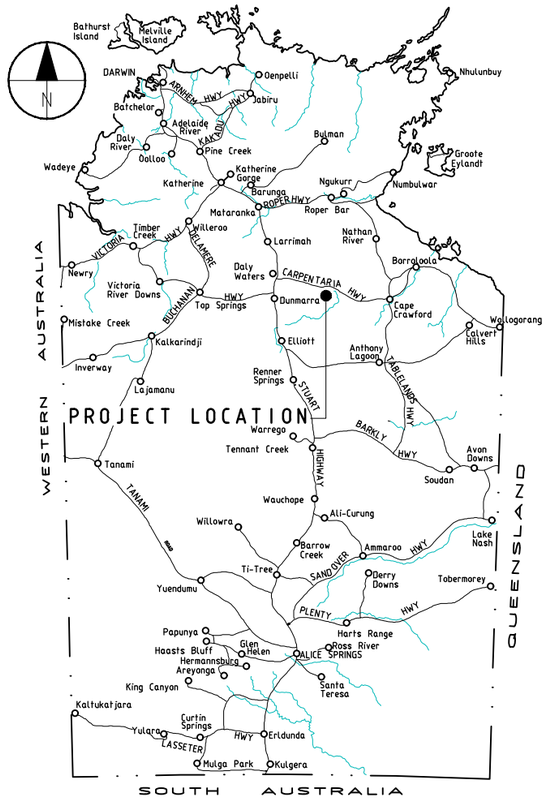
RPEQ No.
AECOM Australia Pty Ltd A.B.N. 20 093 846 925

SWEETPEA EXPLORATION DRILL CAMPAIGN

SWEETPEA EXPLORATION DRILL CAMPAIGN
WELL PAD 7 ACCESS ROAD INTERSECTION
EROSION AND SEDIMENT CONTROL PLAN

Status	Drg No.	Rev.
ISSUED FOR INFORMATION	60611666-0007-05	

SWEETPEA EXPLORATION DRILL CAMPAIGN

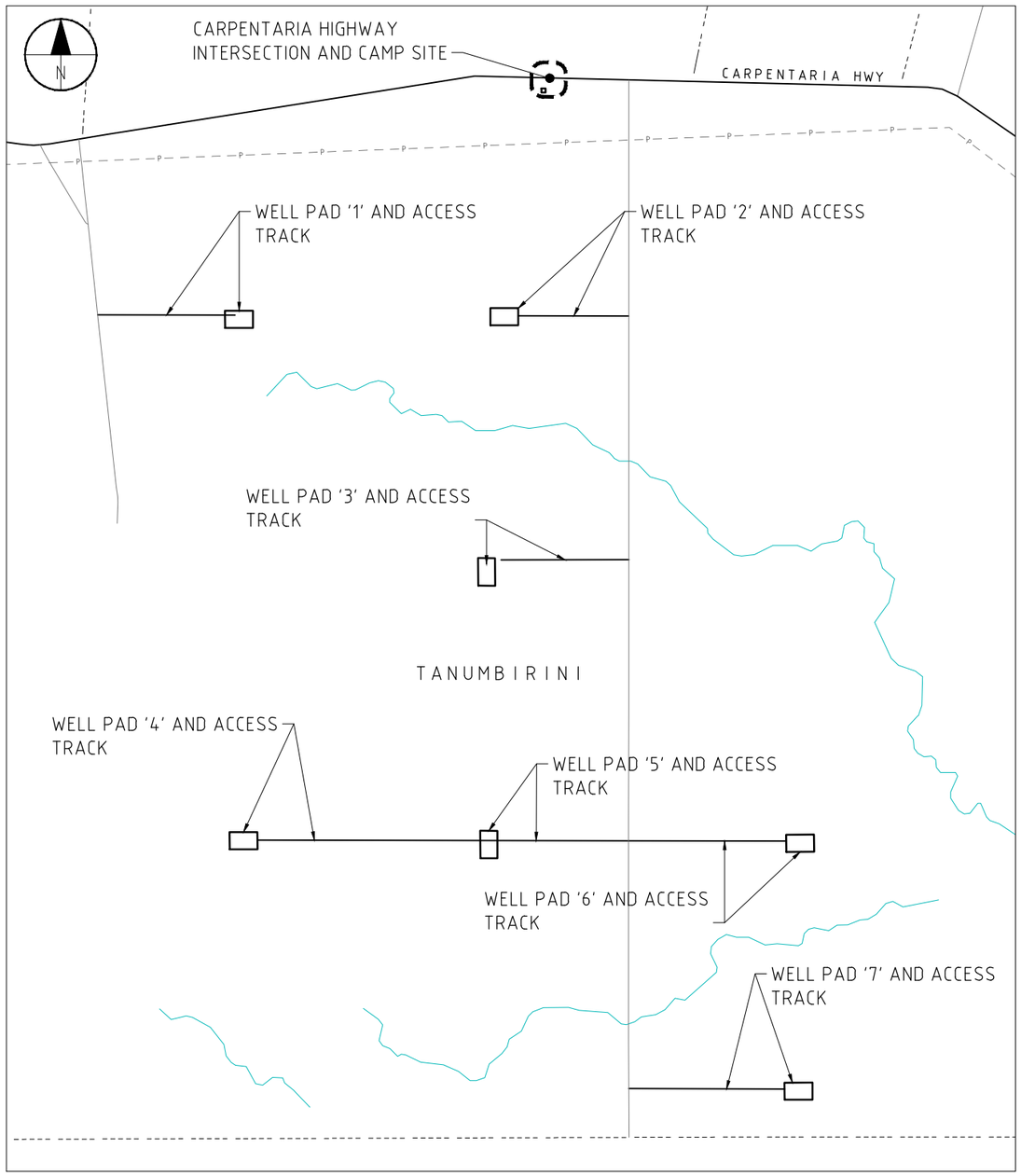


LOCALITY MAP

LEGEND

EXISTING

- PIPELINE
- FENCE
- PRINCIPAL ROAD
- UNSEALED TRACK
- WATERCOURSE



LOCALITY PLAN

SCALE (km) 0 0.5 1 1.5 2 2.5 1:50,000 (A1)

DRAWING LIST

DRAWING No.	TITLE
60611666-0008-00	LOCALITY PLAN AND DRAWING INDEX
60611666-0008-01	CARPENTARIA HIGHWAY INTERSETION DETAILS
60611666-0008-03	CARPENTARIA HIGHWAY INTERSECTION EROSION AND SEDIMENT CONTROL PLAN
60611666-0008-05	ACCESS ROAD TYPICAL SECTION

NOT FOR CONSTRUCTION

CAD REF: I:\SECURE\PROJECTS\60611666\900_CAD_GIS\01_CAD\20_SHEETS\60611666-0008-00.DWG

LAST MODIFIED: 21/01/2021 9:46 AM

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REVISIONS

No.	BY	DATE	DESCRIPTION	APPD
A	G.T	20.01.21	ISSUED FOR APPROVAL	

Scale

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DESIGNED	G.T	CHECKED	J.J
DRAWN	G.T	CHECKED	B.F
APPROVED	J.J	DATE	20.01.21

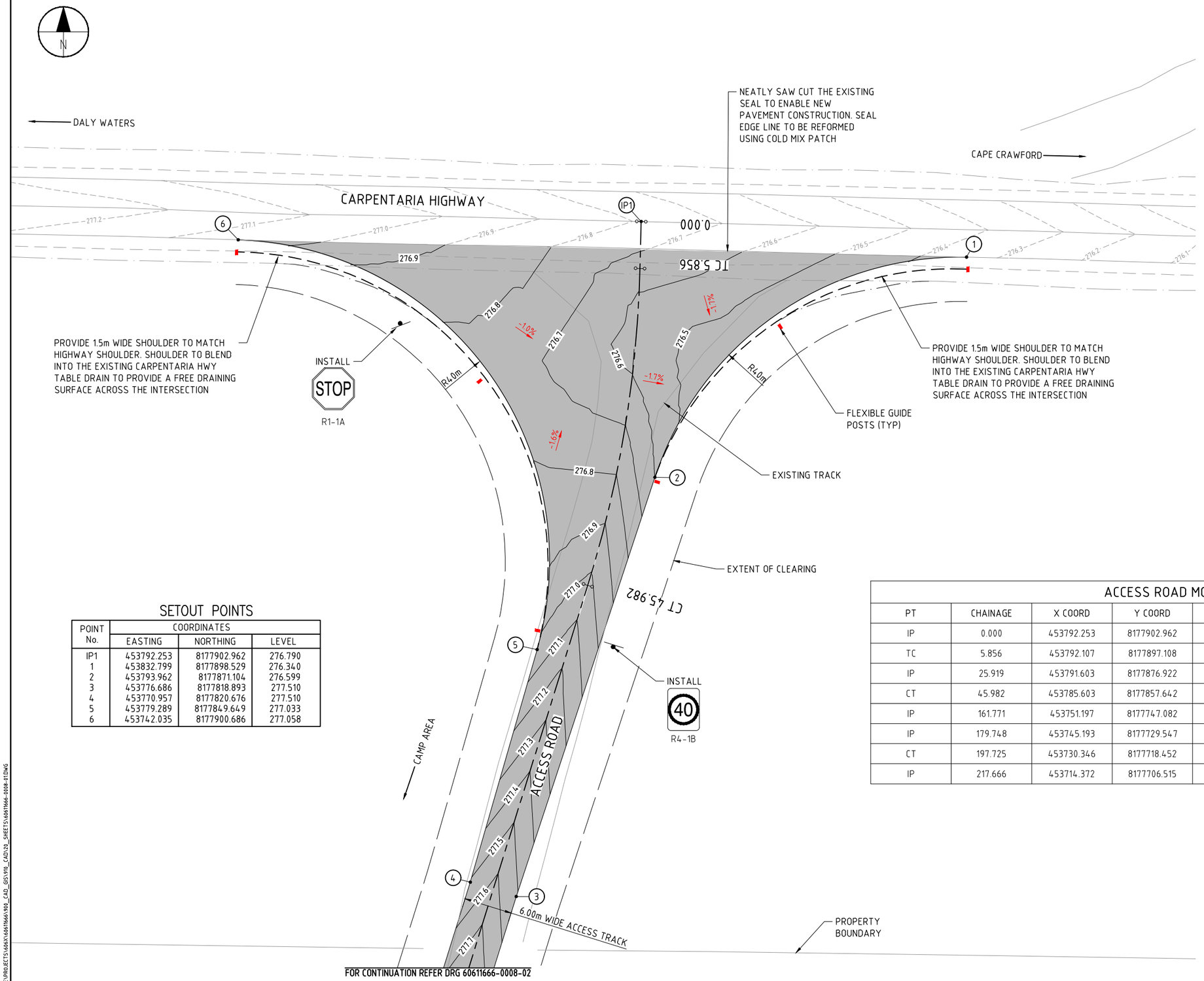
AECOM

RPEQ No.
AECOM Australia Pty Ltd A.B.N. 20 093 846 925

SWEETPEA EXPLORATION DRILL CAMPAIGN

SWEETPEA EXPLORATION DRILL CAMPAIGN
LOCALITY PLAN AND DRAWING INDEX

Status	Drg No.	Rev.
ISSUED FOR APPROVAL	60611666-0008-00	A



LEGEND

EXISTING

- EXISTING EDGE OF SHOULDER
- EXISTING TABLE DRAIN
- EXISTING SURFACE (0.1m INTERVALS)

PROPOSED

- ACCESS ROAD CENTERLINE
- EDGE OF PAVEMENT
- EDGE OF SHOULDER
- TABLE DRAIN
- EXTENT OF CLEARING - (EXTENT OF FIRE BREAK)
- DESIGN SURFACE (0.1m INTERVALS)
- SURFACE SLOPES
- PROPOSED PAVEMENT

NOTES:

1. ALL DIMENSIONS ARE IN METRES UNLESS NOTED OTHERWISE.
2. ALL WORKS TO BE CARRIED OUT IN ACCORDANCE WITH THE APPROVED MANAGEMENT PLAN REQUIREMENTS.
3. NO CONSTRUCTION WORKS ARE TO BE CARRIED OUT OUTSIDE THE APPROVED WORK CORRIDOR BOUNDARIES.
4. CONSTRUCTION FACILITY AREA LOCATIONS TO BE APPROVED BY THE ORIGIN SUPERVISOR PRIOR TO WORKS COMMENCING.
5. THE CONTRACTOR IS TO LIAISE WITH SERVICE PROVIDERS AND THE RELEVANT AUTHORITIES TO ENSURE ALL CONSTRUCTION WORKS ARE CARRIED OUT IN ACCORDANCE WITH SERVICE PROVIDERS AND RELEVANT AUTHORITIES REQUIREMENTS.
6. NO SERVICES WERE PRESENT OR PROVIDED BY DBYD AT THE TIME OF DESIGN AND ARE THEREFORE NOT SHOWN, HOWEVER THE CONTRACTOR IS RESPONSIBLE FOR CONDUCTING A SEARCH PRIOR TO WORKS BEING CARRIED OUT. ANY DAMAGE TO EXISTING SERVICES IS TO BE RE-INSTATED AT THE CONTRACTORS EXPENSE.
7. SIGNAGE TO BE INSTALLED PRIOR TO ROAD USE.
8. LOCATION OF INTERSECTION IS TO BE CONFIRMED BY CONTRACTOR ON SITE.
9. TRAFFIC ROAD SIGNAGE TO COMPLY WITH AS1743 AND NORTHERN TERRITORY GUIDELINES.
10. FINISH SURFACE LEVELS ARE TO FOLLOW EXISTING SURFACE LEVELS AS NEAR AS POSSIBLE AND TO THE GRADES SPECIFIED ON THE DRAWINGS.
11. ALL ROAD PAVEMENTS ARE TO HAVE A 4% CROSSFALL IN ACCORDANCE WITH THE ROAD CROSS-SECTION DETAILED ON DRG. 60611666-0008-05.
12. FOR CONTINUATION OF ROAD SETOUT REFER TO DRG. 60611666-0008-02.
13. FENCELINE IS TO BE MAINTAINED AT ALL TIMES.

SETOUT POINTS

POINT No.	COORDINATES		
	EASTING	NORTHING	LEVEL
IP1	453792.253	8177902.962	276.790
1	453832.799	8177898.529	276.340
2	453793.962	8177871.104	276.599
3	453776.686	8177818.893	277.510
4	453770.957	8177820.676	277.510
5	453779.289	8177849.649	277.033
6	453742.035	8177900.686	277.058

ACCESS ROAD MCA08 SETOUT

PT	CHAINAGE	X COORD	Y COORD	BEARING	RADIUS/SPIRAL	ARC LENGTH	DEFL. ANGLE
IP	0.000	453792.253	8177902.962	181°25'49.93"			
TC	5.856	453792.107	8177897.108	181°25'49.93"			
IP	25.919	453791.603	8177876.922		145.000	40.126	15°51'20.23"
CT	45.982	453785.603	8177857.642	197°17'10.15"			
IP	161.771	453751.197	8177747.082				
IP	179.748	453745.193	8177729.547		60.000	35.953	34°19'58.91"
CT	197.725	453730.346	8177718.452	233°13'52.06"			
IP	217.666	453714.372	8177706.515	233°13'52.06"			

INTERSECTION DETAIL

NOT FOR CONSTRUCTION

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No.	BY	DATE	DESCRIPTION	APPD
A	G.T	20.01.21	ISSUED FOR APPROVAL	

REVISIONS

Scale

0 2.5 5.0 7.5 10.0 12.5
SCALE (m) 1:250 (A1)

THE SIGNING OF THIS TITLE BLOCK CONFIRMS THE DESIGN AND DRAFTING OF THIS PROJECT HAVE BEEN PREPARED AND CHECKED IN ACCORDANCE WITH THE AECOM QUALITY ASSURANCE SYSTEM TO ISO 9001-2000

DESIGNED	G.T	CHECKED	J.J
DRAWN	G.T	CHECKED	B.F
APPROVED	J.J	DATE	20.01.21

AECOM

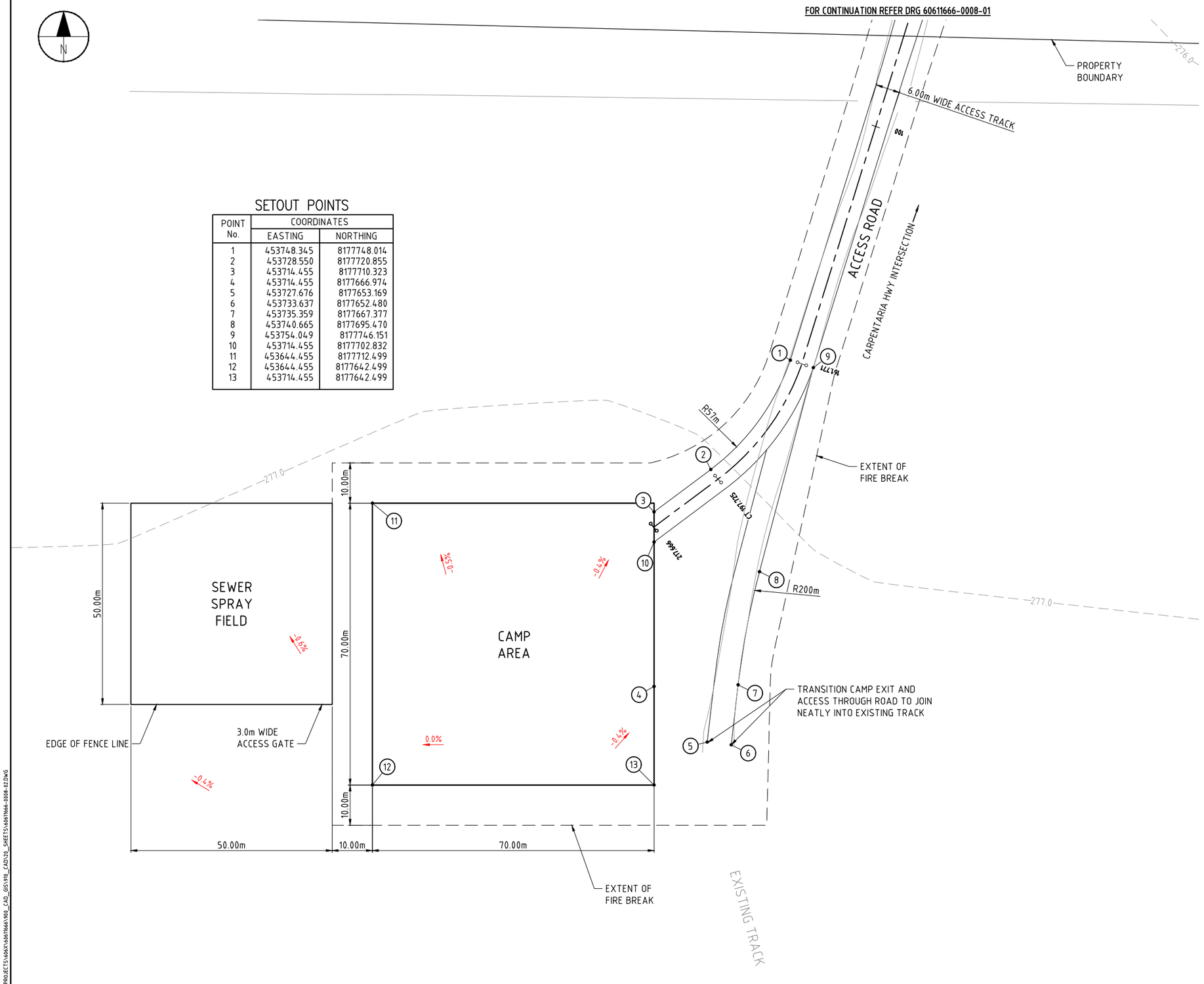
RPEQ No.
AECOM Australia Pty Ltd A.B.N. 20 093 846 925

SWEETPEA EXPLORATION DRILL CAMPAIGN

SWEETPEA EXPLORATION DRILL CAMPAIGN
CARPENTARIA HIGHWAY
INTERSETION DETAILS

Status: ISSUED FOR APPROVAL | Drg No.: 60611666-0008-01 | Rev.: A

CAD REF: \\SECURE\PROJECTS\60611666\900_CAD_GIS\99_CAD\20_SHEETS\60611666-0008-01.DWG
LAST MODIFIED: 21/01/2021 9:46 AM



SETOUT POINTS

POINT No.	COORDINATES	
	EASTING	NORTHING
1	453748.345	8177748.014
2	453728.550	8177720.855
3	453714.455	8177710.323
4	453714.455	8177666.974
5	453727.676	8177653.169
6	453733.637	8177652.480
7	453735.359	8177667.377
8	453740.665	8177695.470
9	453754.049	8177746.151
10	453714.455	8177702.832
11	453644.455	8177712.499
12	453644.455	8177642.499
13	453714.455	8177642.499

LEGEND

EXISTING

269.7 CONTOURS

PROPOSED

ACCESS ROAD CENTERLINE

EDGE OF PAVEMENT

EXTENT OF CLEARING - (EXTENT OF FIRE BREAK)

GENERAL NOTES

1. ALL DIMENSIONS ARE IN METRES UNLESS NOTED OTHERWISE.
2. SEWER SPRAY FIELD AREA IS NOT TO BE CLEARED. SPRAY PIPES LAID ON EXISTING VEGETATION BY OTHERS.
3. ALL WORKS TO BE CARRIED OUT IN ACCORDANCE WITH THE APPROVED MANAGEMENT PLAN REQUIREMENTS.
4. NO CONSTRUCTION WORKS ARE TO BE CARRIED OUT OUTSIDE THE APPROVED WORK CORRIDOR BOUNDARIES.
5. CONSTRUCTION FACILITY AREA LOCATIONS TO BE APPROVED BY THE SUPERINTENDENT PRIOR TO WORKS COMMENCING.
6. THE CONTRACTOR IS TO LIAISE WITH SERVICE PROVIDERS AND THE RELEVANT AUTHORITIES TO ENSURE ALL CONSTRUCTION WORKS ARE CARRIED OUT IN ACCORDANCE WITH SERVICE PROVIDERS AND RELEVANT AUTHORITIES REQUIREMENTS.
7. NO SERVICES WERE PRESENT OR PROVIDED BY DBYD AT THE TIME OF DESIGN AND ARE THEREFORE NOT SHOWN, HOWEVER THE CONTRACTOR IS RESPONSIBLE FOR CONDUCTING A SEARCH PRIOR TO WORKS BEING CARRIED OUT. ANY DAMAGE TO EXISTING SERVICES IS TO BE RE-INSTATED AT THE CONTRACTORS EXPENSE.
8. THE CONTRACTOR IS TO CARRY OUT A DBYD AND LOCATE AND MARK SERVICES ON SITE. ANY DAMAGE TO EXISTING SERVICES IS TO BE RE-INSTATED AT THE CONTRACTORS EXPENSE.
9. SIGNAGE TO BE INSTALLED PRIOR TO ROAD USE.
10. NEW WATER BORE TO BE PROVIDED BY THE CONTRACTOR AND TO DISCHARGE TO ABOVE GROUND TANK.
11. DRILLING CONTRACTOR TO PROVIDE ALL AMENITIES INCLUDING ACCOMMODATION, ABLUTIONS, WATER SUPPLY, WASTE MANAGEMENT AND SEWAGE TREATMENT FOR THE CAMP AREA. AMENITIES TO COMPLY WITH NORTHERN TERRITORY REQUIREMENTS FOR FACILITIES OF THIS NATURE.
12. FIREBREAK CLEARINGS AROUND DRILLING LEASE AND CAMP PAD ARE TO BE USED FOR STORAGE OF TOPSOIL AND VEGETATION AS REQUIRED. IF ADDITIONAL STORAGE SPACE IS REQUIRED THE CONTRACTOR IS TO PROVIDE ADDITIONAL STORAGE AREA AS INDICATED ON THIS DRAWING.
13. SIGNAGE TO BE INSTALLED PRIOR TO ROAD USE.
14. LOCATION OF INTERSECTION IS TO BE CONFIRMED BY CONTRACTOR ON SITE.
15. TRAFFIC ROAD SIGNAGE TO COMPLY WITH AS1743 AND NORTHERN TERRITORY GUIDELINES.
16. REFER TO DRG. 60611666-0000-02 FOR ROAD PAVEMENT DETAILS.
17. FINISH SURFACE LEVELS ARE TO FOLLOW EXISTING SURFACE LEVELS AS NEAR AS POSSIBLE AND TO THE GRADES SPECIFIED ON THE DRAWINGS.
18. TABLE DRAINS ARE TO BE CUT ALONG THE LENGTH OF THE ROAD AND ALL ROAD PAVEMENTS ARE TO HAVE A 4% CROSSFALL IN ACCORDANCE WITH THE ROAD CROSS-SECTION DETAILED ON DRG. 60611666-0000-02.
19. FENCELINE IS TO BE MAINTAINED AT ALL TIMES.

NOT FOR CONSTRUCTION

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No.	BY	DATE	DESCRIPTION	APPD
A	G.T		ISSUED FOR INFORMATION	

REVISIONS

Scale

0 5 10 15 20 25

SCALE (m) 1:500 (A1)

THE SIGNING OF THIS TITLE BLOCK CONFIRMS THE DESIGN AND DRAFTING OF THIS PROJECT HAVE BEEN PREPARED AND CHECKED IN ACCORDANCE WITH THE AECOM QUALITY ASSURANCE SYSTEM TO ISO 9001-2000

DESIGNED	B.F	CHECKED	
DRAWN	G.T	CHECKED	K.P
APPROVED		DATE	

AECOM

RPEQ No.
AECOM Australia Pty Ltd A.B.N. 20 093 846 925

SWEETPEA EXPLORATION DRILL CAMPAIGN

SWEETPEA EXPLORATION DRILL CAMPAIGN
CAMP SITE AREA
GENERAL ARRANGEMENT PLAN

Status: ISSUED FOR INFORMATION | Drg No.: 60611666-0008-02 | Rev.:

LAST MODIFIED:3/11/2021 9:45 AM
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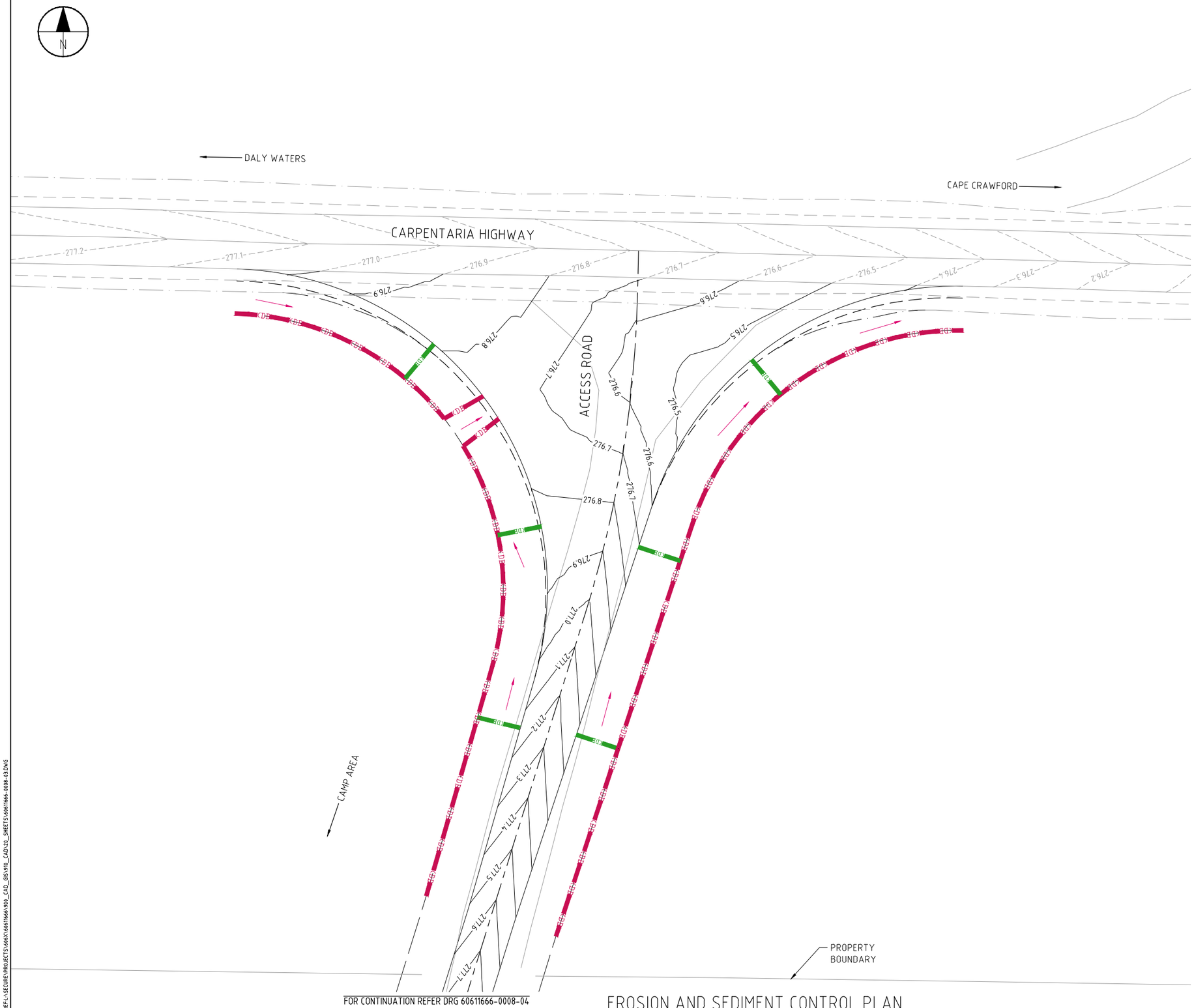

LEGEND

EXISTING

- EXISTING EDGE OF SHOULDER
- EXISTING TABLE DRAIN
- EXISTING SURFACE (0.1m INTERVALS) (275.0)

PROPOSED

- ACCESS ROAD CENTERLINE
- EDGE OF PAVEMENT
- EXTENT OF CLEARING - (EXTENT OF FIRE BREAK)
- FILTER BERM (FDE)
- DIVERSION BUND (DE)
- FLOW DIRECTION
- DESIGN SURFACE (0.1m INTERVALS) (275.0)

EROSION AND SEDIMENTATION CONTROL NOTES

1. ALL WORK TO BE IN ACCORDANCE WITH THE BEST PRACTICE EROSION AND SEDIMENT CONTROL DOCUMENT (2008) PREPARED BY IECA.
2. TOPSOIL STRIPPING DEPTH ASSESSMENT MUST BE UNDERTAKEN IN ACCORDANCE WITH THE BEETALOO TOPSOIL STRIPPING TECHNICAL INSTRUCTION (NT-2050-15-TI-0001) AND AMELIORATION RATES AGREED WITH THE CONSTRUCTION SUPERVISOR. THE EXPECTED NOMINAL TOPSOIL DEPTH FOR THE SITE IS 150MM, FINAL STRIP DEPTH TO BE CONFIRMED IN THE FIELD.
3. MAINTENANCE OF ESC DEVICES:
   - THE CONTRACTOR SHALL INSPECT ALL ENVIRONMENTAL DEVICES ON A REGULAR BASIS. ANY RECTIFICATION OF DAMAGE TO THE ENVIRONMENTAL CONTROL DEVICES OR CLEANING OUT OF THE DEVICES IS TO BE CARRIED OUT BY THE CONTRACTOR AS REQUIRED.
   - REGULAR MAINTENANCE SHALL BE UNDERTAKEN UNTIL SUFFICIENT GROUND COVER IS ESTABLISHED TO PROVIDE STABILISATION TO ALL DISTURBED AREAS.
4. FILTER BERM DIMENSIONS IN ACCORDANCE WITH IECA FIGURE 1 ON STANDARD DRAWING MB-01. FILTER BERM MATERIAL TO BE CONSTRUCTED FROM AVAILABLE SITE MATERIAL.
5. ALL ESC DEVICES WILL BE DESIGN AND INSTALLED IN ACCORDANCE WITH THE NT LAND CLEARANCE GUIDELINES.
6. THE CONTRACTOR MUST SUBMIT AN EROSION AND SEDIMENT CONTROL PLAN WHICH WILL BE APPROVED BY TAMBORAN PRIOR TO MOBILISATION.
7. STOCKPILES SHOULD NOT BE LOCATED WITHIN AN OVERLAND FLOW PATH/DRAIN.
8. IF DIRECTED BY THE SUPERINTENDENT, TOPSOIL STOCKPILES ARE TO BE SOWN WITH A COVER CROP AS SOON AS PRACTICAL AFTER STOCKPILING.
9. NO DISTURBANCE TO VEGETATION IS TO TAKE PLACE BEYOND THE BOUNDARIES OF CURRENT STAGE OF DEVELOPMENT.
10. DURING CONSTRUCTION, TEMPORARY DIVERSION DRAINS, SEDIMENT FENCES AND, OR SEDIMENT TRAPS ARE TO BE CONSTRUCTED AT REGULAR INTERVALS DOWN SLOPE PRIOR TO ANY BREAKS IN CONSTRUCTION (SUCH AS A WEEKEND) OR IF RAIN IS IMMINENT.
11. INSTALL SEDIMENT FENCES TO CONTROL SHEET FLOW OR SEDIMENT TRAPS TO CONTROL CONCENTRATED FLOW.
12. SERVICE TRENCHES ARE TO BE CONTROL REVEGETATED WITH GRASS SODS AND TOPSOIL SAVED DURING EXCAVATION OF THE TRENCHES OR TURFED (AS APPROPRIATE) AND MAINTAINED UNTIL ESTABLISHED.
13. ALL AREAS DISTURBED BY CONSTRUCTION ACTIVITIES SHOULD BE PROMPTLY AND PROGRESSIVELY STABILISED WHERE APPROPRIATE.
14. WHERE ACCESS TRACKS CROSS DIVERSION BUNDS TRAFFICABLE WHOA BOYS TO BE INSTALLED. WHOA BOYS TO BE MAINTAINED FOR LIFE OF PROJECT TO ENSURE FLOW DIVERSION IS MAINTAINED.
15. LIMIT OF CLEARING 20m FROM LEASE BOUNDARY FENCELINE OR EDGE OF ACCESS TRACKS.

EROSION AND SEDIMENT CONTROL PLAN

NOT FOR CONSTRUCTION

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Scale

0 2.5 5.0 7.5 10.0 12.5
SCALE (m) 1:250 (A1)

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APPROVED	J.J	DATE	20.01.21

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RPEQ No.
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SWEETPEA EXPLORATION DRILL CAMPAIGN

SWEETPEA EXPLORATION DRILL CAMPAIGN
CARPENTARIA HIGHWAY INTERSECTION
EROSION AND SEDIMENT CONTROL PLAN

Status	Drg No.	Rev.
ISSUED FOR APPROVAL	60611666-0008-03	A

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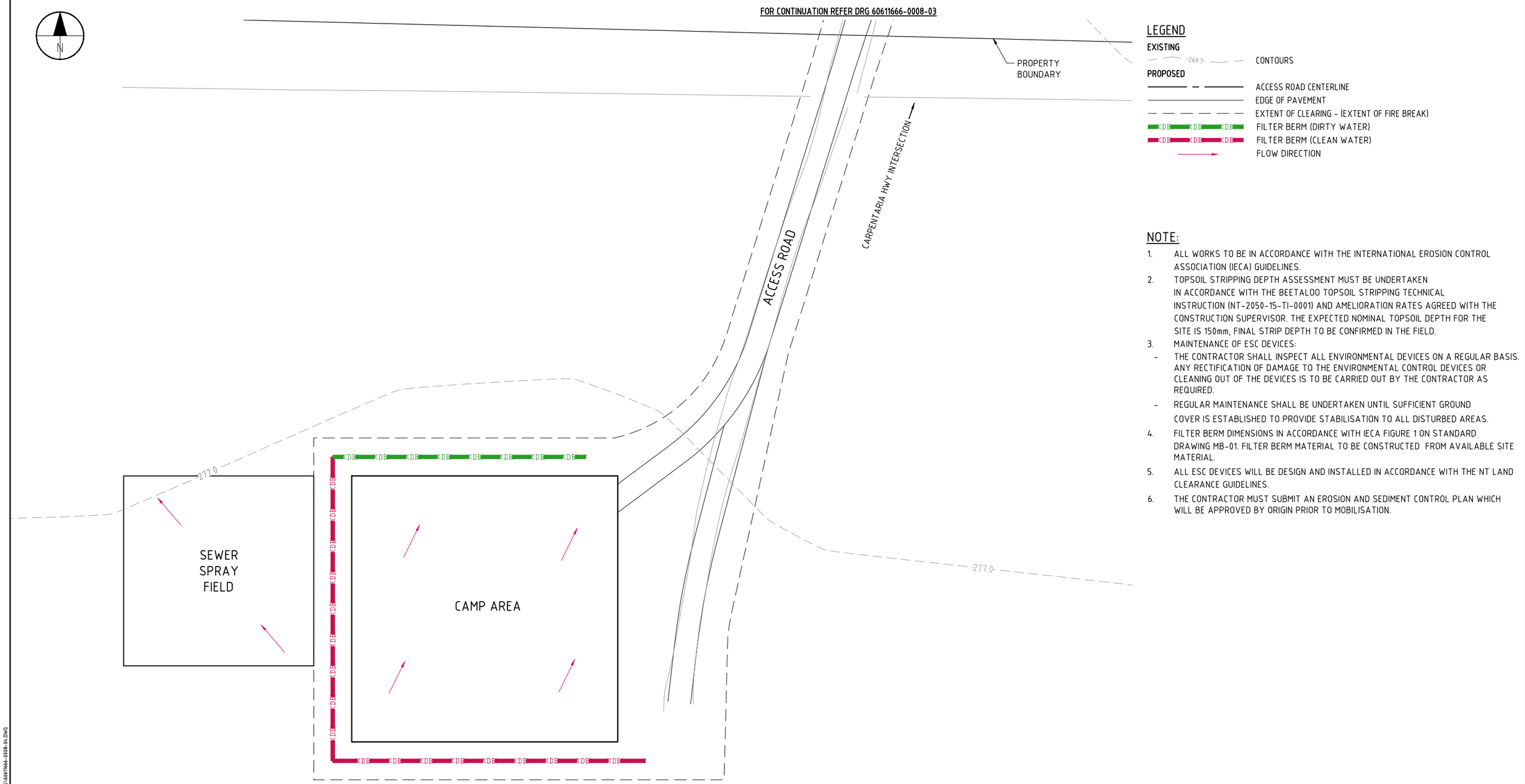

LEGEND

EXISTING

-269.7- CONTOURS

PROPOSED

- ACCESS ROAD CENTERLINE
- EDGE OF PAVEMENT
- EXTENT OF CLEARING - (EXTENT OF FIRE BREAK)
- FILTER BERM (DIRTY WATER)
- FILTER BERM (CLEAN WATER)
- FLOW DIRECTION

NOTE:

1. ALL WORKS TO BE IN ACCORDANCE WITH THE INTERNATIONAL EROSION CONTROL ASSOCIATION (IECA) GUIDELINES.
2. TOPSOIL STRIPPING DEPTH ASSESSMENT MUST BE UNDERTAKEN IN ACCORDANCE WITH THE BEETALOO TOPSOIL STRIPPING TECHNICAL INSTRUCTION (NT-2050-15-TI-0001) AND AMELIORATION RATES AGREED WITH THE CONSTRUCTION SUPERVISOR. THE EXPECTED NOMINAL TOPSOIL DEPTH FOR THE SITE IS 150mm, FINAL STRIP DEPTH TO BE CONFIRMED IN THE FIELD.
3. MAINTENANCE OF ESC DEVICES:
   - THE CONTRACTOR SHALL INSPECT ALL ENVIRONMENTAL DEVICES ON A REGULAR BASIS. ANY RECTIFICATION OF DAMAGE TO THE ENVIRONMENTAL CONTROL DEVICES OR CLEANING OUT OF THE DEVICES IS TO BE CARRIED OUT BY THE CONTRACTOR AS REQUIRED.
   - REGULAR MAINTENANCE SHALL BE UNDERTAKEN UNTIL SUFFICIENT GROUND COVER IS ESTABLISHED TO PROVIDE STABILISATION TO ALL DISTURBED AREAS.
4. FILTER BERM DIMENSIONS IN ACCORDANCE WITH IECA FIGURE 1 ON STANDARD DRAWING MB-01. FILTER BERM MATERIAL TO BE CONSTRUCTED FROM AVAILABLE SITE MATERIAL.
5. ALL ESC DEVICES WILL BE DESIGN AND INSTALLED IN ACCORDANCE WITH THE NT LAND CLEARANCE GUIDELINES.
6. THE CONTRACTOR MUST SUBMIT AN EROSION AND SEDIMENT CONTROL PLAN WHICH WILL BE APPROVED BY ORIGIN PRIOR TO MOBILISATION.

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SCALE (m) 0 5 10 15 20 25 1:500 (A1)

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APPROVED		DATE	

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SWEETPEA EXPLORATION DRILL CAMPAIGN

SWEETPEA EXPLORATION DRILL CAMPAIGN
CAMP SITE AREA
EROSION AND SEDIMENT CONTROL PLAN

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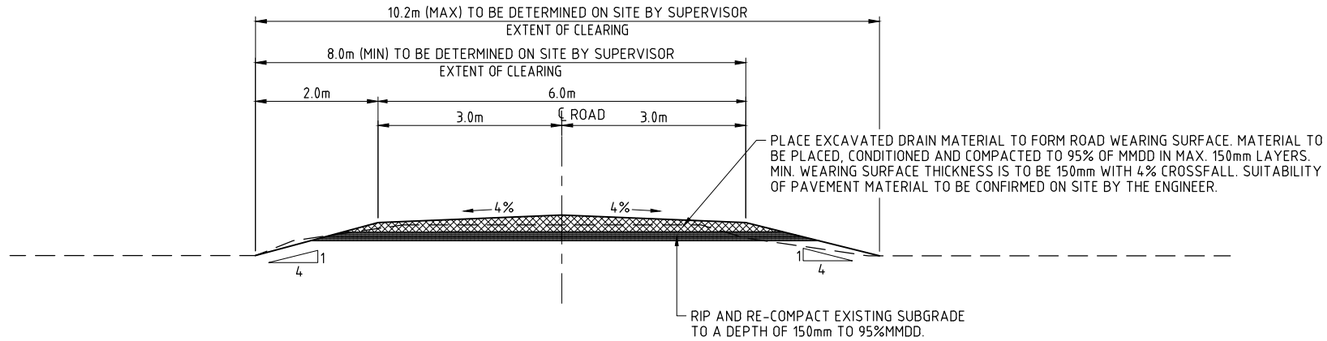
NOTES:

1. ALL UNITS ARE IN METRES (m) UNLESS NOTED OTHERWISE.
2. ENSURE THAT TABLE DRAINS ARE FREE DRAINING.
3. GROUND CONDITIONS AND SUITABLE MATERIALS TO BE CONFIRMED ON SITE BY SUPERINTENDENT.
4. CLEARED VEGETATION TO BE STORED ALONGSIDE NEW ROAD FOR FUTURE REHABILITATION.
5. REFER TO SPECIFICATION FOR COMPACTION REQUIREMENTS.
6. STRIPPED TOPSOIL TO BE STORED IN BERMS ALONGSIDE ROAD.
7. REFER TO SPECIFICATION FOR GENERAL REQUIREMENTS.
8. THE CONTRACTOR IS TO NOTIFY THE SUPERVISOR IF AREAS OF SOFT GROUND ARE ENCOUNTERED OR IF THE SPECIFICATION CANNOT BE ACHIEVED.
9. CLEAR, STRIP 150mm TOPSOIL AND STOCKPILE IN NOMINATED BUFFER ZONE TO ESTABLISH BORROW PITS.
10. THIS DRAWING MAY BE USED FOR TEMPORARY ACCESS APPLICATION TO NT ROADS.
11. TYPICAL CROSS SECTION DESIGNED IN ACCORDANCE WITH NORTHERN TERRITORY STANDARD DRAWING C(S)3003.



TYPICAL CROSS SECTION - ACCESS ROAD

SCALE (m) 0 0.5 1.0 1.5 2.0 2.5 1:50 (A1)

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APPROVED	J.J	DATE	20.01.21

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SWEETPEA EXPLORATION DRILL CAMPAIGN

SWEETPEA EXPLORATION DRILL CAMPAIGN
ACCESS ROAD TYPICAL SECTION

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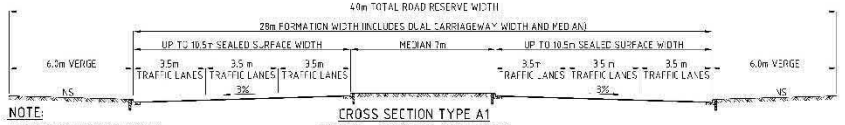
Appendix K4

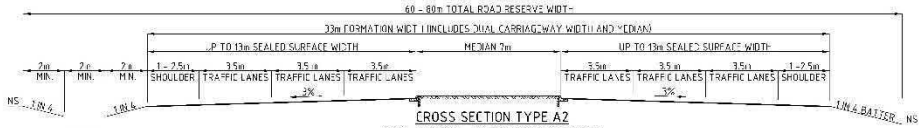
Typical Cross Section for Urban and Rural Environments

Appendix K4 Typical Cross Section for Urban and Rural Environments



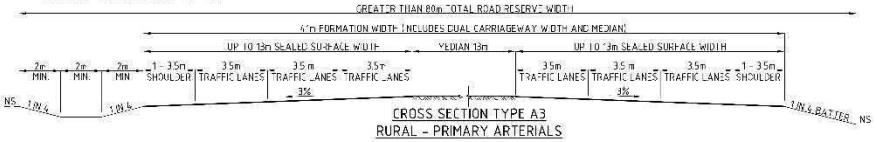
NOTE:
KERB SIDE LANE TO BE MINIMUM 5.0m WIDE DURING STAGE CONSTRUCTION

CROSS SECTION TYPE A1
URBAN - PRIMARY ARTERIALS



CROSS SECTION TYPE A2
SEMI-URBAN - PRIMARY ARTERIALS

NOTE:
TOTAL ROAD RESERVE WIDTH 60 - 80m TO ALLOW FOR SIDE DRAINS AND POSSIBLE SERVICES
SHOULDERS TO BE SEALED, MINIMUM 1.0m.



CROSS SECTION TYPE A3
RURAL - PRIMARY ARTERIALS

URBAN ENVIRONMENT

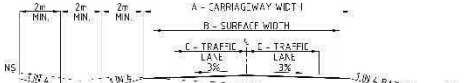
TYPICAL CROSS SECTIONS – URBAN ENVIRONMENT

ROAD CLASSIFICATION	AUSTROAD CLASS	TYPE CROSS SECTION	FORMATION (DUAL CARRIAGEWAY)	TRAFFIC LANES WIDTH (m)	TRAFFIC LANES SURFACE	SEAL WIDTH (m)	COMMENTS
URBAN - PRIMARY ARTERIALS:							
URBAN	CLASS 6	TYPE A1	28.0	UP TO 3 x 3.5 EACH WAY	SEALED	UP TO 10.5 EACH WAY	KERB SIDE LANE TO BE MINIMUM 5.0m WIDE DURING STAGE CONSTRUCTION, TOTAL ROAD RESERVE WIDTH 40m
SEMI - URBAN	CLASS 6	TYPE A2	33.0	UP TO 3 x 3.5 EACH WAY	SEALED	UP TO 13.0 EACH WAY (INCLFULL WIDTH SHOULDER SEAL	SHOULDER TO BE SEALED MINIMUM 1.0m TOTAL ROAD RESERVE WIDTH 60 -80m TO ALLOW FOR SIDE DRAINS AND POSSIBLE SERVICES.
RURAL	CLASS 6	TYPE A3	41.0	UP TO 3 x 3.5 EACH WAY	SEALED	UP TO 14.0 EACH WAY (INCLFULL WIDTH SHOULDER SEAL)	SHOULDER TO BE SEALED MINIMUM OF 1.0m. PAVEMENT & SEAL TO EXTEND A MINIMUM OF 1.0m IN TO THE MEDIAN. TOTAL ROAD RESERVE WIDTH GREATER THAN 80m

TABLE AS PER THE DEPARTMENT'S POLICY FOR STANDARD ROAD CROSS SECTIONS - APRIL 2015 - VERSION 1.0

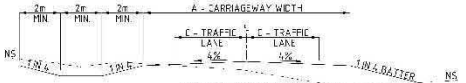
URBAN ENVIRONMENT NOTES:
1 REFER TO LOCAL GOVERNMENT GUIDELINES FOR URBAN SUB ARTERIALS (6000-12000 VPD), URBAN DISTRIBUTOR (LESS THAN 6000 VPD) AND URBAN COLLECTOR (LESS THAN 3000 VPD) ROADS.
2 REFER TO DEPARTMENT GUIDELINES FOR URBAN LOCAL AND URBAN SUBDIVISION REQUIREMENTS

GENERAL NOTES:
1. REFER TO STANDARD DRAWING CS3002 FOR SHEET 1



NOTE:
PAVEMENT AND SEAL TO EXTEND A MINIMUM OF 1.0m IN TO THE MEDIAN. SHOULDERS TO BE SEALED, MINIMUM 1.0m.

CROSS SECTION TYPE B
RURAL SEALED ROADS



CROSS SECTION TYPE C
RURAL UNSEALED ROADS

RURAL ENVIRONMENT

TYPICAL CROSS SECTIONS - RURAL ENVIRONMENT

ROAD CLASSIFICATION	AUSTROAD CLASS	TYPE CROSS SECTION	A CARRIAGE WAY WIDTH (m) (INCLUDING MEDIAN)	C TRAFFIC LANES WIDTH (m)	B SEAL/ GRAVEL SURFACE	B SEAL/ GRAVEL WIDTH (m)	COMMENTS
RURAL - NATIONAL HIGHWAY	CLASS 1	TYPE B	11.0	2 x 3.5	SEALED	8.0	NATIONAL STANDARDS UNDER REVIEW. SEAL WIDTH MAY BE INCREASED TO 9.0m DEPENDING ON LOCAL ISSUES.
RURAL ARTERIAL	CLASS 3	TYPE B	10.0	2 x 3.5	SEALED	8.0	> 1000 VPD - 20 YEAR PROJECTED VOLUMES, SEE NOTE 1
RURAL SECONDARY ROADS	CLASS 4	TYPE B	9.0	2 x 3.0	SEALED	7.0	> 500 VPD - 20 YEAR PROJECTED VOLUMES, SEE NOTE 1
RURAL SECONDARY ROADS	CLASS 4	TYPE C	9.0	2 x 3.0	GRAVELLED	6.0	SEE NOTE 2
RURAL - LOCAL	CLASS 5	TYPE B	9.0	2 x 3.0	SEALED	7.0	FOR UNSEALED ROADS A 9.0m CARRIAGEWAY MAY BE APPROPRIATE IF FUTURE SEALING IS FORESEEABLE, SEE NOTE 2.
		TYPE C	8.0	2 x 3.0	GRAVELLED	6.0	
RURAL - SUBDIVISIONS			REFER TO CS3002				REFER TO DEVELOPMENT GUIDELINES BY THE TRANSPORT INFRASTRUCTURE PLANNING DIVISION.
PASTORAL ACCESS ROADS							
PASTORAL 1	CLASS 5	TYPE C	4.0	1 x 4.0	FORMED	-	SINGLE USER ACCESS
PASTORAL 2	CLASS 5	TYPE C	6.0	1 x 6.0	FORMED	-	MULTI USER ACCESS FOR UP TO 3 PROPERTIES
PASTORAL 3	CLASS 5	TYPE C	8.0	2 x 3.0	GRAVELLED	6.0	PROVIDES ACCESS TO GREATER THAN 3 PROPERTIES

TABLE AS PER THE DEPARTMENT'S POLICY FOR STANDARD ROAD CROSS SECTIONS - APRIL 2015 - VERSION 1.0

RURAL ENVIRONMENT NOTES:
1. FOR PREDICATED FUTURE VOLUMES OF 500 - 1000 VPD THE STANDARD WILL DEPEND ON TRAFFIC MIX (NUMBERS OF ROAD TRAINS/CARAVANS/BUSES) AND TOPOGRAPHY AND WILL BE ASSESSED ON A CASE BY CASE BASIS. SEAL WIDTHS MAY ALSO BE INCREASED DEPENDING ON LOCAL ISSUES SUCH AS SEASONAL VARIATIONS (TOURISM) AND ENVIRONMENT.
2. THE DECISION IN REGARD TO SEALED VERSUS GRAVEL STANDARD FOR A PARTICULAR ROAD WILL DEPEND ON FACTORS SUCH AS PROPOSED USE (IE HORTICULTURAL), ENVIRONMENT, PREDICTED USE AND THE LIKE AND SHOULD BE REFERED TO TRANSPORT INFRASTRUCTURE PLANNING DIVISION.

No.	DESCRIPTION	DATE	NAME	DEPT/COMPANY
	AMENDMENTS			
2	SEALING DETAIL AMENDED	FEB 2020	S.SHI	EES
1	TABLE DETAILS AMENDED	MAR 2019	S.SHI	EES/DIPL
0	ISSUED AS A STANDARD DRAWING	SEPT 2017	J.LEESON	EES/DIPL

WARNING
BEWARE OF UNDERGROUND SERVICES.
THE LOCATIONS OF UNDERGROUND SERVICES ARE APPROXIMATE ONLY AND THEIR EXACT POSITION SHOULD BE PROVEN ON SITE. NO GUARANTEE IS GIVEN THAT ALL EXISTING SERVICES ARE SHOWN.

DRAWN	J.LEESON	CHECKED	S.HATZI
DATE	MAR 2017	DATE	MAR 2017
DESIGNED	J.LEESON	CHECKED	S.HATZI
DATE	MAR 2017	DATE	MAR 2017
DESIGN LEADER	S.HATZI	DESIGN DIRECTOR	S.JACKSON
DATE	10/9/2017	DATE	10/9/2017

Northern Territory Government

STANDARD DRAWINGS
TYPICAL CROSS SECTIONS

TYPICAL CROSS SECTIONS FOR URBAN AND RURAL ENVIRONMENTS

FILE No.	ASSET No.	SHEET No.	DRAWING No.	AMEND No.	SIZE
-	-	2 OF 2	CS3003	2	A1

CS3003 AMED 2 RELEASED 20/12/2019

Appendix L

Traffic Impact Assessment

Appendix L Traffic Impact Assessment

Traffic Impact Statement

Beetaloo Sub-Basin, NT

CIVIL CONSTRUCTION AND WATER BORE EMP

Traffic Impact Statement

Beetaloo Sub-Basin, NT

Client: Sweetpea Petroleum Pty Ltd

ABN: 42074750879

Prepared by

AECOM Australia Pty Ltd
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ABN 20 093 846 925

16-Dec-2021

Job No.: 60611666

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Quality Information

Document Traffic Impact Statement

Ref 60611666

Date 16-Dec-2021

Prepared by Adam Tran

Reviewed by James Jentz, Tyler Hill, Alana Court

Revision History

Rev	Revision Date	Details	Authorised	
			Name/Position	Signature
0	11-Dec-2020	Draft	James Jentz Darwin Office Manager	
1	03-Mar-2021	Final	James Jentz Darwin Office Manager	[redacted]

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1.0 Executive Summary

The proposed works are located along the Carpentaria Highway, situated 132 km east of the Stuart Highway. Department of Infrastructure Planning and Logistics (DIPL) Annual Traffic Report 2019 showed an average traffic flow of 118 vehicles per day with an even distribution of traffic in both directions.

The Carpentaria Highway is a two lane, two-way road which allows a road capacity limit of 17,400 vehicles per day. Vehicle use generated from the proposed activities within exploration permit (EP) 136 produced an increase of 56 vehicles per day for the Carpentaria Highway. Vehicle use generated from other explorations within EP136 include Santos at EP161 and Imperial Oil and Gas (Imperial) at EP 187. Their combined proposed activities produced an increase of 123 vehicles (67 Santos and 56 Imperial) per day for the Carpentaria Highway. The cumulative traffic flow from exploration activities produced an increase of 179 vehicles per day for the Carpentaria Highway, which does not exceed the calculated road capacity limit.

This assessment concluded that the cumulative traffic volumes from other explorations with the inclusion of the proposed works will not negatively impact traffic activities in both directions, for the three-year phases.

2.0 Introduction

2.1 General

The purpose of this document is to discuss the potential traffic management issues associated with Sweetpea Petroleum Pty Ltd (Sweetpea) 2022-2025 development of permit area EP136, in particular the civil works including installation of water bores, upgrading access tracks and constructing drilling lease pads in preparation for future drilling, fracture stimulation and testing phase. This assessment will highlight the impacts of the additional vehicle load to the Carpentaria Highway, constrained particularly to the proposed site.

The Traffic Impact Statement (TIS) will be divided into four sections to better represent each stage of the program, where generally the stages will display similar traffic volume results. The TIS is broken down as follows:

- Identifying the traffic movements associated with the project, including the establishment and demobilisation procedures.
- Existing traffic conditions and road Level of Service.
- Assessment of the total traffic levels created by the works and its potential impact, including other exploration activities within EP136.
- Determine the required impact mitigation treatments.

2.2 Project Description

The Beetaloo Basin is located within the Barkly Region, 500 km south-east of Darwin, Northern Territory.

With reference to Figure 1, as part of the continued development of EP136, Sweetpea aim to complete the civil works required in preparation for drilling. These works will involve:

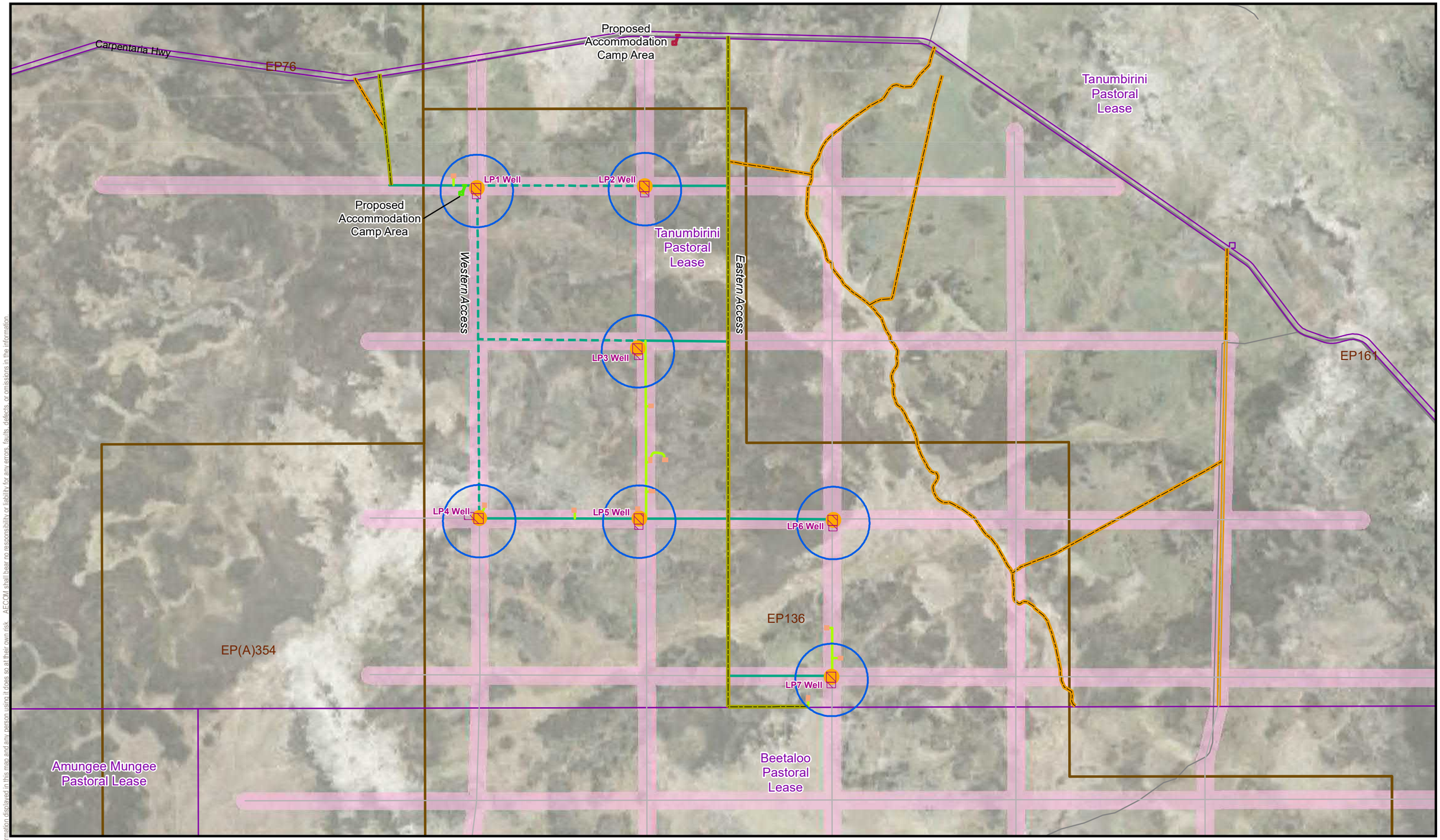
- Establishment of an access junction with the Carpentaria Highway.
- Main Camp establishment.
- Construction of monitoring bores.
- Construction of access tracks.
- Construction of seven drilling pads.

The campsite is located adjacent the Carpentaria Highway and the interaction with Carpentaria highway will be further discussed in the report. The initial construction activities being the construction of the intersection with the Carpentaria Highway, establishment of the camp and well pads for pads 1 and 3 will take place over the 2022 Dry Season with demobilisation planned to occur before the start of the Wet Season. It is noted that the camp will stay on site over the wet season.

The civil works for the balance of the well pad sites cover 2-3 sites a year and is summarised below:

- Install pairs of control monitor bores on site.
- Construct campsite (mobilise to camp site after initial year)
- Construct access tracks to site.
- Construct well pad and tank pad on site.
- Install pairs of impact monitor bores on each well pad site.
- Survey of bores and ongoing groundwater monitoring.
- Demobilise from site before wet season.

It is expected that traffic flows will remain similar for each year of the civil works.



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Projection: GDA 1994 MGA Zone 53

2 1 0 2 km

1:100,000 (when printed at A3)

- Well Site
- Existing Access
- Gravel Pit Access
- Western Access Option Access
- Eastern Access Option Access
- Seismic Lines - progressively rehabilitated
- Pastoral Track
- Highway
- Roads
- 250 m buffer to Seismic Line
- Gravel Pit Footprints
- Well Lease Area
- 1 km Bore Buffer
- EP136 Proposed Accommodation Camp
- Highway Proposed Accommodation Camp
- Native Title Register
- Petroleum Exploration Permit

Data sources:
Imagery: Digital Globe
Permit, Cadastre, Places, Bores - NT Gov 2019.
Pastora Infrstructure - AECOM 2020

Sweetpea Petroleum Pty Ltd, Civil Construction and Water Bore EMP

Location of Lease Pads, Gravel Pits, Camp Pads, Seismic Lines and Access Tracks

PROJECT ID	60611666
CREATED BY	prachi.kulkarni1
LAST MODIFIED	14-Dec-2021
VERSION	1

A3 size

Figure 1

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3.0 Traffic Generation Figures

3.1 Vehicle Movement

Conservative estimates of traffic movement for the site is highlighted in Table 1. Peak traffic flows will be experienced during the initial phase due to the establishment of the control monitoring bores at wells 1 and 2. With the installation of the control monitoring bores being independent to the construction activities required to establish the well and tank pads, vehicle estimates for both activities and establishing the camp site will be combined. It is estimated that for a week during the mobilisation for the bore and camp civil works, that an additional 35 trucks per day and 21 light vehicles per day (56 vehicles per day, total) will be generated from the site.

The construction of the $100 \times 100\ \mathrm{m}^2$ campsite will house a maximum of 55 personnel and will contain amenities (living quarters, kitchen, bathroom) to cater for the duration of the entire civil construction phases. Personnel will mobilise to the campsite using private vehicles where their vehicles will also reside at the campsite for the duration of the civil works and it assumed that some personnel will leave and return camp on rotating rosters via private vehicles or buses, but with most personnel remaining onsite.

Vehicles used to transport machinery and personnel to the well sites will mobilise from the campsite and will not impact traffic from the Carpentaria Highway. During the mobilisation from the camp to the well sites, there will be a day of approximately 47 vehicles a day (32 heavy and 15 light vehicles) accessing the permit used for the pad construction. Simultaneously, during the mobilisation to the bore sites, there will be approximately 9 vehicles (3 heavy and 6 light vehicles) which may coincide with the camp site establishment activities. The expected equipment and machinery can be seen below.

- Light 4WD Vehicle
- Truck-mounted drilling rig
- Cement mixing plant
- Support truck
- Water truck/tanks
- Bore test pump
- Gamma logging equipment
- Mobile camp
- Grader
- Dozer
- Four-wheel loader
- Tip truck
- Water truck/tanks
- Water tanks
- Excavator
- Compactor

The start of the wet season will also coincide with the demobilisation of the work personnel's private vehicles from the campsite and machinery related to the civil works. The 2022 and 2024 phase commencement will begin in the Dry Season where traffic conditions will follow a similar pattern of traffic flow of initially arriving at camp, where again the vehicles will mobilise from the campsite once re-mobilised.

Both Santos EP161 and Imperial EP187 have exploration activities which may coincide with Sweetpea's development of permit area EP136 schedule. From respective EMPs found from the Department of Environment, Parks and Water Security (DEPWS), the period with the highest vehicle generation from respective explorations have been taken as a conservative measure i.e. mobilisation to respective camp sites from the Carpentaria Highway.

Peak traffic flows generated from Santos and Imperial are approximately 67 (46 heavy and 21 light) and 56 (35 heavy and 21 light) vehicles per day for the Carpentaria Highway respectively. The cumulative traffic flow produced an increase of 179 vehicles per day for the Carpentaria Highway.

Table 1 Indicative Flows Carpentaria Highway – Sweetpea

Activity	Duration	Average heavy vehicles per day	Light vehicles per day	Total trips per day
Establishment of camp site				
Construct access junction w/ Carpentaria Highway and establish camp	1 week	32	15	Once at mobilisation and demobilisation.
Work personnel arriving on site in private vehicles	2 weeks	NA	15	Once at mobilisation and demobilisation.
Construction of bores per site				
Control & impact monitor bore mobilisation*	1 week	3	6	Once at mobilisation and demobilisation.
Control & impact monitor bore construction*	5 weeks	6	6	Once at mobilisation and demobilisation.
Survey of bore monitors	1 day	NA	2	2
Construction of well and tank pads per site				
Well and tank pad mobilisation*	1 week	NA (vehicles will be already on site from construction of camp)	NA (vehicles will be already on site from construction of camp)	Once at mobilisation and demobilisation.
Construct well pad and tank pad*	3-8 weeks	NA (vehicles will be already on site from construction of camp)	NA (vehicles will be already on site from construction of camp)	Once at mobilisation and demobilisation.
Wet season shutdown				
Demobilisation of personnel and construction vehicles	1 week	32	15	47

**These activities will mobilise from the camp site and will not impact traffic.*

Table 2 Indicative Flows Carpentaria Highway – Other Activities

Activity	Duration	Average heavy vehicles per day	Light vehicles per day	Total trips per day
Establishment of camp site/mobilisation to campsite				
Santos	2 weeks	46	21	Once at mobilisation and demobilisation.
Imperial	2 weeks	35	21	Once at mobilisation and demobilisation.

Note: Vehicle numbers were not explicitly provided in respective EMPs. Determination of vehicle numbers were based on indicative project schedules using Table 1 as the basis.

4.0 Analysis of Traffic Flows

4.1 Impact of Additional Traffic Volumes Generated

The preceding section identifies that the maximum anticipated traffic flow increases associated with the civil works by Sweetpea and works related to Santos and Imperial will be approximately 179 vehicles per day.

To evaluate the impact of additional vehicles, AUSROADS guidelines and DIPL's *Annual Traffic Report 2019* was used to determine the typical level of service operating conditions that would be expected by traffic on rural roads, such as the Carpentaria Highway, which is constrained to a single lane without overtaking. Eq (5) from AUSROADS *Guide to Traffic Management Part 3 (AGTM03-20)* will consequently be used and is broken down below.

$$C = 1800 f_w f_{HV}$$

Where,

$C =$ capacity in vehicles/hour under prevailing roadway and traffic conditions.

$f_w =$ adjustment factor for narrow lanes and lateral clearances (Table 5.1 *AGTM03-20*).

$f_{HV} = \frac{1}{1+P_{HV}(E_{VH}-1)} =$ adjustment factor for heavy vehicles.

$P_{HV} =$ the proportion of heavy vehicles in the traffic stream.

$E_{HV} =$ the average passenger car equivalents for heavy vehicles obtained from Table 5.2 of *AGTM03-20.*

The Carpentaria Highway was estimated to have a width and lateral clearances on each side of 2.7m and 1m respectively; these measurements are of a conservative estimate. This equated to an f_w value of 0.63.

The proportions of heavy vehicle use on the Carpentaria Highway was determined via DIPL's *Annual Traffic Report 2019* and AUSTROADS vehicle classification guidelines found in Chart 1 of the DIPL report, where a heavy vehicle is identified with a Class 3 or above. By summing the percentage of vehicles under the Vehicle Classification of 1 and 2 using Figure 2, the remaining percentage will equate to the proportion of heavy vehicles on the Carpentaria Highway which resulted in 19%.

The E_{HV} value was taken as a conservative approach, equating to 4 and was determined using Table 5.2 from *AGTMO3-20.*

Road Name/Location	Station	Month (Days)	Direction	Vehicle Classification 1	2	3	4	5	6	7	8	9	10	11	12
Carpentaria Highway	RKVDP008	Apr (30)	Both	74.01	10.06	9.28	0.71	0.32	1.22	0.66	0.10	0.24	0.11	1.12	2.16
2km East of Stuart Highway		May (31)	Both	70.57	8.54	11.93	1.11	0.53	0.99	0.79	0.19	0.46	0.44	1.43	3.01
		Jun (30)	Both	71.91	8.65	11.48	0.74	0.32	0.93	0.86	0.12	0.51	0.16	1.41	2.90
		Jul (31)	Both	71.07	9.36	10.90	0.89	0.34	1.18	0.91	0.12	0.49	0.22	1.29	3.24
		Aug (31)	Both	71.44	7.44	11.77	1.14	0.33	1.12	0.82	0.18	0.57	0.31	1.71	3.17
		Sep (30)	Both	72.01	6.85	11.27	1.07	0.34	0.89	0.76	0.17	0.65	0.32	2.16	3.51
		Oct (31)	Both	73.28	5.73	10.71	1.22	0.46	0.86	0.52	0.12	0.65	0.50	1.75	4.19
		Nov (31)	Both	74.37	4.92	10.33	1.19	0.37	0.63	0.60	0.13	1.10	0.54	2.13	3.68
		Dec (31)	Both	77.02	4.54	9.57	1.03	0.25	0.56	0.43	0.10	0.64	0.37	2.05	3.44
		All (365)	Inbound	70.64	7.10	12.76	1.02	0.34	1.16	0.92	0.13	0.58	0.33	1.59	3.43
		All (365)	Outbound	75.77	7.99	8.22	0.85	0.35	0.78	0.51	0.13	0.52	0.29	1.51	3.09
		All (365)	Both	73.26	7.56	10.44	0.94	0.34	0.96	0.71	0.13	0.55	0.31	1.55	3.25

Figure 2 Heavy Vehicle Proportions Carpentaria Highway (DIPL Annual Traffic Report 2019)

This results in a capacity of 725 vehicles per hour (17,400 vehicles per day) for the Carpentaria highway. These anticipated traffic conditions will be used to assess the potential traffic impacts that the project brings.

DIPL's Annual Traffic Report 2019 showed a peak average traffic flow of 118 vehicles per day in August, with an even distribution of inbound and outbound traffic which can be seen in Figure 3 below. These counts would be used as a conservative estimate throughout the project's timeline. In a study undertaken by GHD for the "*Mt Todd Gold Project Traffic and Transport Impact Assessment June 2013"* highlighted that physical counts during peak periods could reach a 50% increase in average daily flows. This will also be taken into consideration and hence the 118 vehicles per day will be artificially increased to 177 vehicles per day. This represents a worst-case scenario for traffic flows in the vicinity of the site, from regular traffic.

Road Name / Location	Station No	Direction	Units	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	AADT
Carpentaria Highway	RKVDP008	Inbound	Veh	20	23	31	34	41	53	62	62	41	42	36	25	39
2km East of Stuart Highway		Outbound	Veh	17	23	30	30	40	51	55	56	43	41	35	28	37
		Both	Veh	37	46	61	64	81	104	117	118	84	83	71	53	76

Figure 3 Calculated AADT for Carpentaria Highway (DIPL Annual Traffic Report 2019)

The peak cumulative traffic flow produced from mobilisation to respective camp sites within the vicinity of the Sweetpea camp site is expected to be 179 vehicles per day. This brings the worst-case scenario of 356 vehicles per day or 15 vehicles per hour which is well below the calculated 725 vehicles per hour capacity. It is therefore expected that impacts on traffic flows are to be negligible.

4.2 Impact of Composition of Traffic

Regarding AUSTROADS vehicle classification guidelines, the distribution of vehicles based on the most recent DIPL traffic report for the Carpentaria Highway can be seen under the subheading "*Current split of vehicles"* in Table 3. Traffic Level of Service may also be impacted through changes in traffic compositions, with the volume of trucks affecting the road capacity greater than light vehicles. To assess the changes in traffic compositions, vehicle category data obtained from DIPL's *Annual Traffic Report 2019* were assessed against expected peak total project traffic figures. Taking into consideration the period with the largest increase in traffic flow, the split of vehicles for the Carpentaria Highway changes, where a comparison can also be seen in Table 3 under the subheading "*Estimated split of vehicles"*. By looking at the "*Estimated increase of vehicles"* heading, the distribution of vehicle show that the proportion of short vehicles decreased by 19.2% and long combination vehicles by 1.7%. The proportion of medium vehicles increased by 3.8%, long vehicles by 8.4% and medium combination by 8.4%. This change in percentage is unlikely to negatively impact upon the road's capacity and LOS.

Table 3 Comparison of Vehicle Distribution of current and estimated additional traffic flows

Vehicle Type Description	Current split of vehicles		Estimated split of vehicles		Estimated increase of vehicles
	Vehicles Per Day (VPD)	Percentage of Vehicles Per Day (%)	Vehicles Per Day (VPD)	Percentage of Vehicles Per Day (%)	
Short	130	73.4	193	54.2	63
Medium	34	19.2	82	23.0	48
Long	4	2.3	38	10.7	34
Medium Combination	3	1.7	37	10.4	34
Large Combination	6	3.4	6	1.69	No change
Total no. of vehicles	177		356		

5.0 Other Potential Risks and Mitigations

5.1 Camp adjacent the Carpentaria Highway

The location of the camp is approximately 125m off the highway alignment. The site is an existing clearing used as a camp for road construction and maintenance crews through the year. Potentially it may cause a distraction for road users, particularly with the use of lights at night with the operation hours of the site starting and ending at 0600-1800 respectively, 7 days a week.

The below photo shows the camp site is surrounded by a well vegetated buffer which will assist in shielding the camp from the Carpentaria Highway. Traffic entering and exiting the site will also be using this access point. To mitigate these impacts, appropriate signage will be placed before the camp to inform road uses of the camps location. All traffic management protocols as per the DIPL Roadworks Master Specification - Section 1; Provisions for Traffic will be followed.

Figure 4 Site entry off Carpentaria Highway

6.0 Conclusion

The proposed activities are located on the Carpentaria Highway approximately 132km east of the Stuart Highway. Average peak flows from DIPL *Annual Traffic Report 2019* was artificially increased from 118 to 177 vehicles, including a peaking factor of 50%.

The peak additional traffic generated from mobilisation of the vehicles relating to the construction of bore works and camp site establishment will be approximately 56 vehicles per day. The peak additional traffic generated from Santos and Imperial works will be approximately 67 and 56 vehicles per day respectively. Cumulatively, this causes the Carpentaria Highway to experience 356 vehicles per day when factoring existing daily flows. These anticipated values are well below the AUSROADS *Guide to Traffic Management Part 3 (AGTM03-20).*

It is concluded that with the low traffic volumes relative to the calculated 17,400 vehicles per day capacity for a two lane, two-way road and utilisation of management practises, impacts of the proposed civil works on existing traffic conditions will be negligible.

7.0 Reference

Santos. (2019, October 23). *Environment Management Plan: McArthur Basin 2019-2020 Hydraulic Fracturing Program – NT Exploration Permit (EP) 161*. DEPWS. https://depws.nt.gov.au/__data/assets/pdf_file/0009/747567/ep161-santos-mcarthur-basin-2019-2020-hydraulic-fracturing-program-emp.pdf

Imperial Oil & Gas. (2020, September 30). *Environment Management Plan – Imperial 2020-21 Drilling Program NT Exploration Permit (EP) 197 (IMP2.-6.1)*. DEPWS. https://depws.nt.gov.au/__data/assets/pdf_file/0009/937503/Approved-EMP.PDF

Appendix M

Emergency Response Plan

Appendix M Emergency Response Plan

EMERGENCY MANAGEMENT PROCEDURE

TAMBORAN RESOURCES LIMITED INTEGRATED MANAGEMENT SYSTEM		
DOCUMENT TITLE:	Emergency Management Procedure	
DOCUMENT NO:	TRL-HSE-PR-08	REVISION NO: 0
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REVISION

Revision No.	Revised By	Revision Justification	Revision Date
A	N Merdith/M Jenkins	Draft issued for review	15-Oct-2021
B	M Jenkins	Review by DB / FT	09-Dec-2021
0	M Jenkins	Issued	09-Dec-2021

DOCUMENT APPROVAL

APPROVALS	Responsibility	Signed
Approved	Ensure this document is consistent with the Project objectives, compliant with regulation and provides a clear overview of the management systems and processes under which the Project will be executed.	_____ Mark Jenkins Project Manager
CONCURRENCE	**Responsibility**	**Signed**
Accepted	Review document to ensure it is consistent with the Company planned activities and operations.	_____ Jaime Lopez Operations Team Manager
Accepted	As the ultimate owner of the Emergency Management Procedure.	_____ Faron Thibodeaux COO

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- when there is a significant change to the applicable Legislation;
- when there is a significant change in the systems and processes under which operations are conducted;
- if it becomes technically out-dated;
- if it is unable to provide the level of assurance required to safeguard the safety and health of personnel including employees, contractors or visitors, or sound environmental practices;
- every two years where the project is ongoing or if no revision for other reason occurs prior.

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1. INTRODUCTION

1.1. Purpose

This Emergency Management Procedure (EMP) describes the process Tamboran Resources (TRL) applies for the prevention of, preparedness for, response to and recovery from emergency situations. The EMP supports the implementation of Element 4.4 Emergency Preparedness and Response of the Health, Safety, and Environment Management System (HSEMS).

The purpose of the EMP is to:

- Establish the principles of emergency management applied by the Company
- Describe the emergency risk management process
- Describe how the Company will prepare for emergencies
- Describe the functions of the office-based emergency management teams and how they respond to site-based emergencies
- Identify the process for emergency classification and notification
- Provide guidance on the recovery from an emergency

The EMP supports the site-specific emergency response plan (ERP), through a project specific emergency response interface document (ERIP) when required, and should be read in conjunction with the approved Spill Management Plan (SMP). Emergency response documentation may be requested by the Department of Primary Industry and Resources (DPIR) under the *Code of Practice: Onshore Petroleum Activities in the Northern Territory*.

The EMP is not intended to be an infallible rule book to be used in lieu of sound judgement based on the knowledge and experience of the organisation's emergency management organisation and on the particular circumstances in any given area or situation.

1.2. Scope

This procedure applies to all offices and operations managed under the Tamboran Resources HSEMS.

The immediate site based emergency response is described in the site specific ERP. Where site operations are under the HSEMS of a Lead Contractor then bridging arrangements and interfaces must be agreed to and documented in an ERIP.

Crisis management, being Tamboran's strategic response to a significant event, is covered under the Crisis Management Plan TRL-HSE-PL-03.

1.3. Crisis and Emergency Management Structure

The overall Tamboran Crisis and Emergency Management System applies across the company and through all lines of business. It is a three-tiered structure as shown in Figure 1 with:

- An Emergency Response Team (ERT) or First Responders at each facility or site. This may be provided by Tamboran, a contractor or may be local emergency services.
- An office-based Emergency Management Team (EMT) lead by the Tamboran Project Manager.

- The Tamboran Crisis Management Team (CMT) lead by the Tamboran COO.
- Support teams may be activated to assist the Emergency Management Team or the Crisis Management Team with specialist functions e.g., IT Disaster Recovery, Media, Human Resources and Trauma Counselling, etc.

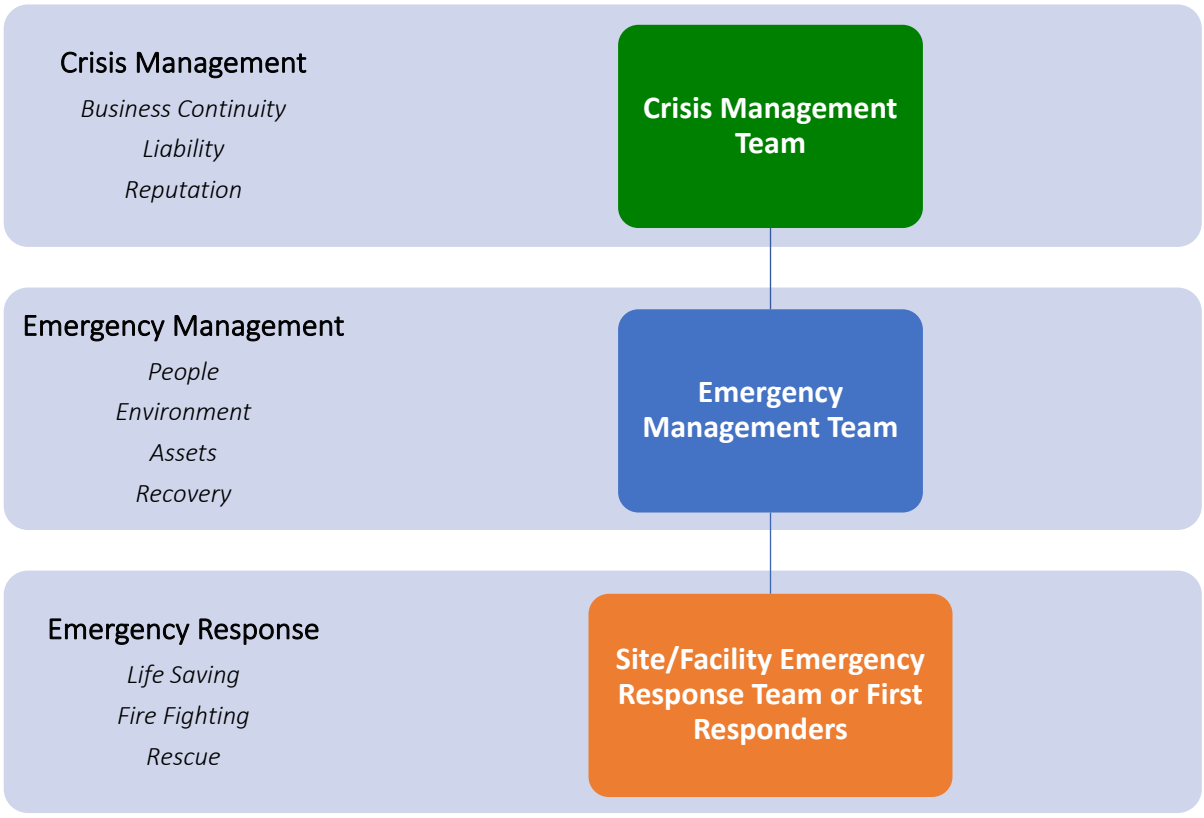

Figure 1. Crisis and Emergency Management Structure

2. ROLES AND RESPONSIBILITIES

Table 1. Roles and responsibilities

Role	Responsibilities
COO	• Ensure the implementation of this procedure at all levels of the business • Ensure appropriate resources are available • Monitor compliance with this procedure
HSE Manager	• Responsible for the ongoing development, maintenance and revision of this procedure • Measure and report on compliance with this procedure
Project Manager / Operations Team Manager	• Ensure the implementation of this procedure within the project/operations team • Ensure statutory reporting is carried out as required • Ensure personnel have appropriate competency to fulfil their emergency management role
All personnel	• Comply with the requirements of the EMP as they apply to their position • Follow all instructions during an emergency

3. ABBREVIATIONS

Table 2. Abbreviations

Abbreviation	Definition
AAR	After Action Review
CMT	Crisis Management Team
DPIR	Department of Primary Industry and Resources
EMP	Emergency Management Procedure (this document)
EMT	Emergency Management Team
ERP	Emergency Response Plan
ERIP	Emergency Response Interface Plan
ERO	Emergency Response Officer (Tamboran Operations Superintendent)
ERT	Emergency Response Team
OSC	On-Scene Commander
MAE	Major Accident Event
PIC	Person-in-Charge
PPRR	Prevent Prepare Respond Recover
TPC	Third Party Contractor
SITREP	Situation Report (refer Appendix A)
SMP	Spill Management Plan

4. EMERGENCY MANAGEMENT PRINCIPLES

4.1. What is an Emergency

For the purpose of this procedure an emergency is a situation that harms (or threatens to harm) people, property or the environment *and* requires:

- Urgent action
- Fast decision making
- A response that is non-routine and requires the activation of additional resources or processes - in the workplace this will trigger activation of the site ERP
- May require support of outside agencies

Not all incidents[1] are emergencies - a workplace injury that is managed through normal injury management procedures is not an emergency although calling an ambulance would be. And not all emergencies are incidents - the response to an impending severe weather is based on the threat of an incident.

4.2. PPRR (Prevent, Prepare, Respond, Recover)

The emergency management is based on the following systematic approach

- **Prevent** emergencies occurring – risk management activities to eliminate the hazard or reduce the risk, largely focused on the right side of the bowtie/mitigation controls
- **Prepare** for the emergencies – the development of plans (including this EMP), training, exercises
- **Respond** effectively to emergencies - all the things we activate in the event of an emergency
- **Recover** quickly from emergencies - returning things to how they were before the event or, at least, to a level of satisfactory function, and actions taken to minimise the risk of recurrence

Note that these phases are not a linear sequence; both prevention and preparation are ongoing and recovery activities can commence during an ongoing response.

4.3. Emergency Priorities

In an emergency it may be necessary to prioritise the response in the following order, better known as PEAR, People, Environment, Assets, Reputation

1. P - Safety of people
2. E - Protection of the environment
3. A – Safeguarding assets and commercial interests (business continuity)
4. R - Reputation

To achieve the first priority of protecting people it may be necessary to take actions that will have a detrimental effect on the environment and/or assets.

4.4. Organisational Principles

Industry experience has shown that the emergency response organisation is most successful when the following key organisational concepts and principles are applied:

- Use of a single, integrated organisation to manage the response
- Organisation by function, i.e. Command, Operations, Planning, Logistics
- Establishment of clear, hierarchical reporting relationships – a chain of command (a series of command and control positions in hierarchical order of authority) and a unity of command (each person within emergency management organisation reports to one and only one designated person).
- Maintaining a modular and scalable organisation, ensuring it is appropriately sized to achieve the response objectives.

[1] The term “incident management” is often used to describe the response activities although in the US it describes broader emergency management. Emergency is the term used in the Australian legislation and by regulators. It is also a term well understood in the workplace as distinct from incident reporting and investigation. As such, the term emergency is used in this procedure.

4.5. Management Principles

The emergency management system is based on the following management principles:

- Ensuring an objectives-driven response
- Formulation of an Action Plan
- Use of common and consistent terminology
- Maintaining a manageable span of control where each manager/supervisor has 3 to 8 (preferably 5) direct reports
- Coordination of equipment, personnel resources and communication.

5. PREVENTION - EMERGENCY RISK MANAGEMENT

Emergency risk management is part of the standard risk management process described in Risk Management Procedure [TRL-HSE-PR-01] although the focus is more on mitigation controls or the right-hand side of the bowtie.

Mitigation controls are identified at the HAZID stage and recorded in the Risk Register. The HAZID and/or subsequent Major Accident Event (MAE) analysis will identify the need for further detailed emergency risk management studies such as fire and explosion analysis or dispersion study. The HAZID should also identify, or note actions to identify, external support, such as medivac capability and well control specialists, and the level of site response, such as firefighting, rescue and first aid/medical resources.

Where critical controls are identified, performance standards and a system of assurance must be established.

The following events will be considered during the HAZID (not exhaustive):

- Injured person requiring a medivac
- Mass casualties
- Infectious disease/pandemic
- Fatality
- Fire at well site
- Fire at camp
- Loss of well control
- H_2S release
- Significant hazardous substance spill
- Motor vehicle accident offsite
- Lost load in transit
- Missing person
- Aircraft incident
- Bushfire
- Flood and severe weather

6. PREPARATION

6.1. Emergency Response Organisation

The emergency response organisation and communications lines that are implemented by Tamboran are represented in Figures 2 and 3.

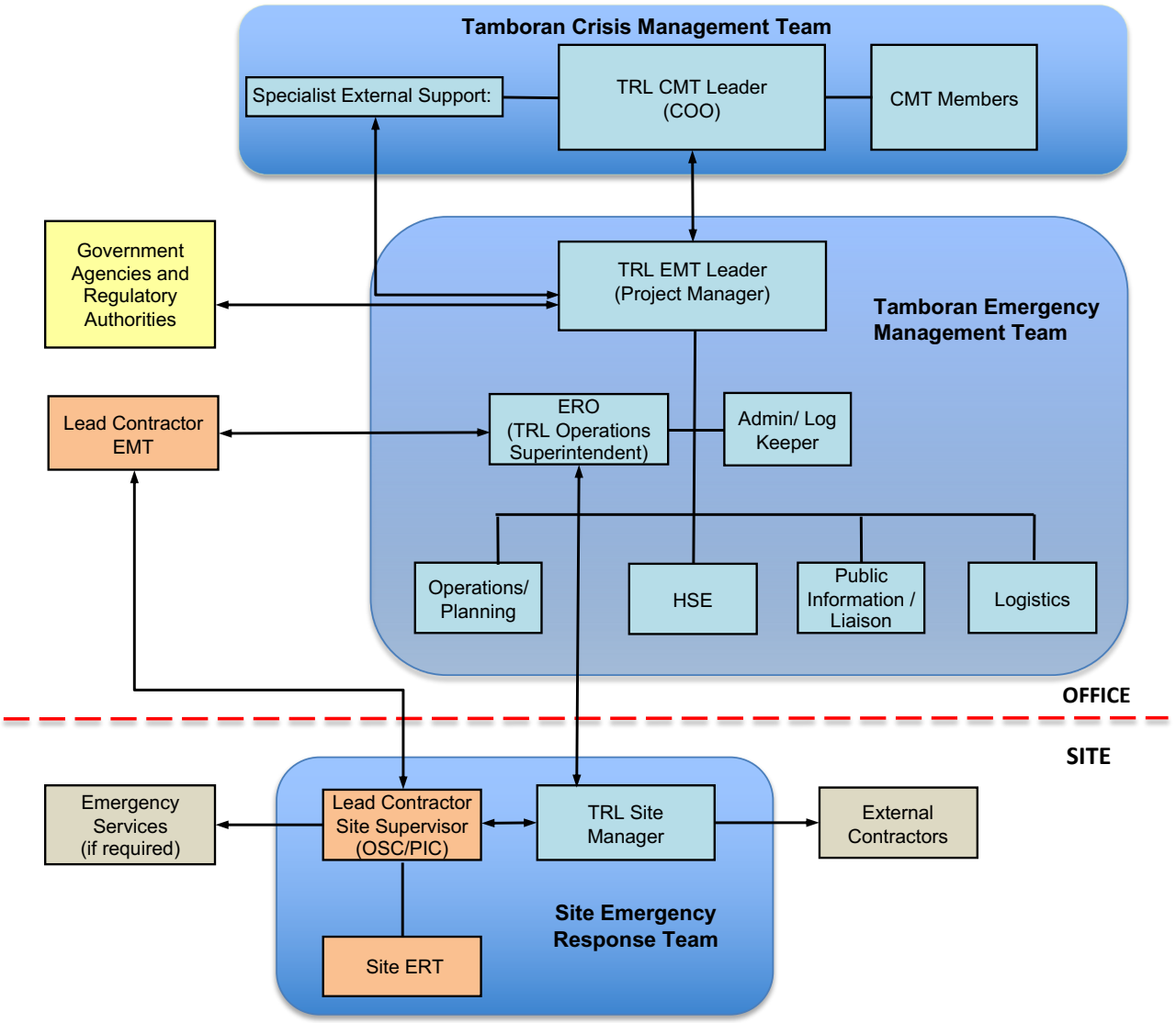

Figure 2. Emergency Response Organisation

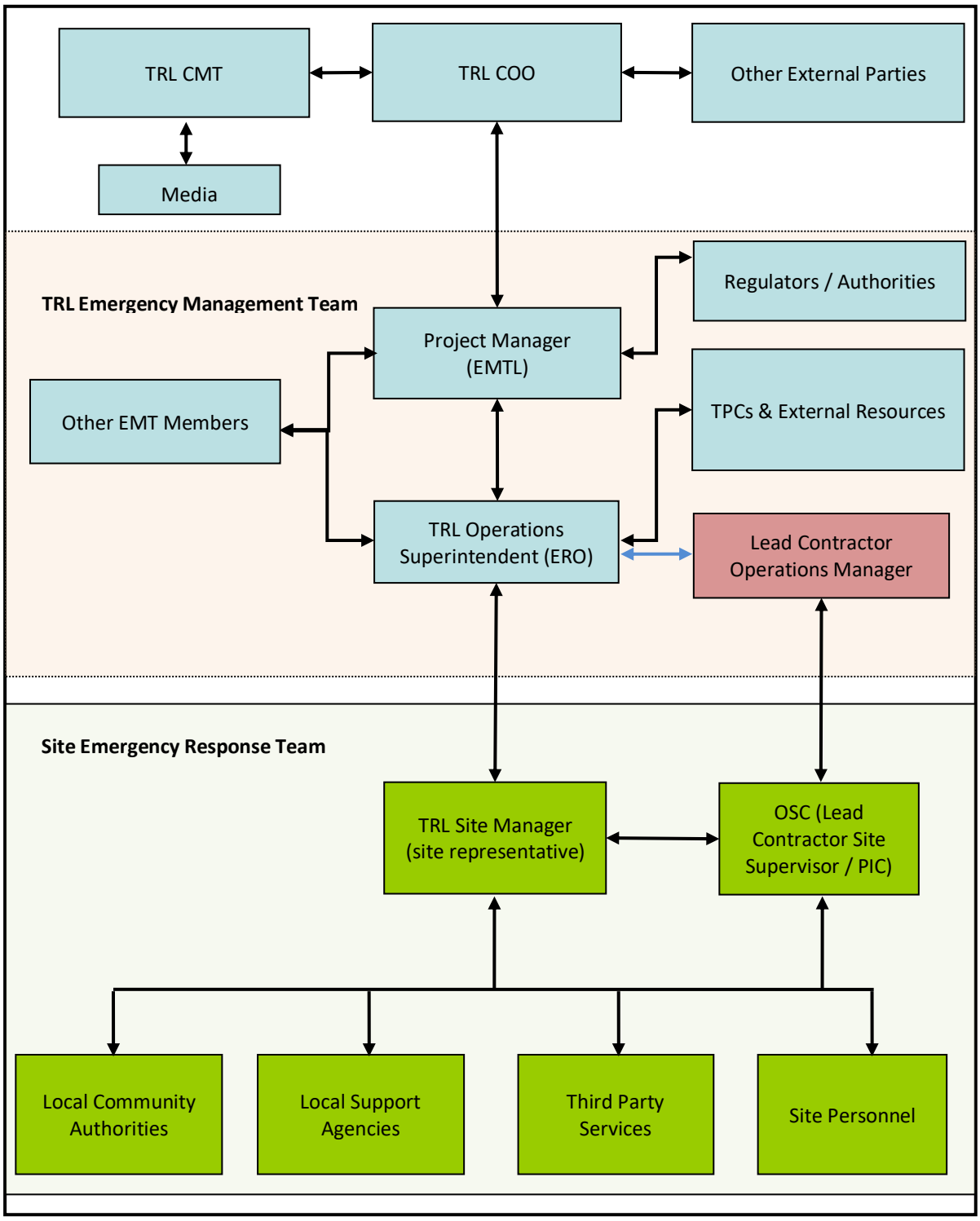

Figure 3. Emergency Response Communication Lines

6.1.1. Site Based Emergency Response Team

The On Scene Commander (OSC) (normally the PIC at a site) is responsible for the declaring of, and immediate management of emergencies, the safety of all personnel on site, the direction of the ERT, and coordination with external resources such as medivac services.

The ERT provides the resources to battle the emergency situation, such as firefighting, rescue and first aid/medical support. Because remote sites do not have access to external emergency services, the ERT must be able to deal with an emergency until casualties are safely evacuated and all personnel are removed from any further threat of harm or the emergency situation is brought under control.

Where the site is under the day-to-day management control of a Lead Contractor, for example during drilling operations, the site-based response is under the control of the contractor's system and the OSC and ERT will be the contractor's personnel. In this case the Tamboran Site Manager will be the communications link between the site and the EMT.

External agencies, such as NT Police, may assume overall control of the site on arrival. For emergencies occurring outside of immediate site control, such as missing persons, motor vehicle accidents on public roads and aircraft incidents, the NT Police will control the on-scene response, while bushfires are managed by Bushfire NT.

6.1.2. Emergency Management Team

The purpose of the EMT is to:

- Provide direct technical and logistics support to the OSC
- Provide the OSC with the approvals required to increase resources, both strategic, tactical, or human resources as determined by the OSC and agreed with the EMTL
- Improve resource coordination and communications
- Facilitate the cooperation and integration of responding organisations
- Liaise with the DPIR
- Mobilise specialist resources such as well control or waste management
- Manage immediate HR issues such as medivac'd personnel
- Manage logistics in the case of evacuation
- Develop and coordinate the release of information on the situation and response efforts to the CMTL (Crisis Management Team Lead) or COO. The CMTL or COO will be responsible for approving and directing the release of any information or statements to the media.
- Record and document the emergency response

The size and make-up of the EMT is determined by the EMT Leader and must be fit for purpose and based on the size, complexity, and time frame of the emergency situation. In many emergencies the EMT make-up may change through the course of the emergency.

The roles and responsibilities of the EMT members are described in Table 3. With a smaller EMT mobilisation, members will fill more than one role. Detailed role specific checklists are attached as appendices.

Table 3. EMT positions

Role	Responsibilities
EMT Leader (EMTL)	• Activates the EMT and establishes make-up • Notify the CMT Leader if required • Establish incident response objectives and strategies to be followed • Establish immediate priorities • Initiate, maintain and control the communications process within the organisation • Assess the status of the response • Approve, implement, and evaluate the Incident Action Plan • Coordinate activity for all EMT members • Approve requests for additional resources or for the release of resources • Authorise the release of information through the Public Information Officer • Order demobilisation of the incident when appropriate and stand down EMT • Ensure completion of incident after-action reports
Emergency Response Operations Officer (ERO)	• Provide the primary communications interface between the Site and the EMT • Assist the TRL Site Manager and OSC in the execution of the Project ERP and effective onsite response. • Advise on all tactical response operations to achieve key priorities such as safety, source control, oil spill response, fire containment and the protection of the environment and property • Supervise the execution of the operations portion of the Incident Action Plan • Coordination of simultaneous operations (SIMOPS) • Provide progress SITREP to the EMT Leader
HSE	• Monitoring on-scene safety conditions and developing measures to ensure the safety of all response personnel • Ensuring fatigue management, drug and alcohol and other policies are maintained • Ensure mandatory HSE reporting occurs • Ensure information is collected and maintained for subsequent incident investigation • Provide assistance to EMT and overall assurance for emergency response process • Provide risk assessment expertise during Incident Action Plan development

Role	Responsibilities
Public Information and Liaison	• Responsible for all interaction between EMT, and with the approval of the CMTL and COO, the news media and the public • Develops and coordinates the release of information on the situation and response efforts including communication to family members as required during an incident or emergency event • Primary contact person for representatives of stakeholder organisations (other than HSE Regulator) • Establishes and coordinates inter-organisational contacts, and maintains a list of assisting organisations and corresponding representatives
Operations / Planning	• Collecting, evaluating, and disseminating the tactical information related to the incident • Incident log • Preparing and documenting Incident Action Plans • Provide progress SITREP (Situation reports) to the EMT Leader • Maintain a register of resources allocated or requested • Ensure proper risk assessments are conducted as required prior to complex planning events, but only when time allows; there should be no distractions when conditions require immediate decisions to be made • Develop recovery plan and strategy • Provide support services – radio, telephone, computing, document distribution and administration • Develop shift, changeover and demobilisation plan • Collect, collate and store incident records
Logistics	• Responsible for providing facilities, services, and materials for the incident response • Ensure logistics budget is submitted and approved by the CMTL/COO as soon as practical after initiation events are in progress • Estimate future service and support requirement • Facilitate establishment and maintenance of staging areas • Provide progress SITREP to the EMT Leader
Admin / Log Keeper	• Maintains accurate, up-to-date incident documents • Records, collects, and displays information about the event, response, resources, casualties and people, onto the status boards used in the EMT Room (either electronic and/or hard copy)

6.1.3. Crisis Management Team

The CMT is only activated in Level 3 emergencies (see Emergency Classification) and deals with the strategic response to an emergency, stakeholder management, business recovery and continuity.

Refer Tamboran Crisis Management Plan TRL-HSE-PL-03.

6.2. EMT Room

An EMT room will be maintained with the following resources, noting that certain response team members may be located remotely in which case they will form part of the team and work virtually:

- Projector (or large format TV)
- Hard copy of this EMP
- Hard copies of site ERPs and associated interface documents where relevant
- Site layout drawings and location maps
- Land line telephone with conference facility
- Internet access
- White board with pens and eraser
- A clock – second clock if site is in a different time zone
- Sufficient power supply for EMT members' laptops
- A means of providing 24-hour access while maintaining building security
- Access to toilets and kitchen facilities

6.3. Site Specific ERP

Site specific ERPs must be developed and implemented. The ERP must be fit for purpose, taking into consideration the location, duration, number of personnel and level of risk associated with the activity.

Note that office locations may be covered under a building ERP maintained by building management, in which case a separate ERP is not required.

6.4. Project Emergency Response Interface Plan

Where a site is under the control of a (lead) contractor's ERP, such as during drilling operations or hydraulic stimulation, an ERIP will be developed and jointly signed off, that identifies the agreed interfaces between the contractor's and Tamboran Resources' emergency response systems.

Details relating to well control, such as training requirements and drill schedule, will be documented in the well control bridging arrangements.

6.5. Emergency Response Contact List

Due to the changing nature of contact details as operations transition from one activity to another, a separate Emergency Response Contact List is maintained. This list is regularly updated and made available internally to Tamboran Resources personnel and issued to appropriate contractor personnel and stakeholders.

6.6. Site Based Medical Resources

For operations in remote locations (such as the Beetaloo Sub Basin) the site based medical resources will be based on a risk assessment for each operational stage and the level of activities and manpower resourcing on site. It will consider the need to provide acute care for several hours and the ability to transport casualties to the nearest airstrip.

6.7. Medivac

For Beetaloo Sub Basin operations a contract for medivac services must be in place or alternatively the NT CareFlight services will be utilised.

6.8. Communications

Redundant and reliable emergency response communications systems must be available. This includes having alternative back-up numbers and personnel for EMT positions. ER communications must be tested regularly. An agreed schedule will be identified in the ERIP.

6.9. Training and Competency

The level of training required depends on an individual's role within the emergency management system, previous training and experience, and the level of risk associated with the operation. Table 4 describes the mi[redacted]um training requirements.

Table 4. Role specific training requirements

Role	Training
Site based teams	Described in the Lead Contractors HSEMS
EMT Members	Introductory training on emergency management concepts, terminology, organisation and response Familiarisation with role checklist Role specific training based on training needs analysis *Above can be achieved through EMT exercises.*
CMT Members	Role specific training based on training needs analysis
All personnel and visitors	Instruction in how to raise an alarm, the appropriate response to an alarm, escape routes and muster areas. *Above is achieved through relevant project and site inductions.*

6.10. Exercises

Site based drills and exercises will be defined in the ERP. Additional drills and exercises may be identified in the ERIP, the Spill Management Plan and well control procedures.

An exercise involving the EMT must be conducted prior to the commencement of each operational campaign such as drilling or hydraulic fracturing.

For normal operations an EMT exercise should be conducted annually.

7. RESPONSE

7.1. Emergency Classification, Notification and Activation

Table 5 gives guidance on the classification of emergencies and the required notification, with Figure 4 showing the activation pathway.

Note that incidents that are managed through standard operating procedures, such as small spills, injuries that can be transported using routine crew change services, and minor well kicks, are not classified as emergencies.

The decision to activate the EMT and the makeup of the team rests with the EMT Leader.

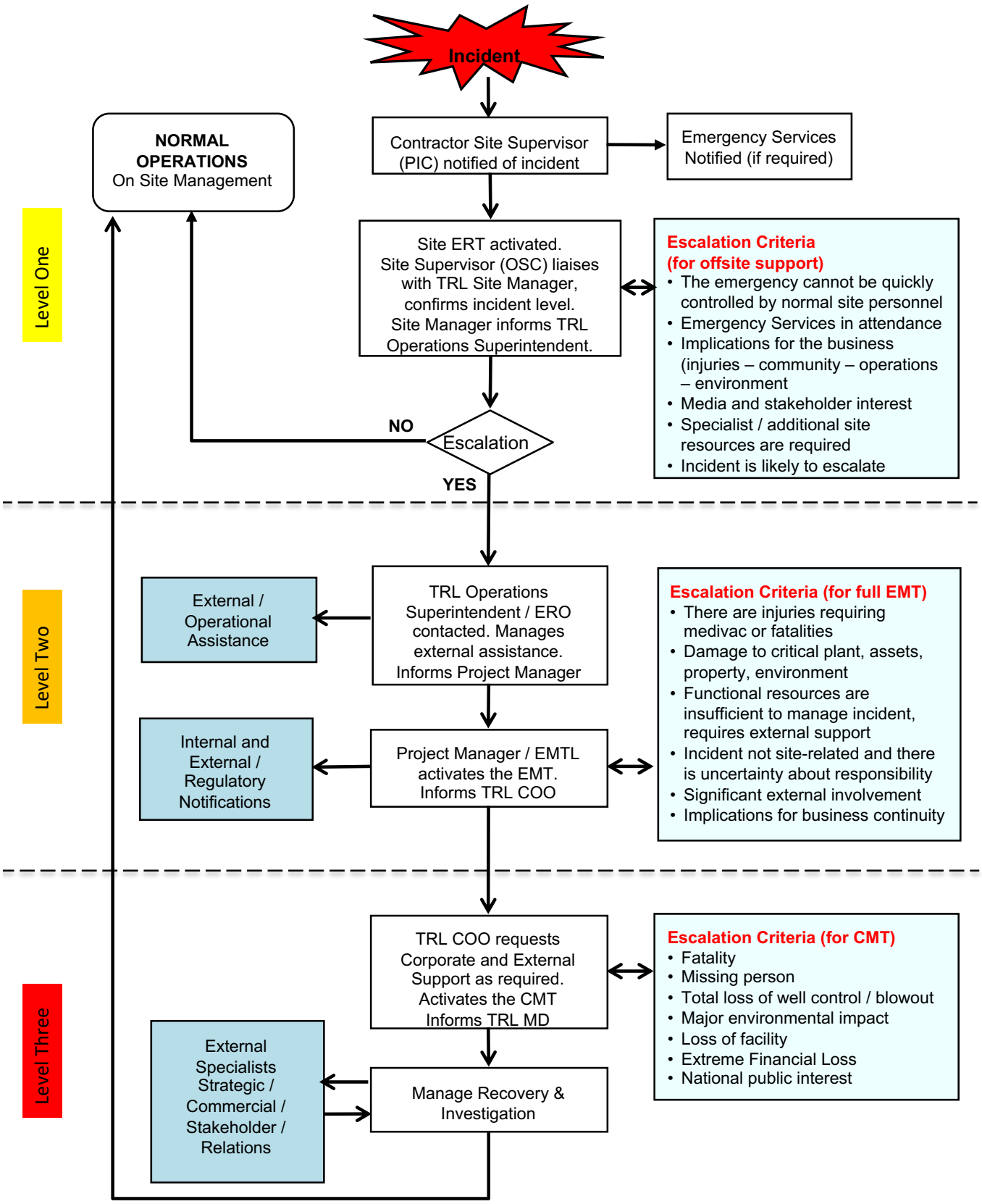

Figure 4: Emergency Activation Pathway

Table 5. Emergency levels, notification and activation

Level	Description	Examples	Notification	Activation
1	The emergency situation presents danger, but there is no immediate threat to areas outside the vicinity of the emergency. The site-based ERP is activated but does not require a response from an outside agency.	Non-urgent medivac Unplanned alarm and muster Minor fire	TRL Site Manager Operations Superintendent Regulator Pastoralist (if relevant)	Site ERT
2	A situation that could go beyond the abilities of the first responders and require the attendance of an outside emergency response agency. Impact expected to spread to or affect all parts of the facility, but not off-site.	Urgent medivac Significant release but contained on site Major fire but within capability of ERT to contain Precautionary site evacuation	As well as above Project Manager COO	EMT
3	Situation is expected to impact both within the facility and beyond the boundary A serious situation with the possibility of developing into a critical situation.	Fatality Missing person Total loss of well control (blowout) Major environmental impact beyond site boundaries National public concern	As well as above Managing Director *OSC to notify police immediately in case of a fatality*	CMT

If emergency involves a:	Regulator	Requirement	Responsibility
Notifiable incident*	NT WorkSafe	1800 019 115	Lead Contractor
Fatality	NT Police	Immediately on 000	PIC
Reportable incident (Environment)*	DPIR	Within 2 hours on 1300 935 250 petroleum.operations@nt.gov.au	Tamboran Resources
Well integrity incident	DPIR	Within 2 hours on 1300 935 250 petroleum.operations@nt.gov.au	Tamboran Resources

**For details on notifiable and reportable incidents see Incident Reporting and Investigation Procedure [TRL-HSE-PR-11]*

7.2. Stand-down

The EMT Leader will make the decision to stand-down the EMT which may occur in phases, ensuring that all relevant stakeholders are notified.

On declaring an end of the emergency response phase, a debrief should be conducted with the EMT.

7.3. Records

All EMT records, including handwritten notes, emails, SITREPs, and action plans, must be retained for 5 years.

8. RECOVERY

This phase includes activities associated with the reconstruction of the physical infrastructure and returning to operations, clean-up and restoration of the environment, and the recovery of emotional, social, economic and physical wellbeing.

The recovery phase may cover an extended period and may commence while active response is ongoing. Extended recovery activities require specific action plans to be developed.

8.1. After Action Review

The EMT Leader will hold an AAR to identify what did not work well, what did work well and what can be improved. Corrective actions from the AAR are entered in the action tracking system.

8.2. Investigation

An investigation and report will be conducted following the activation of a site's ERP other than for precautionary evacuation. See Incident Reporting and Investigation Procedure (TRL-HSE-PR-11).

9. CONTINUAL IMPROVEMENT

This EMP will be reviewed following any emergency response exercise involving the EMT or on activation of the EMT using information provided by the AAR and incident investigation report.

The EMP will also undergo a scheduled management review as defined in the HSEMS Manual (TRL-HSE-MS-01).

APPENDIX A. SITREP FORM

Emergency Management Situation Report Form					
Issue Date	Revision	Prepared By	Approved By	Document No.	Page
15-Oct-21	**0**	**N Merdith**	**M Jenkins**	**TRL-HSE-FM-06**	**1 of 1**

EMERGENCY SITUATION REPORT (SITREP) FORM

Take copies of this form at the outset of the emergency. Complete when updating Incident Information.

Incident Site:	**Update No:**	**Date:**	**Time:**
INCIDENT TYPE			
Medivac ☐ Fire ☐ Missing Person ☐ Vehicle Collision ☐ Spill ☐ Fatality ☐ Explosion ☐ Well Control ☐ Severe Storm ☐ Equipment Failure ☐ Other ☐ Describe: _____			
INJURY DETAILS	***(Do Not List Names on This Sheet – Report Verbally To EMT Leader)***		
No. of Fatalities:	**No. of Serious Injuries:**	**No. of Minor Injuries:**	
Causes:			
Injury Details:			
WEATHER			
Dry ☐ Wet ☐ Windy ☐	**Wind Direction:**	**Wind Speed:**	
Forecast:			
IMPACT ON OPERATIONS			
Rig Damage:			
Operations Shut Down:			
Activity Impact:			
EXTERNAL ASSISTANCE MOBILISED			
Helicopters ☐ Vessels ☐ Police ☐ Govt Authorities ☐ Mutual Aid ☐ Other ☐ Describe: _____			
RESPONSE FORWARD PLAN			
Next 30 minutes:			
Next 6 hours:			
Next 12 hours:			
LAST EXTERNAL CONTACTS			
Agency	**Contact Name**	**Time**	**By Whom**
APPROVALS			
Prepared by:	**Approved by:**		
DISTRIBUTION			
EMT Admin ☐ Operations Superintendent ☐ Project Manager ☐			

Note: Mark any speculative information with an asterisk (*)

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APPENDIX B. EMT LEADER CHECKLIST

EMT Leader		
Phase	**Activity**	**Check**
Activation	On consultation with OSC / TRL Site Manager and Operations Team Manager establish the emergency level – determine if the pastoralist should be informed and if so, when	
	Level 2 - Activate EMT and determine composition	
	Level 3 - Notify CMT Leader	
	Record personal log of events	
Response	Assign EMT roles – allocate tasks and monitor performance	
	Establish communications with lead contractor	
	Establish, review and update objectives	
	Establish EMT timeout and briefing schedule	
	Ensure regulator notification(s) occur – if pastoralist needs to be informed, ensure it occurs	
	Review and approve incident action plans	
	Mobilise additional resources/personnel as required	
	Mobilise incident investigation as required	
	Authorise the release of information through the Public Information Officer	
	Initiate development of recovery strategy	
	Provide regular updates to CMT	
	Prepare shift handover	
Stand down	Review closed-out and outstanding actions	
	Notify CMT Leader, support teams, contractors of intent to declare end of emergency response	
	Stand down EMT members as required	
	Declare end of emergency response phase	
	Conduct debrief/AAR and ensure lessons are shared and corrective actions assigned	
	Provide all records and log sheets to Administration Officer	
	Ensure all records are appropriately filed	

APPENDIX C. HSE CHECKLIST

HSE		
Phase	**Activity**	**Check**
Activation	Mobilise to EMT room on activation	
	Record personal log of events	
	Receive briefing from EMT Leader	
	Review event classification and notification process	
Response	Monitoring on-scene safety conditions and assist in developing measures to ensure the safety of all response personnel, including planned activities	
	Ensure mandatory HSE reporting occurs	
	Ensuring fatigue management, drug and alcohol and other policies are maintained	
	Provide risk assessment expertise during Incident Action Plan development	
	Review the Incident Action Plan for safety implications	
	Ensure information is collected and maintained for subsequent incident investigation	
	Provide HSE advice and support to EMT	
	Provide overall assurance for emergency response process	
Stand down	Complete actions, identify and report on open actions	
	Participate in debrief and AAR	
	Record actions from AAR	
	Provide all records and log sheets to Administration Officer	
	Develop follow-up reports for Regulator	
	Support ongoing investigation	
	Advise and support ongoing monitoring	

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APPENDIX D. PUBLIC INFORMATION AND LIAISON CHECKLIST

Public Information and Liaison		
Phase	**Activity**	**Check**
Activation	Mobilise to EMT room on activation	
	Record personal log of events	
	Receive briefing from EMT Leader	
	Identify external communications that have already occurred	
Response	Establish contact with controlling Authority as required	
	Act as primary contact person for representatives of stakeholder organisations (other than HSE Regulator)	
	Consult with the Lead Contractor and the TPCs regarding the establishment of a response to relatives	
	Notify the employers of TPCs on location of the incident status, and update regularly.	
	Prepare media release for approval	
	Regularly update EMT on external communications	
	Liaise with CMT to ensure a coordinated media response between the two levels. Any information released to media must get approval from the CMTL and COO.	
	Ensure that all key actions are logged by Log Keeper on main events board.	
	Liaise with the Log Keeper on the collection, compilation and storage of incident related documentation.	
	Ensure that records of all press and staff briefings are given to the Log Keeper.	
Stand down	Complete actions, identify and report on open actions	
	Participate in debrief and AAR	
	Provide all records and log sheets to Administration Officer	

APPENDIX E. OPERATIONS CHECKLIST

Operations		
Phase	**Activity**	**Check**
Activation	Mobilise to EMT room on activation	
	Record personal log of events	
	Receive briefing from EMT Leader	
	Establish contact with site	
Response	Provide the primary communications interface between the Site and EMT	
	Set up a regular schedule for incoming SITREPs (situation reports) from the Site	
	Obtain the POL manifest and personnel details from the Site	
	Allocate resources for the coordination of emergency support.	
	In the event of a fatality, ensure the scene remains intact as far as practical. Initiate incident investigation in preparation for the Regulator, police and/or coroner investigations. Ensure the information requested by the authorities is recorded.	
	Direct logistical support activities	
	Advise on all tactical response operations to achieve key priorities such as safety, source control, oil spill response, fire containment and the protection of the environment and property	
	Request resources to support tactical operations through the Logistics Section	
	Coordination of simultaneous operations (SIMOPS)	
	Approve release of resources	
	Supervise the execution of the operations portion of the Incident Action Plan	
	Make or approve changes to the Incident Action Plan as necessary	
	Assess progress of the response	
	Provide SITREPs to EMT Leader	
Stand down	Review closed-out and outstanding actions	
	Complete actions, identify and report on open actions	
	Participate in debrief and AAR	
	Provide all records and log sheets to Administration Officer	
	Support ongoing investigation	

APPENDIX F. PLANNING CHECKLIST

Planning		
Phase	**Activity**	**Check**
Activation	Mobilise to EMT room on activation	
	Record personal log of events	
	Receive briefing from EMT Leader	
	Establish status of emergency and situation	
Response	Develop and communicate the Incident Action Plan within the EMT	
	Advise ERO of likely technical specialists required	
	Coordinate procurement of equipment, supplies, specialist and technical support personnel and service	
	Coordinate engineering and technical resources, and liaise with technical specialists to ensure adequate support is available for the response effort	
	Ensure proper risk assessments are conducted as required prior to complex planning events, but only when time allows; there should be no distractions when conditions require immediate decisions to be made	
	Arrange for material / equipment transportation to the Site	
	Reconcile the casualty reports and evacuees with personnel registers	
Stand down	Review closed-out and outstanding actions	
	Complete actions, identify and report on open actions	
	Participate in debrief and AAR	
	Provide all records and log sheets to Administration Officer	

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APPENDIX G. LOGISTICS CHECKLIST

Logistics		
Phase	**Activity**	**Check**
Activation	Mobilise to EMT room on activation	
	Record personal log of events	
	Receive briefing from EMT Leader	
Response	Ensure logistics budget is submitted and approved by the CMTL/COO as soon as practical after initiation events are in progress	
	Coordinate procurement of equipment, supplies, specialist and technical support personnel and services	
	Arrange for material / equipment transportation to the Site	
Stand down	Review closed-out and outstanding actions	
	Complete actions, identify and report on open actions	
	Participate in debrief and AAR	
	Provide all records and log sheets to Administration Officer	

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APPENDIX H. ADMINISTRATION / LOG KEEPER CHECKLIST

Administration / Log Keeper		
Phase	**Activity**	**Check**
Activation	Mobilise to EMT room on activation	
	Ensure the EMT Room is ready for operation, with all relevant documents, maps, log sheets, etc are available and appropriately displayed. Ensure EMT Room is accessible virtually for team members in various global locations to be able to attend virtually 24/7	
	Record personal log of events	
	Receive briefing from EMT Leader	
Response	Set up Master Event Log for recording of all significant events/developments in chronological order.	
	Begin recording of events immediately, continually update.	
	Keep EMT Leader and Members informed and reminded of pertinent actions and decisions.	
	Maintain chronological calendar of events on Master Event Log using computer and data projector or electronic whiteboard. Print copies before advancing/cleaning board, if using laptop or other computer to record events save file on a regular basis and ensure hard copies are available at all times.	
	Act as recording secretary for all EMT briefing meetings updating log immediately.	
	Remind EMT Members of any commitments they have failed to keep.	
	Collect and collate individual records from all EMT Members.	
	Support members of the EMT with any admin requirements as they arise.	
Stand down	Review closed-out and outstanding actions	
	Complete actions, identify and report on open actions	
	Participate in debrief and AAR	
	File all records and log sheets	