IR	PRC Plan Guideline Requirements	Notes	Response
Land Stability Assessment, Identifying pre-existing land degradation/erosion and pre-disposition to ongoing stability issues for each PMLU	Baseline Data - pre-existing land degradation/erosion and predisposition to ongoing stability issues	Several baseline studies were completed to obtain approval for the project and included studies to understand the pre-existing land conditions and pre-disposition to stability issues. LFA studies were identified to be required and are conditioned in the EA. Refer to Condition H2(i) and Appendix A, rehabilitation Criteria. LFA reference sites are only required to be established during the 1st year of Mining. Mining has only just commenced at Fairhill.	Three documents address Land Stability: 1. Soils and Land Suitability Assessment (NRC 2018) – now provided as Appendix H 2. Soil and Land Suitability Assessment (SLR 2019) – previously provided – previously provided as Appendix A 3. Landform Design Report – provided as Appendix I The NRC report (Appendix H) Contains pre-mining land suitability assessment and includes a Soil Erosion hazard and risk assessment. Based on the factors determined for each component of the RUSLE, the predicted soil loss rates have been calculated for the dominant soil types across the Fairhill project. An erosion risk rating is also applied to each dominant soil type as detailed in Table 12. The soil loss and erosion risk rating for the Fairhill Coal Project ranges from low on 1% slopes to high or extreme on 20% slopes. The SLR Study (Appendix A) addresses pre-existing Land degradation and erosion, and predisposition to ongoing stability issues. By assessing Pre-mining land suitability criteria limitations for rainfed broadacre cropping and beef cattle grazing, which include soil Physical factors, workability, salinity, ESP (exchangeable sodium percentage), rockiness, topography (slope), water erosion and flooding. The limitations are summarised for each soil unit. The pre-mining land landform is provided for each Soil Mapping Unit. The Landform Design Report (Appendix I) addresses how the final landform has been designed to draw upon the existing pre-mining topographical features to create an overall stable landform.

			The Landscape Function Analysis (LFA) required as per Condition H2 of the EA (during the first year of commencement of mining) will be carried out to provide suitable baseline reference for progressive rehabilitation benchmarking.
Hydrogeological Assessment (S3.6.1 of Guideline)	Assessment should include • determining the groundwater occurrence including the existence of, and depth to, aquifers and aquitards • locating groundwater recharge and discharge locations locally and regionally • groundwater quality within each of the aquifers and from surface expressions (i.e. seeps and springs) • current and potential future uses of groundwater including existing groundwater extraction bores • groundwater flow direction and velocity, including field tests to determine hydraulic conductivity • the development of potentiometric mapping and hydro stratigraphic cross sections • groundwater modelling to determine contaminant transport and potential changes to groundwater level from dewatering or waste storage The prediction of water quality impacts from mining activities is necessary to determine appropriate measures for the containment and management of	Appendix D, Guideline response for Activities with impacts to Water, was provided. Appendix D1, Underground Water Impact Report is now included.	Appendix D, Guideline response for Activities with impacts to Water, and the Underground Water Impact Report (Appendix D1 – Referred to as Appendix A1 in Appendix D), now included, address all points. The following points are made with reference to Appendix D1. Occurrence of Aquifers is addressed under Section 4.3. Recharge, Discharge and Connectivity is addressed in Section 5 Groundwater quality is addressed throughout, Section 4 addresses the Groundwater quality measured from individual bores and aquifers. Usage is addressed in Section 5.1.2.2 Groundwater flow direction and potentiometric levels are addressed in Section 4.4.1.3 A hydro stratigraphic cross section is shown in Figure 14 Section 6 addresses numerical modelling which assesses potential drawdown from pit excavation. Section 8 addresses predicted impacts on quality of groundwater that may happen if underground water rights are exercised.

	contaminants and the potential impacts on environmental values should they be released.		Section 9 Addresses EV's that may be affected by the exercise of underground water rights.
Assessment of Flood Susceptibility (S3.6.1)	Assess the flooding susceptibility and influence across the site. You must at least: • consider the location of domains in relation to potential flood levels • consider alteration of flow upstream and downstream • model flood levels (including probable maximum flood levels) for a range of design storm events • develop a flooding risk profile.	The PRC Plan report addresses Flooding in Section 6.9. This section also references the Water Management Assessment, 2019, undertaken by ATC Williams.	Appendix C, Water Management Assessment (ATC Williams 2019) – previously provided, addresses flood susceptibility. • A hydraulic model was developed by ATC Williams (2019) using TUFLOW. • Section 6.9 of the Fairhill Coal Project PRC Plan addresses Flood Susceptibility. • Upstream and Downstream flow alteration has been considered and is addressed in Section 3.7 of the ATC Report and are also addressed in Section 6.9 of the PRC Plan Report, concluding that the final landform will have a limited impact on downstream flooding and limited reductions in modelled peak discharge rates • In Section 6.9 The final depression and dump are considered in relation to maximum inundation levels for a 0.1 % annual exceedance probability scenario. The FHCP Water Management Assessment, ATC 2019 considered, depths and velocities for the 1%, 0.1% and PMP events were modelled. The detailed project design takes the modelled outputs into consideration. • The executive summary and other areas of the ATC Report address flood risk. Flooding Risk is also addressed in Section 6.9 of the PRC Plan Document.

Mine Waste Characterisation Report (S3.6.1 GL)	Characterise mine wastes in a report that describes the likely physical behaviour and chemical reactivity of the waste materials under the conditions in which they would be stored. The report must address the constituent elements present, and their likely future speciation and mobility. The mine waste characterisation report should investigate the character of waste rock, low grade ore and tailings and include identification of any contaminants that pose a risk to the environment, such as contaminants associated with AMD, neutral mine drainage and saline mine drainage The report should achieve the following outcomes: • demonstrate that the sampling regime meets best practice standards, is spatially representative of all material being mined (i.e. the ore body, exposed pit walls and overburden etc.) and representative of all lithologies • be capable of confidently classifying mine waste streams based on environmental risk and managements requirements • be capable of generating block models and estimating the volume of mine waste based on waste type (i.e. level of environmental risk) • provide recommendations for the management and mitigation of waste streams to manage	A Mine Waste Characterisation report was provided with the PRCP Plan. Appendix K has been provided in Addition.	The requirements are addressed in: 1. Appendix E (Overburden and Potential Coal Reject Characterisation Report, 2018), previously provided, 2. Appendix K (Guideline Response for Activities with Impacts to Land, June 2019) now included Appendix E (Overburden and Potential Coal Reject Characterisation Report, 2018), previously provided, contains the findings of several assessments which have been carried out including soil physical characteristics, acid generation potential, metalliferous drainage potential and saline drainage. • The report provides a conclusion in which overburden is identified to be Non-Acid Forming. The report identifies further opportunities for investigation during mining. • The environmental risk was identified in the Conclusion of the above report to be low. • Ongoing sampling during the early stages of mining will identify the need for block modelling. However, based on the low-risk current findings this is not necessary. • The Guideline Response for Activities with Impacts to Land (June 2019) now included as Appendix K addresses the requirements to manage environmental risk in section 3.5 and 3.6. Specifically, it is determined that there is no requirement to design the final landform to encapsulate PAF material. It is noted that ongoing analyses are recommended. • The characterisation of waste material will be ongoing as described in Section 3.5 of Appendix K. • The report recommends ongoing monitoring of water in mine affected water storages at least once a quarter and subsequent actions if the pH decreases below 6. Groundwater monitoring is also ongoing monthly as per the EA.

	environmental risk and achieve proposed rehabilitation methods and objectives.
	
	The characterisation of waste material should continue throughout the operation of the mine and should include the following:
	• static tests, such as:
	  ○ chemical composition (whole rock and elemental analysis)
	  ○ mineralogical analysis
	  ○ acid base accounting (paste pH, sulfur speciation, neutralising potential (NP) or acid neutralising capacity (ANC) and total inorganic carbon)
	  ○ net acid generation
	  ○ water extraction (batch extraction) tests – with solution assay
	• kinetic tests, such as:
	  ○ humidity cell leach testing
	  ○ column leach testing
	
	The conceptual site model for waste rock dumps, low-grade ore stockpiles, heap leach pads and TSFs must also identify site-specific factors that may result in geochemical risks, including consideration of the interaction of natural and anthropogenic processes that influence management controls.		

Soil and capping material assessment (S3.6.1 GL)	The available soil resources and capping material should be assessed prior to the commencement of operations. A soil assessment must be carried out that, at a minimum, identifies and characterises the following: • the quality and quantity of available resources (such as topsoil, clay material and competent rock) required to complete the target rehabilitation methodology • the location (i.e. with respect to haul distance) and accessibility of cover material (i.e. is the material located on the tenure or are other approvals required?) • an assessment to determine the need for ameliorants and fertilisers • the relationship between soils and vegetation ecosystems for the PMLU and rehabilitation methodology.	The Soil and Land Suitability Assessment, SLR 2019 was provided as Appendix A. The above study was carried out to supplement a previous Soil and Land Suitability Study carried out by NRC 2018. Both studies are now included.	Three documents address Soil and Capping Material: 1. Soils and Land Suitability Assessment (NRC 2018)-– provided as Appendix H 2. Soil and Land Suitability Assessment (SLR 2019), previously provided as Appendix A. 3. PRC Plan The detailed soil and suitability assessments above, were commissioned specifically for purposes of understanding these resources and are the basis of DETSI deciding to approve the EA and subsequently that we are low risk for ERC decisions to date, after much review. The information in these reports was utilised to quantify the top-dressing material available across each disturbance domain, where specific locations are identified that there is a surplus of topsoil available across the domains. The SLR report specifically focusses on soil sampling and analysis and classification (**Quality**) of the soils to determine suitability for specific land uses including Grazing which is the PMLU across the site. Section 6.10.3 in the PRC Plan Document specifically addresses **Quantities** of topsoil available across each domain and identifies that there is a surplus of topsoil available on site. Topsoil Quality and need for ameliorants is addresses in the SLR Report and in the section in the PRC Plan Document identified above. The specific amelioration requirements cannot be determined until the topsoil that has been stripped is laboratory tested prior to rehabilitation so that amelioration is applied at the specific necessary quantity.

			Section 6.10.5 of the PRC Plan details the fertiliser application rates to ensure successful revegetation to achieve the PMLU.
A final Landform Design (S3.6.1 GL)	Landform Design Report inclusions as per guideline. • 3D design plans of the final landform • Method of determining landform design • Modelling predicting the long-term stability of the final landform design • Method of construction • Quality Assurance / Quality Control (QA/QC) requirements • trial methodology to verify the predicted success of the final landform design • limitations and assumptions of the landform design. Key considerations of the landform design report must also include: • structure location, footprint and height (including proposed lift heights) – these factors may be influenced by location of environmental values, local topography, location of sensitive receptors or visual impact • whether the structure requires a lining to prevent water or air ingress and minimise the potential	Included as Appendix I - update	A Landform design report is included as Appendix I. Landform design is also addressed at Section 6.2 of the PRC Plan.

	for seepage release and/or a seepage collection system • whether the landform is 'water-retaining' or 'water-shedding', considering rainfall patterns, and intensity, and the composition and texture of the waste • the identification of materials available for landform rehabilitation including their ability to achieve the required landform design outcomes • erosion assessments to determine landform heights, gradients, profiles, and material placement • slope profile design considering the interactions between soil erodibility, rainfall erosivity, landform height, gradient and vegetation cover to identify acceptable erosion rates over a long-term average • settling and subsidence over time, which may impact the availability of areas for rehabilitation • hydrological and hydrogeological assessments • a waste placement strategy developed to mitigate environmental and rehabilitation risks during the construction and decommissioning phase • specific landform requirements committed to in stakeholder consultation, mine planning or other sources, which could include rock incorporation,		

	designed flow paths, aesthetic considerations, non-linear batter slopes and targeted placement of materials • monitoring to determine performance of control measures (i.e. liners or seepage collection systems)		
A Cover Design (S3.6.1 GL)	Where waste has the potential for AMD, neutral or saline mine drainage, cover system must take into consideration results from geochemical characterisation • type and physical characteristics of the material being covered (from the material balance developed for the site) • site conditions • availability of suitable cover materials (both quality and quantity) • criteria for discharge (i.e. to protect environmental values) • suitable vegetation. The cover design should include: • identification and specification of the objectives of the cover system • a detailed description of the design including the thickness of each layer • a detailed description of construction methodology including any proposed staging of the cover system • a quantitative assessment that identifies the location and quantity	Appendix E (Overburden and Potential Coal Reject Characterisation Report, 2018), previously provided, details, acid generation potential, metalliferous drainage potential and saline drainage. The report concludes that AMD as well as saline drainage is unlikely to occur. Drainage is unlikely to result in any adverse impacts to EV's. It therefore follows that the cover system design is note required to be designed for AMD encapsulation. In addition Section 3.5 of Appendix K (Guideline response for Activities with impacts to land, 2019), now provided, discusses the negligible potential for acid rock drainage and the large buffering capacity of the materials sampled. The Cover design takes all of the information relating to waste overburden, subsoil and topsoil into consideration and is provided in Appendix L.	The Cover Design and associated related information is provided in 1. Appendix L – Fairhill Cover Design, now provided 2. Appendix E (Overburden and Potential Coal Reject Characterisation Report, 2018), previously provided 3. Soil and Land Suitability Study (SLR 2019), previously provided 4. Appendix K – Guideline response for Activities with impacts to land. 5. Appendix M - Mine Closure Plan, now provided 6. PRC Plan The availability of Topsoil as a capping material is addressed in 1. Soil and Land Suitability Study (SLR 2019), previously provided 2. PRC Plan As discussed under 'Soil and capping material assessment' above. The SLR Report addresses the **quality** of the cover material and its suitability for Grazing which is the PMLU across the site. Section 6.10.3 of the PRC Plan Document specifically addresses **Quantities** of topsoil available across each domain and identifies that there is a surplus of topsoil available on site.

	of proposed capping material available on site • proposed QA/QC for the construction of the cover system including the timely implementation of corrective actions where deviations from the design are identified		Section 6.3 of the PRC Plan addresses the Cover design. Overburden Management is addressed in Section 5.1.2 of the Mine Closure Plan. Revegetation and Management of pests and weeds are addressed in Sections 5.1.4 and 5.1.5 respectively. Revegetation is addressed in detail at Section 6.10 of the PRC Plan. Topsoil and Subsoil Management and application of ameliorant are also addressed in this section of the PRC Plan. A simplified schematic of the cover design including the thickness of layers is provided in Appendix L. The QA/QC for the cover design is addressed in Section 5 of Appendix K, and Section 7 of Appendix M. The QA/QC approach aligns with EA' Completion Criteria.
Void Closure Plan (S3.6.3 GL)	Void Closure Plan requirements that could be applicable to a backfilled void include: • void hydrology, addressing the long-term water balance and water level in the voids, stratification connections to groundwater resources and potential for overflow • groundwater modelling to determine whether the void is acting as a sink or a source for groundwater • a water balance study including an assessment of void surface and groundwater interactions such as. • groundwater lowering/reduction in hydraulic head (from new voids) (e.g. caves/karst systems)	There will not be a void remaining at closure. This is addressed in Section 4.4.1 of the PRC Plan Submitted. The ATC Williams Report, which was previously provided as Appendix C, largely addresses the information requirements. Additional supporting documents are now included.	4 Reports contain the information required that is specific to Void Closure: 1. PRC Plan 2. Appendix C, Water Management Assessment (ATC Williams 2019) – previously provided, 3. Appendix D1, Underground Water Impact Report (SLR 2019), now provided 4. Appendix M - Mine Closure Plan, now provided Void closure is addressed in the Mine Closure Plan (Now included). IT should be noted that the terminology utilised at the time is not appropriate as the term 'residual void' used implies a NUMA, however it is more appropriate to describe the final landform as a depression which will be rehabbed to achieve a PMLU. Section 5.1.3 of the Mine Closure Plan describes that a depression will remain in the landscape and that surface runoff is expected to pool in the backfilled depression.

	• cones of depression and associated impacts • the drainage and flooding behaviours of surface waters in the vicinity of the void • the potential extent of flooding and implications of interactions with the void • a conceptual model that incorporates all projected inflows, outflows, and recharge rates • water storage and long-term water balance • each of the major water fluxes into and out of the void • the sources of surface water within the mine catchment that are likely to influence the water quality in the void. • predicted water quality in the long-term including potential stratification • rehabilitation strategies		Water accumulating would be from surface water and water quality is expected to improve over time due to establishment vegetation. This comes from the ATC and SLR Reports. Water Balance and Flood modelling was undertaken by ATC Williams. ATC Williams, 2019 states that based off the anticipated limited groundwater flows there would be no impacts on groundwater. ATC Williams draws these conclusion from the Underground Water Impact Report (SLR 2019) in which groundwater modelling was carried out. The SLR 2019 Study includes a conceptual groundwater model (See section 4.4), which was further developed into a 2D numerical model (MODFLOW-SURFACT) to assess potential drawdown from the pit excavation. The predicted drawdown is for the Permian and Alluvium are addresses in Section 6.1.5 of the Report. Section 7 of the SLR report predicts pit inflows and outflows per aquifer (Alluvium and Permian). The Pit is predicted to be a sink with minimal drawdown predicted (Refer to Section 10.1) Model results from the Water Balance Modelling conducted by ATC Williams 2019, includes a conceptual site water management system and indicates that on average, mine affected water accumulation over the life of the project would occur. (ATC Williams Report). Section 6 of the report addresses Post Mining Water Management. Section 7 of the ATC Report addresses the Water Quality Monitoring Approach. Groundwater data collection and model calibration will be ongoing as mining commences and more data becomes available.

			The Rehabilitation Strategy for the void area is addressed in Section 4.5 and Section 5.1.3.1 of Appendix M.
A Flood Plain Model Report (S3.6.3 GL)	Where a land outcome document has a pre-approved land outcome for a void with a location specified, flood plain modelling is not required (note that an assessment of the flooding susceptibility and influence is still required—see section 3.6.1).	There will be no residual void or NUMA. The 'void' area once rehabilitated will become a depression which will achieve a post mining land use. The requirement for a flood plain model report is addressed in Section 4.4.1 of the PRC Plan which identifies that there will not be a void and that the final landform landform will be designed to be higher than the peak water level 0.1AEP as modelled. The final land outcome in the void area is pre-approved in the EA and therefore flood plain modelling report is not required. Flood Risk, susceptibility and impacts have all been appropriately addressed in the ATC Report referred to above.	Appendix C, Water Management Assessment (ATC Williams 2019) – previously provided, addresses flood susceptibility.