Table 1: Summary of Project Refinements

Project component	Options presented in Initial Advice Statement (April, 2020)	Current Project status	Justification
Mining lease	The Project spans three Mining Lease Application (MLA) areas; 700044, 700045 and 700055	In addition to the three MLAs, an application for a specific purpose mining lease (SPML) was lodged on 13/08/2021 (SPMLA 700068), which extends over the proposed mine access road, rail spur, water supply pipeline and communications infrastructure.	The SPMLA is a type of mining lease for infrastructure purposes only. The purpose of the SPMLA is to secure tenement rights over the proposed water supply line and rail corridor.
		Refer Attachment A, Figure 1.	
Construction timing	Should the Project be approved by State and Commonwealth regulators, construction of mine infrastructure is scheduled to commence in 2024,	Construction is scheduled to commence in late 2024 for a duration of 30 months. Forecast construction completion is late 2027.	Current dates align with the forecast approval dates.
	over a 2 year period		Construction timeline updated following refinement of the infrastructure design.
Operational mine life	Approximately 35 years, commencing in 2026	37 years (from 2027 to 2063)	Recent exploration works and mine planning has allowed further optimisation of the operational mine life.
Environmental Authorities	Two associated Environmental Authority (EA) applications were submitted to the Department of Environment and Science (DES), one for MLA 700055 (previously referred to as the Valeria	Two associated EA applications will remain. An amendment application will be lodged for the EA application associated with MLA 700055 to be inclusive of the SPMLA 700068 area.	The ownership structure of MLA 700055 and SPMLA 700068 are aligned to allow operation to be authorised under a single integrated EA.
	Project) and one for MLAs 700044 and 700045 (previously referred to as the Valeria South Project). At a future date during the approvals process, the Proponent intends to replace the two EA applications with one EA, to allow the Project to be approved and managed as a single integrated operation.		The areas underlying MLAs 700044 and 700045 are under a separate ownership structure. It had been intended to amalgamate the ownership with MLA700055 and SPMLA700068, but this will no longer occur. Consequently the two EAs will remain in place, and ultimately will be managed by the proposed operator, Valeria Coal Holdings (VCH).
Co-located infrastructure corridor	Location not specified within the IAS.	A co-located infrastructure corridor between mine site and Gregory Highway has been proposed to the Project footprint. This corridor comprises the mine access road, temporary access road,	The co-located infrastructure corridor was not specified within the IAS as numerous options were being considered at the time of submission.
		communication infrastructure, powerline, water supply pipeline and rail spur.	The final option was determined based on consideration to access with the Gregory Highway,

Options presented in Initial Advice Statement (April, 2020)	Current Project status	Justification
	Refer Attachment A, Figure 2	road safety requirements, ecological constraints and minimising impacts to landholders.
The route for the rail infrastructure corridor is under evaluation with options extending to the east, north and south to connect with existing railway networks. Where practicable, linear infrastructure will be co-located and will depend on the location of infrastructure within the Project area, origin and connection points, existing land- use and planning constraints, economic considerations and environmental, cultural heritage and social impacts.	The footprint of the rail infrastructure corridor has been confirmed. It is proposed to extend from the rail loop and train load-out (TLO) located in the vicinity of the mine infrastructure area (MIA) within the mine site, then continue east to join the Aurizon Goonyella Coal Chain (near Oaky Creek) rail network. Refer Attachment A, Figure 3	The rail spur infrastructure corridor was not specified within the IAS as numerous options were being considered at the time of submission. A multi-criteria assessment was undertaken to optimise the rail spur infrastructure corridor alignment. The final alignment was determined to minimise potential social and transport impacts in Clermont, Cappella and/or Emerald. The chosen corridor alignment connecting with the Aurizon Goonyella Coal Chain (near Oaky Creek) rail network will also allow flexibility in available port options providing access to export via the Dalrymple Bay (DBCT), Wiggins Island (WICET) or RG Tanna coal terminals (RGCT).
 Project water supply options are being investigated and could include a combination of: Processing water re-use and recycling; Open cut dewatering; Flood harvesting; Groundwater; Wastewater treatment; Incidental rainfall and runoff collection; and Pipeline connecting to existing water networks in the area. Production water would potentially be sourced from a combination of pit-water, secure third- party raw water supply sources, water harvesting, surface water catchment dams and groundwater sources. Surface run-off from disturbed and undisturbed areas would be captured in sediment dams and reused. Potable water will likely be supplied to site by truck initially and eventually via 	 Project water supply options will be a combination of: Processing water re-use and recycling; Open cut dewatering; Flood harvesting; Groundwater bores; Wastewater treatment; Incidental rainfall and runoff collection; and A water supply pipeline connecting to existing water networks in the area. The water supply pipeline infrastructure is proposed to extend from the water supply dam in the vicinity of the MIA within the mine site, east to source water from available allocations in Bedford Weir. Refer Attachment A, Figure 3 	Multiple water supply options will remain as part of the Project to maintain flexibility during operations. The water supply corridor was not specified within the IAS as numerous options were being considered at the time of submission. The chosen corridor alignment will allow the potential for operational water to be sourced from available allocations from Bedford Weir. Co-locating the water supply pipeline with the rail spur corridor will minimise the potential disturbance footprint of the Project.
	Options presented in Initial Advice Statement (April, 2020) The route for the rail infrastructure corridor is under evaluation with options extending to the east, north and south to connect with existing railway networks. Where practicable, linear infrastructure will be co-located and will depend on the location of infrastructure within the Project area, origin and connection points, existing land- use and planning constraints, economic considerations and environmental, cultural heritage and social impacts. Project water supply options are being investigated and could include a combination of: Processing water re-use and recycling; Open cut dewatering; Flood harvesting; Groundwater; Wastewater treatment; Incidental rainfall and runoff collection; and Pipeline connecting to existing water networks in the area. Production water would potentially be sourced from a combination of pit-water, secure third- party raw water supply sources, water harvesting, surface water catchment dams and groundwater sources. Surface run-off from disturbed and undisturbed areas would be captured in sediment dams and reused. Potable water will likely be supplied to site by truck initially and eventually via	Options presented in Initial Advice Statement (April, 2020) Current Project status Refer Attachment A, Figure 2 The route for the rail infrastructure corridor is under evaluation with options extending to the east, north and south to connect with existing railway networks. Where practicable, linear infrastructure will be co-located and will depend on the location of infrastructure within the Project area, origin and connection points, existing land- use and planning constraints, economic considerations and environmental, cultural heritage and social impacts. The footprint of the rail infrastructure area (MIA) within the mine sife, then continue east to join the Aurizon Goonyella Coal Chain (near Oaky Creek) arail network. Project water supply options are being investigated and could include a combination of: Processing water re-use and recycling; Open cut dewatering; Flood harvesting; Groundwater; Wastewater treatment; Incidental rainfall and runoff collection; and Pipeline connecting to existing water networks in the area. Project water supply options will be a combination of: Processing water re-use and recycling; Flood harvesting; Flood harvesting water extertement; Flood harvesting; Flood harv

Project component	Options presented in Initial Advice Statement (April, 2020)	Current Project status	Justification
Road transport	Access options to the site are being assessed and will require use of local and State-controlled road assets to travel to the site access turn off. The alignment of the rail infrastructure corridor will influence the location of the primary site access	Temporary site access track is proposed to extend from the MIA to the Gregory Highway. The permanent mine access road is proposed to extend from the MIA to the Gregory Highway	The mine site access (both temporary and permanent) location was not specified within the IAS as numerous options were being considered at the time of submission.
	road and is currently under assessment. Although Fourteen Thousand Access Road was designated as the access to the site (as required for the submission of the MLAs), alternative options to the east and south are also under consideration and identified alternatives will be assessed as part of the EIS.	Refer Attachment A, Figure 3	The temporary access road has been located to utilise existing farmers tracks to minimise the required disturbance. The temporary access road location will also have the benefit of minimising transport impacts on local roads by allowing transport plant to access the mine site via the Gregory Highway, rather than via Fourteen Thousand Access Road.
	During site access road construction, access to the Project area will likely be via Fourteen Thousand Access Road, a local road which connects with Capella Rubyvale Road and the Gregory Highway (state controlled). There will be no coal haulage on public roads for the Project, however haulage of ROM and potentially product coal will be required on internal roads between pits, the CHPP and the rail load out facility.		The permanent site access track has been co-located with the rail infrastructure to minimise Project disturbance impacts. Connecting the mine access road with the Gregory Highway will minimise potential Project transport impacts when compared with access via local roads. The proposed intersection location on the Gregory Highway location took traffic safety into consideration (e.g. site distances before and after the intersection).
Electricity options	The Project will require a permanent electricity supply during operations. Power supply to the Project would initially consist of diesel-powered generators for construction processes which would	During operations power supply to the Project would comprise a combination of diesel-powered generators and a powerline connected to the Ergon powerline.	The powerline infrastructure corridor alignment was not specified within the IAS as numerous options were being considered at the time of submission.
	 powerline. The location, origin and connection points for a powerline to the Project area are yet to be determined and will depend on: The electricity requirements of the Project during all phases of development; Final proposed location of infrastructure on site (e.g. CHPP, rail loop etc); and 	The proposed powerline infrastructure will extend from the MIA within the mine site will extend east to the Gregory Highway and then south to join the Ergon powerline at the Lilyvale Road turn-off from Gregory Highway. Refer Attachment A, Figure 3	Mine design undertaken as part the initial studies determined a 66kV would be suitable to meet mine site power demand. A multi-criteria assessment was undertaken to optimise the powerline infrastructure corridor alignment. The chosen option provided connection for the 66kV powerline and also offered minimal disturbance to
	 The capacity of nearby service infrastructure and need for upgrade. Diesel-fired power generation could continue to be used for 		land and impacts on the community.

Project component	Options presented in Initial Advice Statement (April, 2020)	Current Project status	Justification
	temporary or mobile structures throughout the Project life.		
Communication options	The construction of a mobile radio tower and/or booster system may be required if there is insufficient local reception available at the Project area. Data transfer will rely on the installation of optic fibre to the site. This connection will be used to run fleet management, maintenance, and plant control systems. Digital radio communication will be required for communication between heavy vehicles and light vehicles within the Project area.	Communications infrastructure including a fibre optic cable extending from the MIA within the mine site to the Gregory Highway. On-site communication infrastructure including mobile radio tower and booster networks will be required. Refer Attachment A, Figure 3.	Locating the fibre within with the co-located infrastructure corridor will minimise land disturbance impact.
Sewage treatment	The Project will require a STP with appropriate capacity to service the anticipated workforce. It is proposed that effluent will be treated before being irrigated to land. Sewage residue would be removed from the STP by a licensed contractor and would be disposed of at an appropriately authorised facility.	Treated effluent from any STP will be utilised on the Project as dust suppression water, construction water or process water.	The use of treated effluent for construction or process water will provide another water supply source.
Project area and disturbance footprint (excluding off-site infrastructure corridors)	The extent of the Project area, excluding the infrastructure corridor(s), is approximately 28,267 ha of which approximately 10,000 ha is estimated to be disturbed.	 The Project area in the IAS was for the mine site only. The Project area in the EPBC Referrals is made up of the following components: Mine site (approx. 28,300 ha) Co-located infrastructure corridor (approx. 1,150 ha) Temporary site access (approx. 300 ha) The current estimated Project disturbance area is approximately 10,000 ha (including the on-site workers accommodation camp). Refer Attachment A, Figure 2. 	The mine layout within the IAS was proposed based on preliminary mine planning Further mine planning work undertaken since the IAS, has refined the area of disturbance associated with the mine and the mine access road.
Disturbance in the State Forest areas	The preliminary Project layout had both Llandillo and Crystal State Forests impacted by the mine disturbance area. Crystal State Forest would be fragmented by proposed mine infrastructure, including mine pits,	To minimise potential impacts to the State Forests, the Project team has refined the mine layout to minimise the infrastructure required within the State Forests. These refinements comprised of: - Minimising infrastructure within the Llandillo State Forest	Initially, mine infrastructure (including an out-of- pit tailings dam, mine water dam, haul road and out-of-pit dump) were proposed within the State Forests. The Valeria Project team recognised early in the assessment phase that the initial designs would significantly impact the utility and ecological values of the State Forests and consequently

Project component	Options presented in Initial Advice Statement (April. 2020)	Current Project status	Justification
	a MIA, water storage dam, haul roads and waste rock dumps. Llandillo State Forest would be impacted by a proposed mine water dam and haul roads within the State Forest.	 Removing mine water infrastructure from Crystal Creek State Forest Shifting any remaining required infrastructure to the edge of Crystal Creek State Forest to maximise the continuous unimpacted portion of the State Forest The total area of the Crystal Creek State Forest is 1,826 ha. The total proposed disturbance represents approximately 14 % of the total State Forest area. Refer Attachment A, Figure 2. 	 infrastructure and pit extents have been reduced where possible to minimise impact. The remaining infrastructure within the Crystal Creek State Forest is required to: Provide haulage between Crystal North and South pits and the MIA Provide connection between Crystal North and Crystal South pits which is only possible via Crystal Creek State Forest Allow overburden placement adjacent to the pit
Mine layout	Mining coal from eight pits, including: - Retro North - Retro South - Carbine North - Carbine South - Kettle Pit - Valeria South - Crystal South - Crystal North	 Mining coal from six pits, including: Carbine North Carbine South Kettle Pit Valeria South Crystal South Crystal North Retro North and South pits as well as associated haul roads have been removed from proposed mine layout. Other changes to the mine plan include: All remaining pits, WRD, levees, dams and haul roads have been optimised across the site Mine dam within Crystal Creek State Forest has been removed Workers accommodation camp has been located north-east of the MIA Refer Attachment A, Figure 2. 	To minimise the disturbance area, the mine plan has been refined through removal of two pits from the northern part of MLA 7000055 (Retro North and South pits). The removal of these pits will reduce overall ground disturbance area and minimise potential impacts to mapped strategic cropping land, cultural heritage values, threatened ecological values, sensitive receptors and surface water quality.
Mine Water Release Dam	Location not specified	Three potential mine water release dams may be included with the final mine layout. These include one west of Carbine North pit, one north of the	Mine plan design and water balance modelling has identified the proposed location of the mine water release dams. Further Project refinements and

Project component	Options presented in Initial Advice Statement (April, 2020)	Current Project status	Justification
		MIA and another south of the MIA. All three mine water release dams are proposed to overflow into Carbine Creek.	water balance modelling are being undertaken which may result in removal of a mine water release dam.
Mine Infrastructure Area	Located centrally and west of the previous Carbine South pit	MIA has been moved east closer to the eastern mining lease boundary.	The MIA was relocated to provide efficient access to the site from the Gregory Highway.
		Refer Attachment A, Figure 2.	
Tailings storage facility (TSF)	Did not specify whether the TSF would be in-pit or out of pit	The mine plan is currently assessing two options for tailings disposal:	Further mine planning and exploration work is being undertaken to determine the preferred tailing management option.
		 In-pit TSF – located east of Kettle Pit. Once the initial in-pit TSF is filled remaining tailings will be disposed of in northern part of Kettle pit Out-of-pit TSF – located west of Carbine South pit 	
		Refer Attachment A, Figure 2.	
Watercourse crossings	 The preliminary Project layout will likely require internal haul road crossings of a number of watercourses, including: Retro Creek; Theresa Creek; Carbine Creek; and Crystal Creek. 	 A number of watercourse crossing will be required across the Project area, including: Mine Site: Carbine Creek Crystal Creek Co-located Infrastructure Corridor: Theresa Creek Gordonstone creek Rail spur and water pipeline Spitters Creek Belcong Creek Tipperary Creek Expedition Creek 	The refinement of the mine plan (i.e., removal of Retro North and South) has allowed the Theresa Creek watercourse crossings within the mine site to be removed. Other watercourse crossings will be required as part of the off-site infrastructure. All watercourse crossings will be designed and constructed to minimise hydrological and aquatic ecological impacts.
		Refer Attachment A, Figure 4.	
Operational workforce	It is estimated that an operational workforce of up to 950 fulltime equivalents (FTEs) will be required. The operational workforce demand may vary	A peak operational workforce of 1,250 full time equivalents will be anticipated.	The increased workforce is required based on the increased strip ratio identified following the exploration drilling programs and update to

Project component	Options presented in Initial Advice Statement (April, 2020)	Current Project status	Justification
	during different stages of the Project's life. This estimate is based on comparison to similar operations, however exact workforce requirements for the Project are still being determined.		geological models. Mining equipment selections undertaken following the initial studies have also dictated personnel requirements for operations (e.g. replacing electric shovels with hydraulic excavations).
Workforce accommodation	The construction and operational workforce for the Project would be sourced and housed locally wherever possible. At this early stage of Project development, the potential need for on-site accommodation during construction or operational	A construction workers accommodation camp is proposed on-site during the construction phase. The operational workforce will be housed using existing housing available in Tieri, Clermont, Capella and Emerald.	Due to the short-term nature of the construction phase, supplementing existing housing with an on- site workers accommodation camp is appropriate to minimise impact to housing supply in the region.
	phases is still being determined.		An accommodation strategy is currently being developed for the operational phase to ensure the Project is able to maximise the use of existing housing supply and minimise impacts on the existing community.

Attachment A: Memo Figures

Figure 1: Project Area (comparison between IAS and current proposal)
Figure 2: Mine Layout (comparison between IAS and current proposal)
Figure 3: Off-Site Infrastructure (current proposal only)
Figure 4: Watercourses Impacted by Project (current proposal only)
Figure 5: Native Title Claimants (current proposal only)





IAS Proposal







IAS Proposal



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The Valeria Project

Figure 3 Off-Site Infrastructure (current proposal only)



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Legend

Mine Site

- Co-located Infrasturcture Corridor
- Powerline Corridor
- Rail Spur and Water Line Corridor
 - Temporary Site Access Track (external to Co-located Infrastructure Corridor)
- State Controlled Roads
- Roads and Tracks
- Existing Rail

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The Valeria Project

Figure 4 Watercourses (current proposal only)



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	Construction Worker Accommodation Camp
	MIA & CHPP
	Mine Water Dams
	Pine Creek Diversion
	Waste Rock Dump
	Haul Roads

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### **The Valeria Project**

Figure 5 Native Title Claimants (current proposal only)



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#### Legend

- Mine Site
  - Co-located Infrasturcture Corridor
  - Powerline Corridor
  - Rail Spur and Water Line Corridor
- State Controlled Roads
- Roads and Tracks
- Existing Rail -----

#### **Register of Native Title Claims**

- Western Kangoulu People
  - Clermont-Belyando Area Native Title Claim
  - Barada Kabalbara Yetimarala People
- Gaangalu Nation People
- Jangga People #3

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