North Kiaka

Proposal Content Document

Table 1: General proposal content description

Proposal title	North Kiaka Project
Proponent name	Simcoa Operations Pty Ltd
Short description	The existing Approved Proposal for Moora Mine and Kemerton Smelter approved under MS 813 The development of North Kiaka mine (the Project), a new quartzite mine approximately 15 km north of Moora, WA. The Project is approximately 1.5 to 2 km north northeast (NNE) of the existing Moora Quartzite Mine and is expected to generate up to 130,000 tpa of lump quartz for downstream processing at the Kemerton Silicon Smelter (Kemerton Smelter). The Kemerton Smelter is located in the Kemerton Strategic Industrial Area (KSIA) 17 km north-east of Bunbury, WA. The Project will be an open-cut mine operating above the water table and has a predicted Life of Mine of 20 years based on current resource estimates. Ore mined will continue to be pre-processed (crushed and screened) using existing processing infrastructure at Moora Mine prior to transporting to Kemerton Smelter using the established network of power, water and roads at Moora Mine. The construction of an abandonment bund for the Moora Mine pits is being undertaken as part of this Revised Proposal.

Table 2: Proposal content elements

Proposal element	Location / description	Approved Proposal (MS 813) (Maximum extent, capacity or range)	North Kiaka Mine and abandonment bund (Maximum extent, capacity or range)	Revised Proposal - Combined Extent
Physical elements				
Revised Proposal Development	Figure 1 part 1 and 2	Clearing of no more than 25 ha of native vegetation within a disturbance footprint of not	Disturbance footprint (DF) of up to 44.59 ha (including up to 17.12 ha of clearing) within	Total combined DE of 455.52 ha including clearing of no more than 43.12 ha of native vegetation within a DF of

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Envelopes (DE) Including a mine pit, waste rock landform (WRL), run of mine area (ROM), laydown and stockpile areas, access corridor and associated infrastructure and abandonment bund.		more than 93 ha within a development envelope of 239.10 ha	a 216.42 ha North Kiaka DE. Increasing the Moora Mine DF from 93 ha to 96 ha (additional 3 ha). Clearing of 1 ha of native vegetation within the amended Moora DF.	140.59 ha which consists of: – 26 ha clearing of native vegetation within a disturbance footprint of not more than 96 ha and DE of 239.10 ha – Moora Mine – 17.12 ha of native vegetation within a disturbance footprint of not more than 44.59 ha and DE of 216.42 ha - North Kiaka DE.
Construction elements				
Key construction elements for the Revised Proposal will include clearing for all identified physical and operational elements, installation of temporary offices/ ablutions, movement of topsoil, and bulk earthworks to support construction of ancillary facilities.				
Operational elements				
Mine pit	Figure 1 part 2	Moora Mine DE 239.10 ha Moora Mine pit footprint is 25.48 ha and is currently operational with approved clearing of no more than 25 ha of native vegetation within a disturbance footprint of not more than 93 ha in the Moora Mine DE or 239.10 ha.	Clearing of no more than 17.12 ha of native vegetation within a 44.59 ha disturbance footprint within 216.42 ha development envelope (North Kiaka DE) 26 ha of native vegetation within a disturbance footprint of not more than 96 ha (Moora Mine)	The Moora Mine pit footprint is 25.48 ha Total combined DE of 455.52 ha including clearing of no more than 43.12 ha of native vegetation within a DF of 140.59 ha which consists of: – 26 ha clearing of native vegetation within a disturbance footprint of not more than 96 ha – Moora Mine

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		Current production of up to 130,000 tpa of lump quartz within an approved extent of 160,000 tpa.	An estimated 236,000 tonne per annum (tpa) of ore will be processed (crushed and screened) to produce up to 130,000 tpa of lump quartz within a approved extent of 160,000 tpa.	– 17.12 ha of native vegetation within a disturbance footprint of not more than 44.59 ha - North Kiaka DE An estimated 236,000 tonne per annum (tpa) of ore will be processed (crushed and screened) up to 130,000 tpa of lump quartz within a approved extent of 160,000 tpa.
Waste Rock Dump	Figure 1 part 2	Waste Rock dumps at Moora Mine are a total of 34.9 ha: – Main Waste Dump – 9.7 ha – North Dump – currently 6.0 ha with maximum approved of 19.0 ha – Old North Dump – 1.5 ha – South East Dump – 3.8 ha – West Pit Dump – 0.9 ha	Proposed WRD (Tonkin) with a footprint of 9.69 ha to be located approximately 0.5 km south of the mine pit, on farmland previously cleared of native vegetation. It Is estimated that up to 2.15 million m^3 of waste rock will be disposed to the Tonkin WRD, assuming a swell factor of 30%. The final height of the WRL is expected to be 21–- 45 m below the tallest landform in the North Kiaka DE (pre-development).	Total combined WRD is 44.59 ha – Moora Mine: 34.9 ha – North Kiaka DE: Tonkin WRD 9.69 ha footprint

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ROM	Figure 1 part 2	Short-term ROM (1.22 ha, approximately 80 m x 100 m) allowing for up to 20 days per year to be stockpiled	No change	No change
Ancillary Facilities	Figure 1 part 2		Access corridor (connecting North Kiaka DE to the Moora Mine) (7.31 ha) and associated infrastructure (0.88 ha) including an administration building, car park, weighbridge, workshops, ablution facilities, laydown and stockpile areas, hydrocarbon storage, refuelling facility, and washdown bays	Access corridor (connecting North Kiaka DE to the Moora Mine) (7.31 ha) and associated infrastructure (0.88 ha) including an administration building, car park, weighbridge, workshops, ablution facilities, laydown and stockpile areas, hydrocarbon storage, refuelling facility, and washdown bays
Power	Figure 1 part 2	One onsite generator (noting that crushing and screening of ore will occur at the Moora Quartzite Mine)	No change	One onsite generator (noting that crushing and screening of ore will occur at the existing Moora Quartzite Mine)

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Groundwater abstraction (water demand)	Moora Mine	Moora Mine permitted abstraction of up to 250,000kL of groundwater within tenement	No dewatering or groundwater abstraction is currently proposed for the Project. If additional water is required, SIMCOA will seek the necessary approvals under the RiWI Act to abstract groundwater within M70/1292.	Moora Mine groundwater licence (GWL 104693(6)) to authorise the use of 250,000kL of abstracted water within tenement M70/1292. The groundwater abstraction volume approved in MS813 is expected to be sufficient for Moora Mine and North Kiaka DE. If additional water is required, SIMCOA will seek the necessary approvals under the RiWI Act to abstract groundwater within M70/1292.
Water Discharge		Discharge of up to 122,000 kL per annum of dewatered groundwater via Kiaka Creek to the Conderoo River wetlands (Moora Mine)	No change	Discharge of up to 122,000 kL per annum of dewatered groundwater via Kiaka Creek to the Conderoo River wetlands (Moora Mine)
Dewater discharge pipeline		Dewater discharge pipeline routed along an existing access road (Moora Mine)	No change	Dewater discharge pipeline routed along an existing access road (Moora Mine)
Area of rehabilitation		All disturbed areas (Moora Mine)	All disturbed areas (North Kiaka DE)	All disturbed areas (Moora Mine and North Kiaka DE) Excluding the Moora and North Kiaka pits, abandonment bund and roads to remain after closure

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Kemerton Smelter	Figure 1 part 3	Ministerial Statement 813 – Silicon Production 64,000 tonnes per annum (approximately) – Quartzite Consumption 160,000 tonnes per annum (approximately) – Wood for Charcoal 110,000 tonnes per annum (approximately) – Charcoal Production 27,000 tonnes per annum (approximately) – Smelter Furnaces • 4 x submerged electric arc furnaces – Off-gas Cleaning Plant (Baghouses) • One large baghouse with stacks	Extend operating life of Kemerton Smelter from 2026 to 2042	As per authorised extent in MS 813

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		• One large baghouse without stacks		
Revised Proposal elements with greenhouse gas emissions				
Construction (the Project and abandonment bund at Moora Mine – no new construction at Kemerton Smelter)				
Scope 1	2,168			tCO2-e
Scope 2	0			
Scope 3	3,653			tCO2-e
Operation elements (combined annual Moora Mine (processing) and the Project) Kemerton Smelter				
Scope 1	1,546 Moora Mine and the Project		123,454 Kemerton	tCO2-e
Scope 2	0		300,024 Kemerton	tCO2-e
Scope 3	11,761 Moora Mine and the Project		681,680 Kemerton	tCO2-e
Rehabilitation				
Rehabilitation of North Kiaka DE and Moora Mine will be undertaken in line with commitments in the s.40AA Supporting Document, Ministerial Statement conditions (following approval of the Revised Proposal by the Minister), and the Mine Closure Plan (to be assessed and approved by Department of Mines, Industry Regulation and Safety (DMIRS)). Some key rehabilitation commitments are listed below: – Rehabilitation will be undertaken progressively. – Rehabilitated landforms (Tonkin WRD) will be stable and non-polluting (i.e. batter slope of 18°, placement of structurally stable soils at the surface, contoured/ ripped/ logs and rocks placed to reduce erosion risk). – The Tonkin WRD will be rehabilitated using local native species to meet post-closure goals and outcomes as specified in the Mine Closure Plan (MCP) – Waste rock that is stable and non-acid forming will be used as growth medium for rehabilitation of landforms, as this method is proven to successfully re-establish native provenance species at the existing Moora Mine. – Topsoil comprising sandy gravels will be collected, stockpiled (<2 m height) and used to rehabilitate areas previously used for agriculture that will be returned to their pre-mining land use.				

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– Weed management will be undertaken for the first three years following rehabilitation. Any requirement for further weed control will be assessed after the three-year timeframe.				
Commissioning				
Limited commissioning works are required as all crushing activities will continue to be undertaken at Moora Mine. No commissioning required for the construction of the abandonment bund. There will be no change to the volume of quartz being processed at Kemerton Smelter, so no commissioning will be required at that site.				
Decommissioning				
SIMCOA intends to enable regrowth of local native flora species on the WRD's, close the Moora Mine pit with an abandonment bund, and return all other disturbance footprints to pre-mining agricultural land use (including the removal of buildings and infrastructure). SIMCOA operate the Moora Mine under an approved MCP. They currently comply with the MCP for Moora Mine for post mining landuse and other requirements. SIMCOA will develop a MCP in accordance with the *Department of Mines, Industry, Regulation and Safety 2020 Guidelines for Mining Proposals in WA* (DMIRS, 2023b), to support the development of the Project under the *Mining Act 1978*. The MCP will be assessed and approved by DMIRS prior to commencement of activities.				
Other elements which affect extent of effects on the environment				
Proposal time*	Maximum project life	20 years		
	Construction phase	1 year		
	Operations phase	18 years		
	Decommissioning phase	Approximately 1 year		

** Proponents should only provide realistic timeframes to avoid unnecessary change to proposal applications at referral (section 38C), assessment (section 43A) or post assessment (section 45C).*