EPBC Act referral

Australian Government
Department of Agriculture, Water and the Environment

Note: PDF may contain fields not relevant to your application. These fields will appear blank or unticked. Please disregard these fields.

Title of proposal	2021/9089 - North Kiaka Project Quartzite Mine Expansion

Section 1

Summary of your proposed action

1.1 Project industry type Mining

1.2 Provide a detailed description of the proposed action, including all proposed activities

Simcoa Operations Pty Ltd (Simcoa) currently operates a quartzite mine (the Existing Mine), located approximately 15 km north of Moora, in the Wheatbelt region of Western Australia (WA) (see Figure 1 in 'Figs 1-2 - Proposed Action Location and Footprint'). The Existing Mine is located on tenements M70/191, G70/91, G70/92 and G70/93, and is approved under WA Environmental Protection Act 1986 (EP Act) via Ministerial Statement 813 (MS 813). Simcoa is proposing to establish a new quartzite mine approximately 2 km north of the Existing Mine. The development of the new quartzite mine at North Kiaka (the Proposed Action) will be located within tenement M70/1292. The Proposed Action Area is approximately 216.42 ha, which includes a Disturbance Footprint of 44.45 ha (see Figure 2 in 'Figs 1-2 - Proposed Action Location and Footprint'). The Proposed Action includes the establishment of:

— One mine pit
— One waste rock landform (Tonkin waste dump)
— A secondary run of mine (ROM)
— An easement linking the Proposed Action to the Existing Mine
— Associated infrastructure such as offices, car park, ablutions, laydown and stockpile areas, a weighbridge, and workshops (to include hydrocarbon/ chemical storage, refuelling facility and washdown bay).

Quartzite ore will be transported from the Proposed Action Area to the Existing Moora Quartzite Mine in uncovered dump trucks, where it will be pre-processed prior to being transported in covered trucks to Simcoa's existing Smelter (the Smelter) located in Kemerton Strategic Industrial Area (KSIA), approximately 17 km north-east of Bunbury in the South West of WA. The Proposed Action is expected to produce approximately 130,000 tonnes per annum of high purity quartzite per annum and extend Simcoa's operations by approximately 18 years.

The Proposed Action will replicate methods undertaken at the Existing Mine, with the ore body mined via drill and blast methods, to construct the open pits to a maximum depth of 45 m below ground level (bgl). Mining will remain above the groundwater table. The quartz material will be removed using excavators and haul trucks, transporting it to the existing ROM (located the Existing Mine) where it will undergo a crushing and wet screening process, prior to being stored in stockpiles for transport to the Smelter. The northern most infrastructure area in the DE will make provision for a short-term ROM (approximately 80 m x 100 m) allowing for up to 20 days per year to be stockpiled. This short-term ROM will only be used intermittently, if there is some reason why the material cannot be transported to the Existing Mine for processing.

It is anticipated the Proposed Action and Existing Mine may have a period of approximately seven years in which they will operate concurrently. During this period Simcoa will develop the Proposed Action and use the established infrastructure at the Existing Mine. The ore will be transported from the DE via trucks along the linear easement corridor to the Existing Mine for processing prior to transportation to the Smelter.

Activities that may have a direct or indirect impact on the environment are summarised below:

— Mining will permanently alter the key landform within the DE, the Noondine Chert Formation, which supports environmental values including Coomberdale TEC, Threatened flora, and Carnaby's Black Cockatoo foraging habitat.
— The construction of Tonkin waste dump has the potential to impact ground water quality through acid and metalliferous drainage, or saline drainage, if adverse materials are present in waste rock (noting that the silica style orebody has been assessed as low risk for acid production, with low concentrations of leachable minerals such as halite, gypsum and carbonate) (see 'Att 12 - GHD 2019b_Materials Characterisation Assessment' Section 4, pp 7).
— Clearing of 17.22 ha of native vegetation representing 2% of the total 785 ha extent of the mapped Coomberdale TEC vegetation. Including clearing of Threatened flora (six locations of Acacia aristulata, three locations of Daviesia dielsii), and 15.55 ha of suitable foraging habitat for Carnaby's Black Cockatoo.
— Noise and vibrational impacts to nearby sensitive receptors associated with the operation of plant and equipment, and construction of buildings/infrastructure.
— Reduced visual amenity due to mining elevated topographic features and construction of the Tonkin waste dump.
— Amenity impact resulting from increased traffic between the Proposal, the Existing Mine, and the Kemerton Silicon Smelter.

Other potential minor impacts from activities of the Proposed Action include:

— Soil erosion impacting nearby vegetation, future land use, or surface water quality (through sedimentation)
— Introduction and/ or spread of weeds increasing competition with native vegetation in undisturbed and rehabilitated areas
— Dust generated from operational activities smothering native vegetation in undisturbed and rehabilitated areas (reduced vegetation health)
— Fire cause by operation of machinery/ plant causing damage/ loss of native vegetation in undisturbed and

Note: PDF may contain fields not relevant to your application. These fields will appear blank or unticked. Please disregard these fields.

rehabilitated areas

— Accidental release of hydrocarbons/ chemicals from storage and handling areas impacting soil, surface water and/or groundwater quality. Note: bulk storage of approximately 55,000 litres of diesel will be required for operation of the mining fleet, which does not trigger the requirements for a Prescribed Premise Licence under the Environmental Protection Regulations 1987, and will not require a Dangerous Goods Storage Licence. Only minor quantities of chemicals will be stored on site. Storage and handling facilities will be appropriately bunded (see 'Att 5 - GHD 2021b_Environmental Management Plan_North Kiaka', Section 3.3.5, pp 22).

— Unauthorised solid/liquid waste discharge from sewage facilities impacting soil, surface water and/or groundwater quality

— Death, injury or displacement of native fauna species due to operational activities (i.e. vehicle strike, entrapment, noise, vibration, light emissions, bushfire, predation from introduced species)

— Direct impacts to Aboriginal or European heritage sites due to ground disturbance (i.e. vegetation clearing, earthworks)

— Air quality impacts associated with clearing, earthworks, and blasting/mining/processing/ transport of quartz ore

The potential impacts identified above can be adequately mitigated through the proposed management measures detailed in the Environmental Management Plan (see 'Att 5 - GHD 2021b_Environmental Management Plan_North Kiaka', Section 3, pp 15, 19, 21, 25, 29, 31).

1.3 What is the extent and location of your proposed action?

See Appendix B

1.5 Provide a brief physical description of the property on which the proposed action will take place and the location of the proposed action (e.g. proximity to major towns, or for off-shore actions, shortest distance to mainland)

The Proposed Action is located within the Shire of Moora, on a board acre agricultural area, situated approximately 15 km north of the Moora Township. The main agricultural uses are sheep farming and cropping. The natural environment in the area has been significantly altered through historic clearing of native vegetation for farming. The Proposed Action is situated approximately 2 km north-east of the existing Simcoa Moora Quartzite Mine and approximately 93 km from the coastline.

1.6 What is the size of the proposed action area development footprint (or work area) including disturbance footprint and avoidance footprint (if relevant)?

The Proposed Action Area (development footprint) is 216.42 ha, including a Disturbance Footprint of 44.45 ha (see Figure 2 in 'Figs 1-2 - Proposed Action Location and Footprint'). While there is no designated 'avoidance footprint', development of the project will be limited to the Disturbance Footprint as specified in the Ministerial Statement for the project (following assessment by the WA Environmental Protection Authority, and approval by the WA Minister for Environment).

The Proposed Action Area consists of 87.57 ha of native vegetation, 4.02 ha of rocky outcrops and 124.83 ha of previously cleared agricultural areas.

1.7 Proposed action location

Other - The Proposed Action is accessible via Kiaka Road, connecting to Midlands Road, 15 km north of Moora

1.8 Primary jurisdiction Western Australia

1.9 Has the person proposing to take the action received any Australian Government grant funding to undertake this project?

☐ Yes ☑ No

1.10 Is the proposed action subject to local government planning approval?

☐ Yes ☑ No

Note: PDF may contain fields not relevant to your application. These fields will appear blank or unticked. Please disregard these fields.

1.11 Provide an estimated start and estimated end date for the proposed action	Start Date	01/01/2023
	End Date	31/12/2041

1.12 Provide details of the context, planning framework and state and/or local Government requirements

The development of the Proposed Action will require approval under the following State legislation:

— Part IV of EP Act: Simcoa has referred the Proposed Action to the Environmental Protection Authority (EPA) under section 38 of the EP Act. Simcoa have informed the EPA of this Commonwealth referral and their desire for the Proposed Action to be assessed under the Bilateral Agreement, between WA EPA and the Commonwealth, should the Commonwealth determine the Proposed Action is deemed a controlled action.

— Mining Act 1978: Regulated by the Department of Mines, Industry Regulation and Safety (DMIRS) Simcoa will submit and obtain approval from DMIRS for a Mining Proposal and Mine Closure Plan.

— Silicon (Kemerton) State Agreement Act 1987: under Clause 8 of the State Agreement Act, Simcoa are required to provide the Department of Jobs, Tourism, Science and Innovation (DJTSI) (previously the Department of State Development) a Detailed Proposal for the development of the North Kiaka project.

— Rights in Water and Irrigation Act 1914 (RiWI Act): Simcoa will seek approval from the Department of Water and Environmental Regulation (DWER) to construct and draw water from a groundwater well.

1.13 Describe any public consultation that has been, is being or will be undertaken, including with Indigenous stakeholders

Simcoa has undertaken consultation with the following key stakeholders:

- Shire of Moora
- Moora (and surrounding rural) Community
- Neighbouring rural landholder
- Yued Native Title Group via the South West Aboriginal Land and Sea Council (SWALSC)
- Department of Jobs Tourism, Science and Innovation (DJTSI)
- Department of Biodiversity Conservation and Attractions (DBCA)
- Department of Mines, Industry Regulation and Safety (DMIRS)
- Department of Planning, Lands and Heritage (DPLH)
- Department of Water and Environmental Regulation (EPA Services, Regulatory Services, Water Services Units) (DWER)
- Department of the Agriculture, Water and Environment (DAWE)
- Moore Catchment Council
- Friends of the Moora Woodlands.

Simcoa also engaged Goode & Associates (2019) to undertake consultation with representatives of the Yued (WC1999/071) Native Title Claim (NTC) Group, to determine if any new Aboriginal heritage site or places may be affected by the Proposed Action (see 'Att 15 - Brad Goode and Associates 2019_Aboriginal Heritage Survey'). The ethnographic consultation was undertaken with eight nominated representatives of the Yued NTC Group.

1.14 Describe any environmental impact assessments that have been or will be carried out under Commonwealth, State or Territory legislation including relevant impacts of the project

The Proposed Action has been referred to the WA EPA for assessment under section 38 of the EP Act. The following key environmental factors have been identified:

- Terrestrial environmental quality
- Landforms
- Flora and vegetation
- Terrestrial fauna
- Inland waters
- Social surrounds.

Key studies:

- GHD 2021a_Fauna Assessment
- Trudgen 2018_Flora and Vegetation Assessment
- Trudgen 2012_Flora and Vegetation Survey of Coomberdale TEC
- GHD 2019a_Geotechnical Desktop Study
- Saprolite 2012_Phase 2 Hydrogeological Investigations
- GHD 2019b_Materials Characterisation Assessment
- Soilwater 2019_Soil Characterisation Assessment
- GHD 2019c_Noise Assessment
- Brad Goode and Associates 2019_Aboriginal Heritage Survey

Other studies:

- Invertebrate Solutions (2019) Subterranean Fauna Desktop Review
- GHD (2020) Air Quality Assessment
- Snowden (2012) Mine Development Plan

Note: PDF may contain fields not relevant to your application. These fields will appear blank or unticked. Please disregard these fields.

1.15 Is this action part of a staged development (or a component of a larger project)?

☐ Yes ☑ No

1.16 Is the proposed action related to other actions or proposals in the region?

☑ Yes ☐ No

1.16.1 Identify the nature/scope and location of the related action (Including under the relevant legislation)

Simcoa currently operates the Moora Quartzite Mine, located approximately 2 km south-west of the Proposed Action. The Moora Quartzite Mine is approved under Part IV of the WA Environmental Protection Act 1986 (Ministerial Statement 813), and the WA Mining Act 1978. Existing approvals under the Mining Act 1978 include Notice of Intents (NOIs) from 1987, 1992 and 2001 (No. 3508).

Simcoa proposes to use the crushing and screening plant at Moora Mine for the life of the project. Quartzite ore will be transported from the Proposed Action Area to the Existing Moora Quartzite Mine in uncovered dump trucks, where it will be pre-processed prior to being transported in covered trucks to Simcoa's existing Smelter (the Smelter) located in Kemerton Strategic Industrial Area (KSIA), approximately 17 km north-east of Bunbury in the South West of WA.

The Moora Quartzite Mine and the Smelter are governed by the provisions of the Silicon (Kemerton) State Agreement Act 1987.

Note: PDF may contain fields not relevant to your application. These fields will appear blank or unticked. Please disregard these fields.

Section 2

Matters of national environmental significance

2.1 Is the proposed action likely to have any direct or indirect impact on the values of any World Heritage properties?

☐ Yes ☑ No

2.2 Is the proposed action likely to have any direct or indirect impact on the values of any National Heritage places?

☐ Yes ☑ No

2.3 Is the proposed action likely to have any direct or indirect impact on the ecological character of a Ramsar wetland?

☐ Yes ☑ No

2.4 Is the proposed action likely to have any direct or indirect impact on the members of any listed species or any threatened ecological community, or their habitat?

☑ Yes ☐ No

Species or threatened ecological community

Listed as Endangered under the EPBC Act and the WA Biodiversity Conservation Act 2016. The DE is located within the known breeding and foraging range of Carnaby's Black Cockatoo (Calyptorhynchus latirostris) (DSEWPaC 2012). The DE provides 87.57 ha of suitable foraging habitat (mixed shrubland habitat) for Carnaby's Black Cockatoos. Approximately 15.55 ha of this potential foraging habitat will be removed. Evidence of feeding (represented by old and fresh chewed Banksia sessilis, in particular snipped branches on the ground) was recorded across the DE (see 'Att 2 - GHD 2021a_Fauna Assessment_North Kiaka' section 4.3.2.1, pp 23 and Figure 5 of Appendix A). The locations of all feeding records observed is recorded in Figure 5 of the GHD (2021a) Fauna Assessment report. No roosting areas were recorded in the DE. No potential breeding trees are present within the Proposed Action Area (see Figure 4 in 'Figs 3-4 - Fauna Habitat and Carnabys BC Observations').

Impact

The following is an assessment of potential impacts on Carnaby's Black Cockatoos (Calyptorhynchus latirostris) against the Significant Impact Guidelines.

The Proposed Action is unlikely to lead to long-term decrease in the size of a population: The Proposed Action will result in the removal of up to 15.55 ha of suitable foraging habitat. Carnaby's Black Cockatoo habitat is well represented within the locality, with the estimated suitable foraging habitat within a 40 km radius of the DE (based on current extent of Beard (1979) vegetation associations) estimated to be 64,742.21 ha (GoWA 2016). The Proposed Action may reduce the overall area of habitat by less than 0.02% within the local area, as a direct loss from clearing vegetation.

Reduce the area of occupancy of an important population: The Proposed Action is unlikely to substantially reduce the area of occupancy of the population of Carnaby's Black Cockatoo, within the local area or region. The species is known to occur throughout the greater south-west region and Swan Coastal Plain bioregion. The removal of 15.55 ha of foraging habitat within the DE is not considered substantial for the species in a regional context.

Fragment an existing important population into two or more populations: The Proposed Action is unlikely to fragment the population into two or more populations. Much of the DE has previously been cleared and vegetation condition is predominately Degraded to Good condition. Based on the mobility of the species and the availability of suitable habitat within surrounding area, the Proposed Action is unlikely to impose a physical barrier to the movement of Carnaby's Black Cockatoo (Calyptorhynchus latirostris) between the habitat within the DE.

Adversely affect habitat critical to the survival of a species: The Proposed Action is unlikely to affect habitat critical for the survival of the species, as only 15.55 ha of foraging habitat. The extent of Carnaby's Black Cockatoo (Calyptorhynchus latirostris) potential foraging was estimated, within a 40 km radius of the DE, by reviewing previously described/mapped vegetation associations (Beard 1979), and based on vegetation structure and species present, assessing the suitability as

foraging habitat. The vegetation associations identified as suitable foraging habitat mapped within a 40 km radius of the DE are 64,742.21 ha. Therefore, the impacts of clearing 15.55 ha of foraging habitat is not considered significant to survival of the species.

Disrupt the breeding cycle of an important population: No potential breeding hollows were recorded within the DE.

Modify, destroy, remove or isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline: While the works associated with the Proposed Action may modify and remove a small portion of potential habitat for this species, it is unlikely to contribute to the decline of the species. The small scale of habitat loss within a regional context (i.e. approximately 0.02% within 40 km of the DE) is considered unlikely to modify, destroy, remove, isolate or decrease the availability or quality of habitats to the extent the species is likely to decline.

Result in invasive species that are harmful to a vulnerable species becoming established in the vulnerable species' habitat: The Proposed Action may potentially increase existing invasive species (e.g. weeds and introduced predators) which already occur within the DE. Simcoa has control measures in place such as, appropriate containment of food waste to avoid attracting feral fauna, and designated access roads to reduce the introduction and spread of weeds (among other measures). Accordingly, the potential incremental change is considered to be minor and unlikely to significantly impact the value of the Carnaby's Black Cockatoo (Calyptorhynchus latirostris) habitat or individuals, such that the species is substantially impacted.

Introduce disease that may cause the species to decline: There is potential that the introduction/spread of Dieback could reduce flora species diversity and density, and potentially impact on the habitat quality for Carnaby's Black Cockatoo (Calyptorhynchus latirostris). Dieback management controls will be implemented during the construction and operational phases of the Proposed Action.

Interfere substantially with the recovery of the species: The Proposed Action is unlikely to interfere substantially with the recovery of Carnaby's Black Cockatoo (Calyptorhynchus latirostris) as it is unlikely to interfere with the recovery actions outlined in the recovery plan for the species (DPaW 2013). These actions include:

- Protect and manage important habitat
- Conduct research to inform management
- Undertake regular monitoring
- Manage other impacts; Undertake information and communication activities
- Engage with the broader community.

Species or threatened ecological community

Watheroo Wattle (Acacia aristulata)

Listed as Endangered under the EPBC Act and the WA Biodiversity Conservation Act 2016, the Watheroo Wattle (Acacia aristulata) is an erect or scrambling shrub, which is confined to the Moora-Watheroo area of south-west WA. The species is associated with outcrops on low rocky ridges and hills, in brown sandy clay loam over granite and chert (DoEE 2019a). The species appeared to be most common in vegetation dominated by Kunzea praestans, and is also often found with Regelia megacephala and was often observed to have been grazed (see 'Att 3 - Trudgen 2018_Flora and Vegetation Assessment_North Kiaka' section 3.3, pp 26). While the species is considered to have a very restricted distribution, within the area of the Coomberdale TEC, it is almost certainly a pyrosere species (i.e. seeds lie dormant in the soil layers and germination is triggered by a bushfire event). Therefore, the population could potentially be larger than initially recorded.

Impact

The following is an assessment of potential impacts on against the Watheroo Wattle (Acacia aristulata) using the Significant Impact Guidelines.

The Proposed Action is unlikely to lead to long-term decrease in the size of a population: Based on surveys completed by Trudgen et al. (2012) (see ' Att 4 - Trudgen 2012_Flora and Vegetation Survey of Coomberdale TEC'), the current population is estimated to be approximately 1,100 plants from 220 locations (see 'Att 3 - Trudgen 2018_Flora and Vegetation Assessment_North Kiaka' Figures 4, 5 and 31 of Appendix A). However, the pyrosere strategy of this species means the population could potentially be larger than initially recorded (Trudgen 2018). Of these 220 recorded locations, 15 locations fall within the Proposed Action Area.

Reduce the area of occupancy of an important population and adversely affect habitat critical to the survival of a species: Simcoa have, as far as practicable, located the Disturbance Footprint of to minimise potential impacts to Acacia aristulata (see Figure 4 of 'Figs 4-5 - Threatened Flora Distribution'). However, to a certain extent the Disturbance Footprint for the Proposed Action is restricted by the location of the mineral resource. Therefore, six locations of Acacia aristulata cannot be avoided and will be removed as it is required to access the ore body.

Fragment an existing important population into two or more populations: The vegetation within and surrounding the Proposed Action Area is already locally and regionally fragmented, predominately as a result of historical clearing for agricultural landuse. The Noondine Chert ridges (the resource) is characterised by skeletal soils with exposed rock, making these areas highly unsuitable for agriculture (particularly cropping). This has resulted in the preservation of remnant native vegetation on ridges/upper slopes where flora species can persist.

Disrupt the breeding cycle of an important population: The removal of six locations of this species is unlikely to disrupt the breeding cycle. Simcoa will implement dust management measures (see 'Att 5 - GHD 2021b_Environmental Management

Plan_North Kiaka', section 3.6.5, pp 32), to ensure dust, generated by the Proposed Action does not adversely impact the health and condition of vegetation within or adjacent to the Proposed Action Area.

Modify, destroy, remove or isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline: Simcoa have, as far as practicable, located the Disturbance Footprint to minimise potential impacts to Acacia aristulata (see Figure 4 of 'Figs 4-5 - Threatened Flora Distribution'). However, to a certain extent the Disturbance Footprint for the Proposed Action is restricted by the location of the mineral resource. The removal of six locations of Acacia aristulata cannot be avoided as it is required to access the ore body. The pyrosere strategy of this species, means the population could potentially be larger than initially recorded.

Result in invasive species that are harmful to a vulnerable species becoming established in the vulnerable species' habitat: The Proposed Action may potentially increase existing invasive species (e.g. weeds) which already occur within the Proposed Action Area. However, the potential incremental change is considered to be minor and unlikely to significantly impact the value of the habitat, such that the species is substantially impacted. Simcoa have also identified management strategies to address weed control (see 'Att 5 - GHD 2021b_Environmental Management Plan_North Kiaka', section 3.1.5, pp 15).

Introduce disease that may cause the species to decline: There is potential that the introduction/spread of Dieback could reduce flora species diversity and density, and potentially impact on the habitat quality. However, dieback management controls will be implemented during the construction and operational phases of the Proposed Action to minimise potential impacts (see 'Att 5 - GHD 2021b_Environmental Management Plan_North Kiaka', section 3.1.5, pp 15).

Interfere substantially with the recovery of the species: As indicated on the DoEE Species Profile and Threats Database for this species, there is no adopted or made Recovery Plan for this species (DoE 2019a).

Species or threatened ecological community

Diels' Daviesia (Daviesia dielsii)

Listed as Endangered under the EPBC Act and the WA Biodiversity Conservation Act 2016, Diels' Daviesia (Daviesia dielsii) is a low shrub with spreading branches, it is generally inconspicuous but noticeable during flowering, with small bright orange-red flowers. This species is endemic to WA, known from 15 populations in the Moora and Watheroo areas. It tends to occur in scattered patches of remnant vegetation in landscapes highly modified for agricultural purposes and degraded roadside reserves. Daviesia dielsii grows on flat or elevated areas on a variety of sandy/gravelly loam soils (DoEE 2019b). While this species has a wider geographic distribution than Acacia aristulata, it is still geographically restricted. It was most commonly found between Kunzea and Allocasuarina campestris communities (see 'Att 3 - Trudgen 2018_Flora and Vegetation Assessment_North Kiaka' section 3.3, pp 276).

Impact

The Proposed Action is unlikely to lead to long-term decrease in the size of a population: Trudgen (2018) recorded 135 locations of Diels' Daviesia (Daviesia dielsii) in the Coomberdale TEC (see 'Att 3 - Trudgen 2018_Flora and Vegetation Assessment_North Kiaka' Figures 6 and 7 of Appendix A), of which 16 were recorded within the Proposed Action Area. In order to develop the Proposed Action three of these 16 locations will need to be cleared.

Reduce the area of occupancy of an important population and adversely affect habitat critical to the survival of a species: Simcoa have, as far as practicable, located the Disturbance Footprint of the Proposed Action to minimise potential affects to Diels' Daviesia (Daviesia dielsii) (see Figure 4 of 'Figs 4-5 - Threatened Flora Distribution'). However, to a certain extent the Disturbance Footprint for the Proposed Action is restricted by the location of the mineral resource. The removal of three locations of Daviesia dielsii plants cannot be avoided as it is required to access the ore body.

Fragment an existing important population into two or more populations: The vegetation within and surrounding the Proposed Action Area is already locally and regionally fragmented, predominately as a result of historical clearing for agricultural purposes. The low hill tops, where the soils are too rocky for agricultural purposes, provide islands for native vegetation species to persist.

Disrupt the breeding cycle of an important population: The removal of three locations of Diels' Daviesia (Daviesia dielsii) is unlikely to disrupt the breeding cycle of the species. Simcoa will implement dust management measures (see 'Att 5 - GHD 2021b_Environmental Management Plan_North Kiaka', section 3.6.5, pp 32), to ensure dust, generated by the Proposed Action does not adversely affect the health and condition of vegetation within or adjacent to the Proposed Action Area.

Modify, destroy, remove or isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline: Simcoa have, as far as practicable, located the Disturbance Footprint to minimise potential impact to Diels' Daviesia (Daviesia dielsii) (see Figure 4 of 'Figs 4-5 - Threatened Flora Distribution'). However, to a certain extent the Disturbance Footprint is restricted by the location of the mineral resource. The removal of three locations of Daviesia dielsii cannot be avoided as it is required to access the ore body.

Result in invasive species that are harmful to a vulnerable species becoming established in the vulnerable species' habitat: The Proposed Action may potentially increase existing invasive species (e.g. weeds) which already occur within the Proposed Action Area. However, the potential incremental change is considered to be minor and unlikely to significantly affect the value of the habitat, such that the species is substantially impacted. Simcoa have also identified management strategies to address weed control (see 'Att 5 - GHD 2021b_Environmental Management Plan_North Kiaka', section 3.1.5, pp 15).

Introduce disease that may cause the species to decline: There is potential that the introduction/spread of Dieback could

Note: PDF may contain fields not relevant to your application. These fields will appear blank or unticked. Please disregard these fields.

reduce flora species diversity and density, and potentially affect the habitat quality. However, dieback management controls will be implemented during the construction and operational phases of the Proposed Action to minimise potential affects (see 'Att 5 - GHD 2021b_Environmental Management Plan_North Kiaka', section 3.1.5, pp 15).

Interfere substantially with the recovery of the species: As indicated on the DoEE Species Profile and Threats Database for this species, there is no adopted or made Recovery Plan for this species (DoE 2019b).

2.4.2 Do you consider this impact to be significant?

☐ Yes ☑ No

2.5 Is the proposed action likely to have any direct or indirect impact on the members of any listed migratory species or their habitat?

☑ Yes ☐ No

Migratory species

Carnaby's Black Cockatoo (Calyptorhynchus latirostris)

Impact

Refer to Section 2.4.1

2.5.2 Do you consider this impact to be significant?

☐ Yes ☑ No

2.6 Is the proposed action to be undertaken in a marine environment (outside Commonwealth marine areas)?

☐ Yes ☑ No

2.7 Is the proposed action likely to be taken on or near Commonwealth land?

☐ Yes ☑ No

2.8 Is the proposed action taking place in the Great Barrier Reef Marine Park?

☐ Yes ☑ No

2.9 Is the proposed action likely to have any direct or indirect impact on a water resource from coal seam gas or large coal mining development?

☐ Yes ☑ No

2.10 Is the proposed action a nuclear action?

☐ Yes ☑ No

2.11 Is the proposed action to be taken by a Commonwealth agency?

☐ Yes ☑ No

2.12 Is the proposed action to be undertaken in a Commonwealth Heritage place overseas?

☐ Yes ☑ No

2.13 Is the proposed action likely to have any direct or indirect impact on any part of the environment in the Commonwealth marine area?

☐ Yes ☑ No

Note: PDF may contain fields not relevant to your application. These fields will appear blank or unticked. Please disregard these fields.

Section 3

Description of the project area

3.1 Describe the flora and fauna relevant to the project area

Much of the remnant vegetation within the DE is associated with a State listed Endangered Threatened Ecological Community (TEC) (Heath dominated by one or more Regelia megacephala, Kunzea praestans and Allocasuarine campestris on ridges and slopes of the chert hills of the Coomberdale Floristic Region). For simplicity, hereafter, this TEC will be referred to by the shortened name 'Coomberdale TEC'.

The Coomberdale TEC habitat is "restricted to the exposed quartzite ridges of the Noondine chert formations in the Coomberdale region from Jingemia to Moora" and "particular floristic composition of the heath community is assumed to relate to the soil/substrate types and depths" (DPaW 2013).

Trudgen et al. (2012 and 2018) has completed extensive surveys of the plant communities associated with areas of outcropping of the Noondine Chert (see 'Att 4 - Trudgen 2012_Flora and Vegetation Survey of Coomberdale TEC' and 'Att 3 - Trudgen 2018_Flora and Vegetation Assessment_North Kiaka'). Trudgen identified and mapped 101 vegetation associations, which were then grouped into 30 alliances reflective of the soil depth and location on slopes. On the basis of the work completed by Trudgen, seven of the vegetation alliances were identified as 'core' parts and three vegetation alliances were identified as 'buffer units' of the Coomberdale TEC.

Initial records for the Coomberdale TEC identified only 10 occurrences; however, following Trudgen's extensive surveys of the area an additional 55 occurrences have been mapped and recorded. While these additional occurrences vary in condition and size they contribute to the total 65 occurrences which total an approximate 785 ha of the Coomberdale TEC recorded on DPaWs TEC database (DPaW 2013). As detailed in the Coomberdale TEC Interim Recovery Plan, the location of the approximate 785 ha of Coomberdale TEC has been recorded within a variety of landholdings (National Park/Reserve; private land covered by mineral tenements; private freehold land; water reserve and Unallocated Crown Land, currently under pastoral / grazing lease) (DPaW 2013).

A desktop search of the Department of Biodiversity, Conservation and Attractions (DBCA) identified 204 vertebrate fauna taxa previously recorded within 20 km of the DE. However, the Level 2 fauna survey and trapping program recorded 87 vertebrate fauna species utilising the DE, which is approximately half of the predicted species for the area. The low fauna diversity may be attributed to the fragmented nature of fauna habitat, due to historical disturbance of native vegetation associated with agriculture; and area of remnant habitat are positioned on areas of rock and soils generally considered unsuitable to support large numbers of species (see 'Att 2 - GHD 2021a_Fauna Assessment_North Kiaka' section 5, pp 27). Review of the Protected Matters Search Tool (PMST) identified the presence / potential presence of 19 conservation significant fauna species (2 mammals, 1 freshwater fish, 1 reptile and 15 birds), within 20 km radius of the DE. Species identified by the PMST as marine and migratory marine were excluded from this assessment, as no marine habitats are present or in close proximity to the DE. However, species identified by the PMST as migratory terrestrial / wetland are considered as part of this assessment. Of the 19 conservation significant species identified in the desktop assessment one species (Carnaby's Black Cockatoo) was recorded within the DE; and based on consideration of the habitat present within the DE one species was considered likely to occur; three were considered unlikely to occur; and 14 are considered highly unlikely to occur within the DE (see 'Att 2 - GHD 2021a_Fauna Assessment_North Kiaka' section 4.3.1, pp 22).

3.2 Describe the hydrology relevant to the project area (including water flows)

There are no Ramsar listed or Nationally Important wetlands occur within or in close proximity to the DE. The closest Ramsar wetland is Forrestdale and Thomson Lakes, located more than 200 km south of the DE. The closest Nationally Important wetland is Guraga Lake, located approximately 71 km south-west of the DE. The Proposed Action is located in the Moore River catchment and Coonderoo / Marchagee sub-catchment. The Moora River catchment covers an area of 13,600 km2. Kyaka Brook (located on the southern boundary of the DE) extends east and north of the DE, flowing in a north-west direction where it terminates in the Coonderoo River Wetlands. Kyaka Brook has a well-defined course with banks up to a meter deep. Water flows are seasonal and episodic, characterised by fast flowing water and short-lived pools (see 'Att 9 - actis 2011_Proposed Discharge Evaluation'). The Coonderoo River Wetlands is a historic saline wetland system located approximately 4.5 km north-west of the DE. The system is made up of a main channel as well as a series of periodic ponds and wetlands (see 'Att 9 - actis 2011_Proposed Discharge Evaluation').

The principal groundwater aquifer in the region is hosted by the Noondine Chert, which is extensively fractured and cavernous, typically providing high bore yields. Local groundwater is used to supply the townships of Moora and Watheroo. Groundwater recharge occurs via infiltration of rainwater (see 'Att 7 - GHD 2019a_Geotechnical Desktop Study' section 3.2, pp 16). While there is no groundwater data available for the DE, extensive groundwater levels monitoring and abstraction pumping trials have been completed for the Existing Mine. Due the proximity and geological continuity between the DE and Exiting Mine, groundwater data from the Existing Mine has been used to infer conditions at the DE.

Monthly groundwater data for 2018 at the Existing Mine indicates the groundwater level varies annually, with the trend being for levels to fall between Septembers to April and rising between May to August. The variance in these levels corresponds to the seasonal rainfall and infiltration of rainwater. Based on the 2018 groundwater level monitoring undertaken at the Existing Mine, the inferred groundwater depths within the DE are estimated to be between 11 m to 14 m in the western portion of the DE (see 'Att 7 - GHD 2019a_Geotechnical Desktop Study', Executive Summary, pp i). The salinity of

groundwater ranges from fresh to brackish and groundwater pH is slightly alkaline (see 'Att 8 - Saprolite 2012_Phase 2 Hydrogeological Investigations' section 6.2, pp 14). The Proposed Action will use groundwater from a licenced bore located on the Existing Mine.

3.3 Describe the soil and vegetation characteristics relevant to the project area

Soils within the DE represent either in-situ weathered rock, or colluvium, mainly from Jimperding Metamorphic Rocks. Soils associated with the remnant quartz ridges belong to the Zone of Ancient Drainage, which represent residual soils that have experienced prolonged weathering and lateritisation. Soils in the lower topographic areas belong to the Northern Zone of Rejuvenated Drainage, and are characterised by erosional surfaces producing a gently undulating landscape (see 'Att 13 - Soilwater 2019_Soil Characterisation Assessment' section 3.2, pp 18).

The following three soils types have been recorded across the DE (see 'Att 13 - Soilwater 2019_Soil Characterisation Assessment' section 4.1, pp 22):

— Skeletal stony soil (SMU 1) - The surface soils, associated with the outcropping quartzite intrusion, are <10 cm in depth and are composed of weathered quartzite and organic debris.

— Shallow gravelly duplex (SMU 2) and Deep gravelly duplex (SMU 3) - The weathered granitic regolith, which forms the intervening lower topographic areas, is covered by a surficial gravel layer which is thinner and coarser along the ridge crest and upper slope (SMU 2), and is thicker and finer on the mid- to- lower slope positions (SMU 3).

The sandy gravels (topsoil and subsoil) present in SMU 2 and SMU 3, are friable and structurally stable, with high saturated permeabilities. These materials are ideal for use in rehabilitation, particularly as an outer surface material on the proposed Tonkin waste dump (see 'Att 13 - Soilwater 2019_Soil Characterisation Assessment' section 4.3.5, pp 36). The underlying granitic saprolite (fine fraction) is structurally unstable, dispersive and highly erodible, and therefore will not be used in the reconstruction of the outer surface of the Tonkin waste dump (see 'Att 13 - Soilwater 2019_Soil Characterisation Assessment' section 4.3.5, pp 36). Furthermore, the gravelly topsoil and subsoil materials contain elevated plant available nutrients (N, P, K and S) making them ideal for use in rehabilitation, while the underlying granitic saprolite has very low levels of plant available nutrients (see 'Att 13 - Soilwater 2019_Soil Characterisation Assessment' section 4.1.2, pp 26).

The DE consist primarily of previously cleared farmland. The remnant vegetation within the DE occurs predominately on the rocky outcrops, separated by narrow cleared areas. Trudgen (2018) recorded 102 species of native flowering plants, one native pine and five species of native ferns and 31 introduced (weeds) species within the DE. The native vegetation within the DE is associated with the State listed Coomberdale TEC (see 'Att 3 - Trudgen 2018_Flora and Vegetation Assessment_North Kiaka' section 3.1).

3.4 Describe any outstanding natural features and/or any other important or unique values relevant to the project area

Simcoa proposes to mine the quartzite mineral resource present in the Noondine Chert Formation, which occurs as unweathered and massive dolerite/quartzite intrusions. The Noondine Chert Formation outcrops as north-north-west trending parallel ridges, across a 150 km stretch between Moora and Three Springs and is highly fragmented.

The Coomberdale TEC Interim Recovery Plan (DPaW 2013) indicates the Coomberdale TEC habitat is "restricted to the exposed quartzite ridges of the Noondine chert formations in the Coomberdale region from Jingemia to Moora" and "particular floristic composition of the heath community is assumed to relate to the soil/substrate types and depths". The soil depth of the chert ridges varies from skeletal on chert outcrops, to gravelly loamy sands on the lower slopes.

3.5 Describe the status of native vegetation relevant to the project area

The DE has a long history of clearing associated with agriculture and as such only 87.57 ha of the total 216.42 ha DE is remnant native vegetation.

As part of the vegetation survey completed by Trudgen (2018), vegetation condition was reviewed based on information collected from the quadrat and relevés during the field survey. This data was combined with aerial photography interpretation to produce the vegetation condition mapping. The vegetation condition within the DE ranges from Completely Degraded (i.e. cleared farmland) to Very Good. Areas of better condition vegetation are associated with the southern part of the main central ridge within the DE (see 'Att 3 - Trudgen 2018_Flora and Vegetation Assessment_North Kiaka' Map 29). Simcoa have designed the Proposed Action to avoid impacts to native vegetation in Very Good to Excellent condition and Excellent condition. The Proposed Action will require the clearing of 17.22 ha of native vegetation, of which only 1.07 ha is rated as Very Good.

3.6 Describe the gradient (or depth range if action is to be taken in a marine area) relevant to the project area

The DE is characterised by a moderately undulating landscape with vegetated rocky outcrops associated with the Noondine Chert Formation. These outcrops, or ridges are oriented north-north-west, elevated approximately 75 m above the adjacent valleys. The Noondine Chert (previously Coomberdale Chert), outcrops across a 150 km stretch between Moora and Three Springs.

Simcoa proposes to mine the quartzite mineral resource present in the Noondine Chert, which occurs as unweathered and massive dolerite/quartzite intrusions.

The Noondine Chert Formation has a total extent of 14,586 ha, of which 92.53 ha (less than 1%) occurs within the

Proposal DE.

3.7 Describe the current condition of the environment relevant to the project area

The vegetation condition within the DE ranges from Completely Degraded (i.e. cleared farmland) to Very Good. Areas of better condition vegetation are associated with the southern part of the main central ridge within the DE (see 'Att 3 - Trudgen 2018_Flora and Vegetation Assessment_North Kiaka Map 29).

While the Trudgen (2018) survey report did not specifically focus on the presence / absence of weeds in the DE, it is noted in Appendix 4 that weeds were present in the DE (see 'Att 3 - Trudgen 2018_Flora and Vegetation Assessment_North Kiaka' Appendix 4).

3.8 Describe any Commonwealth Heritage places or other places recognised as having heritage values relevant to the project

Not applicable. No Commonwealth Heritage Places will be impacted.

3.9 Describe any Indigenous heritage values relevant to the project area

The DE and Existing Mine have been subject to a number of heritage surveys and review of the following online inquiry systems (accessed October 2019): Aboriginal heritage Inquiry System; Heritage Council database; and PMST.

Results from these surveys and desktop searches indicates there is one Registered Aboriginal Heritage Sites and one Other Heritage Place in the vicinity of the DE. Consultation with the Yued People has been undertaken (see 'Att 15 – Brad Goode and Associates 2019_Aboriginal Heritage Survey') and the Proposed Action has been designed to ensure none of these site will be directly or indirectly impacted.

It should be noted the Brad Goode and Associates 2019 report references a registered Aboriginal heritage site, Kiaka Road Scarred Tree (Site ID 4605). However, In September 2020, the Aboriginal Cultural Materials Committee (ACMC) reassessed the registered Kiaka Road Scarred Tree (Site ID 4605) and determined the site no longer meets section 5 of the AH Act 1972 and has subsequently been removed from the Aboriginal heritage sites register.

3.10 Describe the tenure of the action area (e.g. freehold, leasehold) relevant to the project area

The Proposed Action is located in the Shire of Moora, within a broad acre agricultural area, approximately 15 km north of the Moora Township, with the main agricultural pursuits being sheep farming and cropping.

The DE is located on tenement M70/1292, which is situated on a farm owned by proponents. Simcoa has a land owner agreement in place for part of M70/1292.

3.11 Describe any existing or any proposed uses relevant to the project area

The land use for the DE has historically been for agriculture and the area has been extensively cleared of native vegetation.

— The proposed land use for the DE is a quartzite mine. The Proposed Action will primarily consist of one mine pit, one waste dump, a secondary ROM, an easement corridor, and associated infrastructure areas for offices, car park, ablutions, laydown and stockpile areas, a weighbridge, and workshops (to include hydrocarbon/ chemical storage, refuelling facility and washdown bay).

The mine is anticipated to have an intended operating life of approximately 18 years.

Note: PDF may contain fields not relevant to your application. These fields will appear blank or unticked. Please disregard these fields.

Section 4

Measures to avoid or reduce impacts

4.1 Describe the measures you will undertake to avoid or reduce impact from your proposed action

Potential impacts to Matters of National Environmental Significance (MNES) have been considered during Proposed Action design and minimised as far as practical. The Disturbance Footprint of 44.45 ha within the Proposed Action Area of 216.42 ha, represents the maximum area of disturbance. Simcoa have sought to ensure only those areas absolutely necessary for development and operation will be disturbed. Clearing of up to 17.22 ha of native vegetation within the Proposed Action Area is considered unavoidable. Considerable effort has been made by Simcoa during the design phase, to minimise the amount of clearing of native vegetation required for construction and operation to minimise potential impacts to Black Cockatoo foraging habitat and DRF. Where practicable, opportunities to further reduce the clearing within the Disturbance Footprint, will be considered. Simcoa has prepared an EMP for implementation during construction and operation of the Proposed Action (see 'Att 5 - GHD 2021b_Environmental Management Plan_North Kiaka').

Proposed mitigation and management actions include:

— Minimise clearing of native vegetation through strategic placement of the Disturbance Footprint on cleared agricultural land (where possible), and using existing tracks where practicable

— Clearly demarcated clearing areas on site prior to the commencement of clearing activities. Any vegetation or trees that are to be retained will be visibly marked

— Clearing of vegetation shall not exceed the limits of approved clearing and mature trees shall be conserved, as far as practicable

— Control stormwater runoff during construction and operations to minimise soil erosion and impacts to native vegetation/ habitat

— Implement dust suppression measures as appropriate during construction and operations to minimise dust emissions and subsequent smothering of native vegetation/ habitat

— Undertake a pre-clearance fauna survey within areas of remnant vegetation, with relocation of individuals to adjacent native vegetation or other designated site

— During clearing operations, a suitably qualified 'fauna spotter' will be employed to inspect logs and tree hollows (where possible) before clearing, to reduce the likelihood of injury to fauna. Any fauna encountered will be relocated to adjacent native vegetation or other designated site

— Staging the clearing on native vegetation in one direction to allow fauna to relocate towards adjacent habitats

— All staff and contractors involved in clearing activities will be inducted on the potential impacts to fauna and advised to stop works in the vicinity of any injured or shocked animals that are encountered

— In the event that sick, injured or orphaned native wildlife are located on the Proposed Action Area, the WILDCARE Helpline ((08) 9474 9055) will be contacted for assistance

— No pets, traps or firearms will be permitted within the Proposed Action Area

— Fauna are not to be fed or intentionally harmed or killed

— Implement weed and dieback management and hygiene controls. Management controls will include restricting vehicle/ machinery movement to cleared areas or designated tracks. Hygiene controls will include thorough cleaning of earth moving machinery to remove soil and vegetation material prior to entry and departure from the Proposed Action Area

— Monitor vegetation condition in areas adjacent to the Disturbance Footprint

— Where practicable, clearing to be timed to minimise affects to fauna (i.e. clearing will be avoided during spring).

Simcoa's Offset Strategy (see 'Att 11 - Simcoa Offset Strategy'), provides an overview of Simcoa's previous approvals and offsets history for the Existing Mine; as well as presenting the outcomes and findings for the assessment for the Proposed Action against the EPBC Act Offsets Assessment Guide (offsets calculator). As outlined in the Strategy, Simcoa has worked closely with the various regulators, providing an offset for the Existing Mine and as part of their long-term mining strategy (i.e. development of the Proposed Action). On this basis Simcoa are proposing that no further offsets are required for the Proposed Action.

4.2 For matters protected by the EPBC Act that may be affected by the proposed action, describe the proposed environmental outcomes to be achieved

Environmental outcomes for EPBC Act protected matters with the potential to be affected by the Proposed Action include:

Carnaby's Black Cockatoo (Calyptorhynchus latirostris) (Endangered)

— No local decline in the distribution or abundance of Carnaby's Black Cockatoo (Calyptorhynchus latirostris) as the result of the Proposed Action.

— No local decline in foraging and breeding habitat for Carnaby's Black Cockatoo (Calyptorhynchus latirostris) as a result of the Proposed Action.

Acacia aristulata (Endangered)

— Maintain sufficient habitat for the ongoing local viability of Acacia aristulata populations.

Daviesia dielsii (Endangered)

— Maintain sufficient habitat for the ongoing local viability of Daviesia dielsii populations.

Note: PDF may contain fields not relevant to your application. These fields will appear blank or unticked. Please disregard these fields.

Section 5

Conclusion on the likelihood of significant impacts

5.1 You indicated the below ticked items to be of significant impact and therefore you consider the action to be a controlled action

- ☐ World Heritage properties
- ☐ National Heritage places
- ☐ Wetlands of international importance (declared Ramsar wetlands)
- ☐ Listed threatened species or any threatened ecological community
- ☐ Listed migratory species
- ☐ Marine environment outside Commonwealth marine areas
- ☐ Protection of the environment from actions involving Commonwealth land
- ☐ Great Barrier Reef Marine Park
- ☐ A water resource, in relation to coal seam gas development and large coal mining development
- ☐ Protection of the environment from nuclear actions
- ☐ Protection of the environment from Commonwealth actions
- ☐ Commonwealth Heritage places overseas
- ☐ Commonwealth marine areas

5.2 If no significant matters are identified, provide the key reasons why you think the proposed action is not likely to have a significant impact on a matter protected under the EPBC Act and therefore not a controlled action

Implementation of the Proposed Action has the potential to affect one Endangered fauna species (Carnaby's Black Cockatoo), and two Endangered flora species (Acacia aristulata and Daviesia dielsii) listed as MNES. The Department of Environment Policy Statement 1.1 (DoE 2013) was referenced to determine whether the impacts of the propose action are likely to be significant. The Proposed Action may result in the loss of the following:

- 15.55 ha of Carnaby's Black Cockatoo foraging habitat
- Six locations of Acacia aristulata will be removed
- Three locations of Daviesia dielsii will be removed.

As far as practicable, Simcoa have tried to minimise the required clearing of suitable foraging habitat for Carnaby's Black Cockatoo. The clearing of this habitat is unlikely to result in negative long-term impacts, or substantially interfere with the breeding cycle of the species. The estimated area of suitable foraging habitat available within 40 km radius of the Proposed Action Area is estimated to be 64,742.21 ha (GoWA DATE). The Proposed Action will reduce the overall foraging habitat by 0.02 % within the local region. An assessment against significant impact criteria (DoEE 2013) for Carnaby's Black Cockatoo was undertaken in Section 2. In summary:

- No potential breeding trees were present within the Proposed Action Area
- No evidence of roosting was identified during the surveys
- Evidence of foraging was recorded throughout the Proposed Action Area
- The loss of 15.55 ha of foraging habitat is unlikely to further fragment local ecological linkages or affect vegetation corridors.

Therefore, it is considered unlikely the Proposed Action will significant effect Carnaby's Black Cockatoo and is therefore not considered a controlled action.

The current population of Acacia aristulata is estimated to be approximately 1,100 plants from 220 locations. However, the pyrosere strategy of this species means the population could potentially be larger than initially recorded (see 'Att 3 - Trudgen 2018_Flora and Vegetation Assessment_North Kiaka' section 8.3, pp 188). The development of the Proposed Action will result in the clearing of six locations of Acacia aristulata.

Trudgen (2018) recorded 135 locations of Daviesia dielsii in the Coomberdale TEC of which 16 were recorded within the Proposed Action Area. In order to develop the Proposed Action three locations of Daviesia dielsii. will need to be cleared.

Simcoa have, as far as practicable, located the Disturbance Footprint to minimise potential impacts to Acacia aristulata and Daviesia dielsii. However, to a certain extent the Disturbance Footprint for the Proposed Action is restricted by the location of the mineral resource. The removal of three locations of Daviesia dielsii and six locations of Acacia aristulata cannot be avoided as it is required to access the ore body.

While these two species of DRF are geographically restricted, they are relatively widespread within the local region. Therefore, it is considered unlikely the Proposed Action will cause a significant affects on these two species of DRF and is therefore not considered a controlled action.

Note: PDF may contain fields not relevant to your application. These fields will appear blank or unticked. Please disregard these fields.

Section 6

Environmental record of the person proposing to take the action

6.1 Does the person taking the action have a satisfactory record of responsible environmental management? Explain in further detail

Yes.
Simcoa have been operating the Existing Mine since 1988, with no environmental incidents or non-compliances against the various licences/approvals which regulate the operation of the Existing Mine. They have worked extensively with the State government regulator to develop a strategy to conserve the Coomberdale TEC, which has culminated in the development of Cairn Hill A-Class nature reserve, located approximately 1.5 km south of the Existing Mine.

6.2 Provide details of any past or present proceedings under a Commonwealth, State or Territory law for the protection of the environment or the conservation and sustainable use of natural resources against either (a) the person proposing to take the action or, (b) if a permit has been applied for in relation to the action – the person making the application

Simcoa has had no actions brought against it in relation to its environmental performance under Commonwealth or State legislation.

6.3 If it is a corporation undertaking the action will the action be taken in accordance with the corporation's environmental policy and framework?

☑ Yes ☐ No

6.3.1 If the person taking the action is a corporation, provide details of the corporation's environmental policy and planning framework

Simcoa has a Safety, Health and Environment Policy which recognises Simcoa's safety, health and environmental responsibilities as a member of the greater community (see 'Att 10 - Simcoa Safety Health and Environment Policy' pp 1). Environmental commitments outlined in this policy include:

— Continual improvement of environmental performance, including GHG intensity and energy efficiency, through economically viable best practice.
— The prevention of pollution and the management of waste to minimise their impact on the environment.
— The implementation of cost effective actions that support cleaner production and reductions in greenhouse gas emissions.

6.4 Has the person taking the action previously referred an action under the EPBC Act, or been responsible for undertaking an action referred under the EPBC Act?

☐ Yes ☑ No

Note: PDF may contain fields not relevant to your application. These fields will appear blank or unticked. Please disregard these fields.

Section 7

Information sources

Reference source

Department of Sustainability, Environment, Water, Populations and Communities 2012, EPBC Act Referral Guidelines for Three Threatened Black Cockatoo Species, Government of Western Australia

Reliability

Government publication. Peer reviewed guideline.

Uncertainties

N/A

Reference source

Department of the Environment (DoE) (2019a). Acacia aristulata in Species Profile and Threats Database, Department of the Environment, Canberra. Available from: http://www.environment.gov.au/sprat. Accessed Fri, 22 Nov 2019.

Reliability

Government publication.

Uncertainties

N/A

Reference source

Department of the Environment (DoE) (2019b). Daviesia dielsii in Species Profile and Threats Database, Department of the Environment, Canberra. Available from: http://www.environment.gov.au/sprat. Accessed Fri, 22 Nov 2019

Reliability

Government publication

Uncertainties

N/A

Reference source

Department of Parks and Wildlife (DPaW). 2013. Interim Recovery Plan No. 338 – Heath dominated by one or more of Regelia megacephala, Kunzea praestans and Allocasuarina campestris on ridges and slopes of the chert hills of the Coomberdale Floristic Region. https://www.dpaw.wa.gov.au/images/documents/plants-animals/threatened-species/recovery_plans/Approved_interim_recovery_plans_/IRP338_Heath_community_on_chert_hills_Coomberdale_floristic_region_update2013.pdf Accessed 5 November 2019

Reliability

Government publication

Uncertainties

N/A

Reference source

Department of Energy and Environment (DoEE). 2012. EPBC Act referral guidelines for three threatened black cockatoo species: Carnaby's Cockatoo, Baudin's Cockatoo and Forest Red-tailed Black Cockatoo. Prepared for the Commonwealth of Australia.

Reliability

Government publication

Uncertainties

N/A

Note: PDF may contain fields not relevant to your application. These fields will appear blank or unticked. Please disregard these fields.

Reference source

Department of Parks and Wildlife (DPaW). 2013. Carnaby's Cockatoo (Calyptorhynchus latirostris) Recovery Plan.

Reliability

Government publication

Uncertainties

N/A

Note: PDF may contain fields not relevant to your application. These fields will appear blank or unticked. Please disregard these fields.

Section 8

Proposed alternatives

Do you have any feasible alternatives to taking the proposed action?

Yes ☑ No

Note: PDF may contain fields not relevant to your application. These fields will appear blank or unticked. Please disregard these fields.

Section 9

Person proposing the action

9.1.1 Is the person proposing the action an organisation or business?

☑ Yes ☐ No

Organisation

Organisation name (as registered for ABN/ACN)	SIMCOA OPERATIONS PTY. LTD.
Business name	SIMCOA
ABN	42009064653
ACN	
Business address	973 Marriott Rd, Wellesley, 6233, WA, Australia
Postal address	
Main Phone number	08 9780 6761
Fax	08 9780 6616
Primary email address	danielmance@simcoa.com.au
Secondary email address	

9.1.2 I qualify for exemption from fees under Regulation 5.23(1)(ii) of the EPBC Regulations because I am:

☐ Small business
☑ Not applicable

9.1.2.2 I would like to apply for a waiver of full or partial fees under Regulation 5.21A of the EPBC Regulations

☐ Yes ☑ No

9.1.3 Contact (for an organisation - the contact details of the person authorised to sign on behalf of the organisation)

First name	Daniel
Last name	Mance
Job title	Quality, Health, Safety and Environmental Supervisor
Phone	08 9780 6761
Mobile	0438459515
Fax	08 9780 6616
Email	danielmance@simcoa.com.au
Primary address	973 Marriott Rd, Wellesley, 6233, WA, Australia
Address	

Declaration: Person proposing the action (To be signed by the person at 9.1.3)

I, Daniel Mance on behalf of Simcoa Operations Pty Ltd **, declare that to the best of my knowledge the information I have given on, or attached to the EPBC Act Referral is complete, current and correct. I understand that giving false or misleading information is a serious offence. I declare that I am not taking the action on behalf or for the benefit of any other person or entity.**

Signature: ..... Date: 25/11/2021 **.....**

I, Daniel Mance on behalf of Simcoa Operations Pty Ltd **, the person proposing the action, consent to the designation of** Daniel Mance on behalf of Simcoa Operations Pty Ltd **as the proponent for the purposes of the action described in this EPBC Act Referral.**

Signature:.....Date: 25/11/2021 **.....**

Australian Government
Department of Agriculture, Water and the Environment

Note: PDF may contain fields not relevant to your application. These fields will appear blank or unticked. Please disregard these fields.

Proposed designated proponent

9.2.1 Is the proposed designated proponent an organisation or business?

☑ Yes ☐ No

Organisation

Organisation name (as registered for ABN/ACN)	SIMCOA OPERATIONS PTY. LTD.
Business name	SIMCOA
ABN	42009064653
ACN	
Business address	973 Marriott Rd, Wellesley, 6233, WA, Australia
Postal address	
Main Phone number	08 9780 6761
Fax	08 9780 6616
Primary email address	danielmance@simcoa.com.au
Secondary email address	

9.2.2 Contact (for an organisation - the contact details of the person authorised to sign on behalf of the organisation)

First name	Daniel
Last name	Mance
Job title	Quality, Health, Safety and Environmental Supervisor
Phone	08 9780 6761
Mobile	0438459515
Fax	08 9780 6616
Email	danielmance@simcoa.com.au
Primary address	973 Marriott Rd, Wellesley, 6233, WA, Australia
Address	

Declaration: Proposed Designated Proponent

I, Daniel Mance on behalf of Simcoa Operations PTY LTD **,the proposed designated proponent, consent to the designation of myself as the proponent for the purposes of the action described in this EPBC Act Referral.**

Signature: ..... Date: 25/11/2021

Australian Government
Department of Agriculture, Water and the Environment

Note: PDF may contain fields not relevant to your application. These fields will appear blank or unticked. Please disregard these fields.

Referring party (person preparing the information)

9.3.1 Is the referring party an organisation or a business?

☑ Yes ☐ No

Organisation

Organisation name (as registered for ABN/ACN)	GHD PTY LTD
Business name	
ABN	39008488373
ACN	
Business address	Level 10, 999 Hay Street, Perth, 6000, WA, Australia
Postal address	
Main Phone number	08 9721 0716
Fax	
Primary email address	sarah.isbister@ghd.com
Secondary email address	

9.3.2 Contact (for an organisation - the contact details of the person authorised to sign on behalf of the organisation)

First name	Sarah
Last name	Isbister
Job title	Environmental | Sustainability Consultant
Phone	08 9721 0716
Mobile	
Fax	
Email	sarah.isbister@ghd.com
Primary address	Level 10, 999 Hay Street, Perth, 6000, WA, Australia
Address	

Declaration: Referring party (person preparing the information)

I, _____SARAH ISBISTER_____,
declare that to the best of my knowledge the information I have given on, or attached to this EPBC Act Referral is complete, current and correct. I understand that giving false or misleading information is a serious offence.

Signature: ..... Date: .....25/11/2021.....

Australian Government
Department of Agriculture, Water and the Environment

Note: PDF may contain fields not relevant to your application. These fields will appear blank or unticked. Please disregard these fields.

Appendix A

Attachment

Document Type	File Name
action_area_images	Proposed_Disturbance_Footprint_North_Kiaka.shp
action_area_images	Trudgen_2018_Coomberdale_TEC_Distribution.shp
action_area_images	GHD_2021_Fauna_Habitat_Mapping.shp
action_area_images	GHD_2021_Carnabys_BC_Observations.shp
action_area_images	Figure 1 - Proposed Action Disturbance Footprint.pdf
action_area_images	Figure 2 - Carnabys BC Observations.pdf
action_area_images	Figure 3 - Acacia aristulata Distribution.pdf
action_area_images	Figure 4 - Daviesia dielsii Distribution.pdf
action_area_images	Trudgen_2018_Threatened_Flora.shp
action_area_images	Proposed_Disturbance_Footprint_Haul_Roads.shp
public_consultation_reports	Att 1 - Stakeholder Consultation.pdf
public_consultation_reports	Att 15 - Brad Goode and Associates 2019_Aboriginal Heritage Survey.pdf
supporting_tech_reports	Att 2 - GHD 2021a_Fauna Assessment_North Kiaka.pdf
supporting_tech_reports	Att 3 - Trudgen 2018_Flora and Vegetation Assessment_North Kiaka.pdf
supporting_tech_reports	Att 4 - Trudgen 2012_Flora and Vegetation Survey of Coomberdale TEC.pdf
supporting_tech_reports	Att 6 - Trudgen 1985_Moora Mine Flora Survey.pdf
supporting_tech_reports	Att 14 - GHD 2019c_Noise Assessment.pdf
supporting_tech_reports	Att 12 - GHD 2019b_Materials Characterisation Assessment.pdf
hydro_investigation_files	Att 7 - GHD 2019b_Geotechnical Desktop Study.pdf
hydro_investigation_files	Att 8 - Saprolite 2012_Phase 2 Hydrogeological Investigations.pdf
hydro_investigation_files	Att 9 - Actis 2011_Proposed Discharge Evaluation.pdf
impact_reduction_docs	Att 5 - GHD 2021b_Environmental Management Plan_North Kiaka.pdf
impact_reduction_docs	Att 11 - Simcoa Offset Strategy.pdf
impact_reduction_docs	Att 13 - Soilwater 2019_Soil Characterisation Assessment.pdf
corp_env_policy_docs	Att 10 - Simcoa Safety Health and Environment Policy.pdf

Appendix B

Coordinates

Area 1
-30.504763077388,116.03644359984
-30.50107310432,116.0364799822
-30.501032692119,116.03929009837
-30.48214829962,116.04509613654
-30.482230477358,116.04965279187
-30.48351967,116.04964917
-30.487150136999,116.049638958
-30.490780604999,116.049635577
-30.494411073,116.049632196
-30.497106427,116.049624904
-30.499801767999,116.049617612
-30.501024100999,116.049874
-30.505738936829,116.04991342395
-30.505721791795,116.04014339083
-30.505694778122,116.03643441241
-30.505519292051,116.03643614289
-30.504763077388,116.03644359984