



NSW NATIONAL PARKS & WILDLIFE SERVICE

Review of Environmental Factors: Upgrades to Clarence Sands Quarry access road

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1. Brief description of the proposed activity

Proposal name and brief description	Clarence Sands Pty Ltd (the Proponent) seeks approval for upgrade and sealing of parts of Old Bells Line of Road (the Activity) in Clarence, NSW as shown in Figure 1 (the Project Area). The Project Area currently provides access to the Clarence Sand Quarry (the Quarry) under Forestry Corporation Permit MIN100022 (the Permit) (Attachment 1). The Project Area is largely owned by NSW National Parks & Wildlife Services (NPWS) and it is understood that the Permit is to be transferred to NPWS. As such, this Review of Environmental Factors (REF) has been prepared for consideration by NPWS. The objectives of the Activity are: 1. Improve Quarry access and haulage route; 2. Minimise ongoing generation of dust; 3. Minimise risk of ongoing erosion and sedimentation caused by the existing unsealed road surface; and 4. Minimise the need for ongoing road maintenance. Refer to Section 6 of this REF for a detailed description of the Activity.
Location of activity	The Activity is located on parts of Old Bells Line of Road, Clarence (Figure 1) largely within NPWS reserve identified as Gardens of Stone State Conservation Area (GoSSCA). The Project Area is also located over a number of land parcels identified as Crown reserves. Proposed works on these parcels accordingly do not form part of this REF. Land tenure of the Project Area is provided in the Development Plans (Map 02, Attachment 2).
Name of NPWS park or reserve	GoSSCA.
Description of any unreserved land	Unreserved land is identified in the Development Plans (Map 02, Attachment 2). The Project Area within the unreserved land is currently used as an access track providing vehicular access to the Quarry under the Permit.
NPWS Area	Kanangra Area, Blue Mountains Branch.
Council	Lithgow City Council (the Council).
NSW State electorate	Bathurst
Estimate capital cost of project*	\$3.5 million
Estimated duration of project	Anticipated to be 10 months (approximately).
Proposed commencement date	Subject to REF approval, anticipated commencement date 3 June 2025.
Proposed completion date	Subject to REF approval, anticipated completion date 15 March 2026.

* Publication of the Review of Environmental Factors is required for proposals with a capital investment value of >\$5 million and which commence after 1 July 2022.

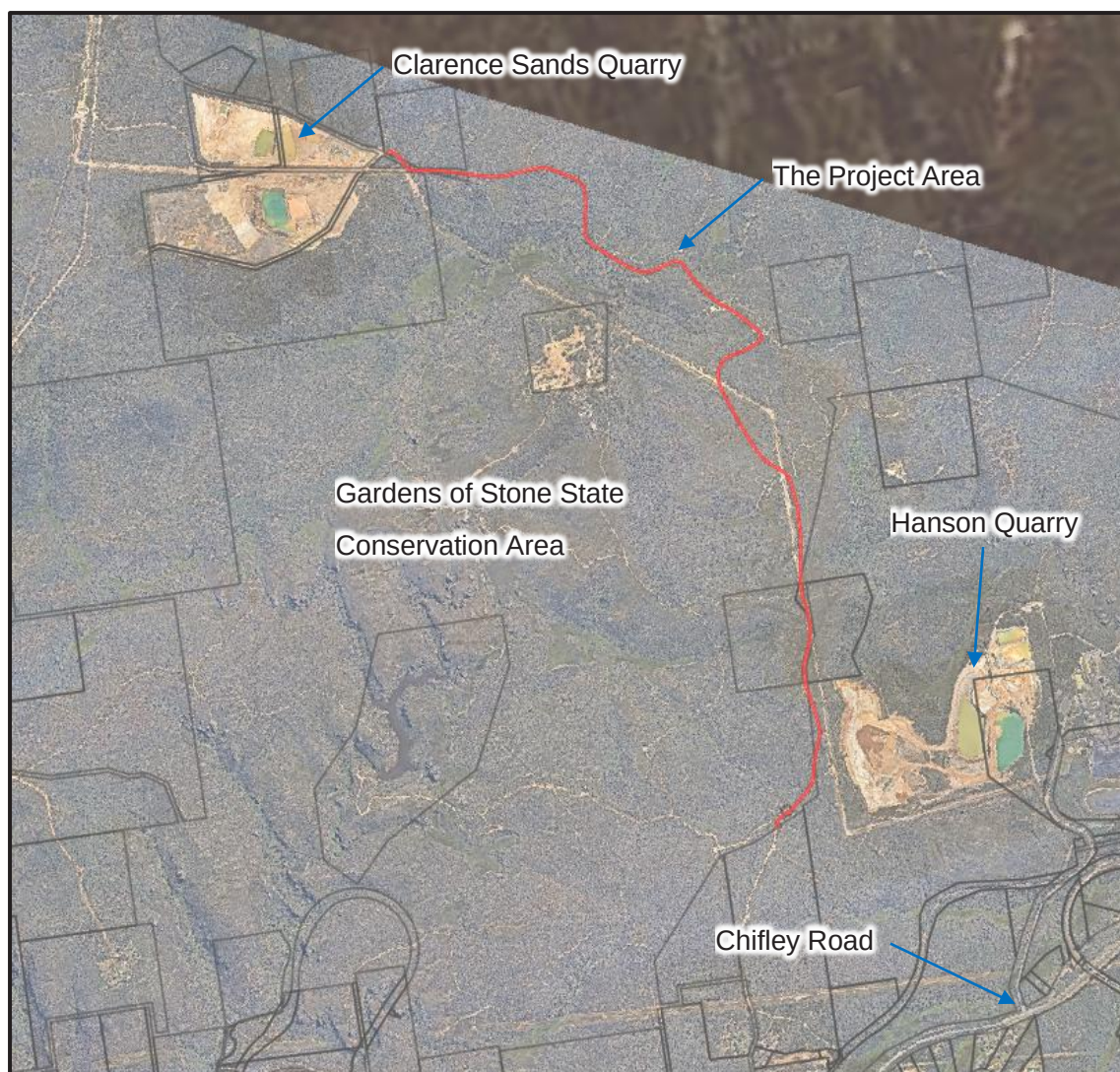


Figure 1: Location of the Project Area (Source: Martens & Associates, 2023).

2. Proponent's details

Contact name	Andrew Helwig
Position	Quarry Manager, Clarence Sands
Street address	Old Bells Line of Road, Clarence NSW 2790
Postal address (if different to above)	As above.
Contact numbers (both office and mobile numbers)	Mobile: 0419 147 500 Office: N/A
Email	andrew@clarencesands.com

Proponent external to NPWS or DPE Environment and Heritage Group (EHG)

Organisation	Clarence Sands Pty Ltd
ACN/ABN	22 603 491 185

3. Permissibility and assessment pathway

3.1 Permissibility under NSW legislation

The following sections outline how the activity is permissible under applicable NSW legislation.

3.1.1 National Parks and Wildlife Act 1974 and NPW Regulation 2019

The objects of the *National Parks and Wildlife Act 1974* (NSW) (**NPW Act**) are as follows:

- (a) *the conservation of nature, including, but not limited to, the conservation of—*
 - (i) *habitat, ecosystems and ecosystem processes, and*
 - (ii) *biological diversity at the community, species and genetic levels, and*
 - (iii) *landforms of significance, including geological features and processes, and*
 - (iv) *landscapes and natural features of significance including wilderness and wild rivers,*
- (b) *the conservation of objects, places or features (including biological diversity) of cultural value within the landscape, including, but not limited to—*
 - (i) *places, objects and features of significance to Aboriginal people, and*
 - (ii) *places of social value to the people of New South Wales, and*
 - (iii) *places of historic, architectural or scientific significance,*
- (c) *fostering public appreciation, understanding and enjoyment of nature and cultural heritage and their conservation,*
- (d) *providing for the management of land reserved under this Act in accordance with the management principles applicable for each type of reservation.*

The Activity is consistent with the objects of the NPW Act for the following reasons:

1. The Activity will conserve existing natural values because it will not result in any significant impacts on threatened ecological communities, or threatened flora and fauna species (see Attachment 6 for Ecological Impact Assessment (**EIA**)).
2. Proposed earthworks are minor and will not cause any adverse impacts on significant geological features or processes, nor will they result in any significant landform changes.
3. Aboriginal cultural significance will be appropriately conserved as concluded in Aboriginal Archaeological Technical Report (**AATR**) (Attachment 5), given:
 - a. No Aboriginal Heritage Information Management System (**AHIMS**) registered sites are located in the Project Area. Two AHIMS registered sites are located within 500 m of the Project Area.
 - b. No Aboriginal objects or culturally modified trees were identified adjacent to the Project Area and it is considered unlikely that Aboriginal objects are present in given existing levels of soil disturbance.
 - c. One area of Potential Archaeological Deposit (**PAD**) was identified in the Project Area (PAD01). An Addendum Archaeological Technical Report (**Addendum Report**) (Attachment 19) was prepared detailing a further archaeological survey of PAD01. The outcome of the Addendum Report is that no Aboriginal objects or areas of archaeological potential within PAD01 were identified.

4. During construction, an alternate access route will be provided by State Mine Gully Road to places of social and recreational value located north of the Project Area within GoSSCA and adjacent national parks.
5. Road safety will be improved following completion of works as a smoother road surface with clearly indicated traffic lanes will be created.
6. Road upgrades will not diminish or negatively impact public appreciation or enjoyment of the natural surrounds, and will support safe access to scenic and recreational areas north of the Project Area within GoSSCA following completion of works.

The Activity is consistent with the management principles stipulated for state conservation areas (see below).

Section 2A of NPW Act, object (2), states the objects of the NPW Act are to be achieved by applying the principles of Ecologically Sustainable Development (**ESD**). The Activity is consistent with ESD principles as, based on the EIA (Attachment 6), the Activity:

1. Does not result in serious or irreversible damage to surrounding ecosystems as no significant impact is predicted to occur to threatened species, populations or communities listed under the *Biodiversity Conservation Act 2016* (NSW) (**BC Act**) and/or *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (**EPBC Act**).
2. Maintains the health, diversity and productivity of the surrounding environment for future generations as there will be no significant impacts to threatened ecological communities, or threatened flora and fauna species.
3. Conserves existing biological diversity and ecological integrity as the impacts on native vegetation, threatened species and ecological communities are manageable and not significant.
4. Will be funded and carried out by the Proponent.

The Activity is located in the GoSSCA. Reserve management principles for state conservation areas pursuant to s 30 G of NPW Act are as follows:

30G State conservation areas

...

(2) A state conservation area is to be managed in accordance with the following principles—

(a) the conservation of biodiversity, the maintenance of ecosystem function, the protection of natural phenomena and the maintenance of natural landscapes,

(b) the conservation of places, objects and features of cultural value,

(c) provision for the undertaking of uses permitted under other provisions of this Act in such areas (including uses permitted under section 47J) having regard to the conservation of the natural and cultural values of the state conservation area,

(ca) provision for the carrying out of development in any part of a special area (within the meaning of the Hunter Water Act 1991) in the state conservation area that is permitted under section 185A having regard to the conservation of the natural and cultural values of the state conservation area,

(d) provision for sustainable visitor or tourist use and enjoyment that is compatible with the conservation of the state conservation area's natural and cultural values and with uses permitted under other provisions of this Act in such area

(e) provision for the sustainable use (including adaptive reuse) of any buildings or structures or modified natural areas having regard to the conservation of the state conservation area's natural and cultural values and with uses permitted under other provisions of this Act in such areas,

(f) provision for appropriate research and monitoring.

The Activity is consistent with the above management principles because:

1. Surrounding biodiversity will be appropriately conserved and protected (EIA, Attachment 6).
2. Aboriginal cultural significance will be appropriately conserved (AATR, Attachment 5, Addendum Report, Attachment 19).
3. The Activity does not interfere or conflict with any visitor or tourist related use given an alternate access route to GoSSCA and adjacent national parks will be provided during construction works, and road safety will be improved for all road users following completion of works due to sealing and demarcation of traffic lanes.
4. There will be no impacts to any existing research and monitoring stations.

In addition, s 156A of NPW Act states the following in relation to vegetation removal:

(1) A person must not, on or in land reserved under this Act or acquired under Part 11—

...

(b) damage or remove any vegetation, rock, soil, sand, stone or similar substance, or

...

(2) It is a defence to a prosecution for an offence under subsection (1) if the accused proves that the removal or damage concerned—

...

(c) was essential for the carrying out of—

...

(ii) an activity, whether by a determining authority or pursuant to an approval of a determining authority within the meaning of Part 5 of that Act if the determining authority has complied with that Part, or

...

The Activity involves essential vegetation removal which is to be carried out under an approval given under Part 5 of the *Environmental Planning and Assessment Act 1979* (NSW). Such removal is therefore not an offence pursuant to s 156 A (2) (c) (ii) of NPW Act.

Clause 20 (1) (c) of NPW Regulation relates to the erection and occupation of structures which requires the consent of the park authority, and states:

(1) A person must not—

...

(c) construct, operate or use any structure, installation, engineering work, plant, equipment, amusement device, fixture or improvement in a park, or

...

Pursuant to clause 20 (2) (a) of NPW Regulation, the carrying out of the above works will not be an offence because approval is sought from NPWS as part of this REF for the following:

1. Construction and use of nest boxes. Details of nest boxes are provided in EIA (Attachment 6).
2. Installation of stormwater drainage works (pipe extensions and riprap protection).
3. Installation of water pipe.
4. Carrying out of civil engineering works including earthworks and sealing of road.
5. Installation of advisory speed signs.
6. Operation of plant and equipment for the carrying out of construction works.

☒ Title and relevant sections of plan of management or statement of management intent

The Activity is to be undertaken on land subject to the Gardens of Stone State Conservation Area Plan of Management (**Plan of Management**).

The Activity is consistent with the management outcomes stipulated in Chapter 4 of the Plan of Management as follows:

1. Supporting Wiradjuri aspirations for Country: Aboriginal cultural significance will be appropriately conserved (AATR, Attachment 5).
2. Setting a sound foundation for the conservation of biodiversity: The Activity will result in no significant ecological impact (EIA, Attachment 6).
3. Assisting the recovery of a landscape under stress: The Activity proposes works to an existing road where vegetation removal has been avoided to the maximum extent possible, and measures are proposed to minimise and/or offset any residual impact.
4. Establishing a major new visitor destination in the Blue Mountains: The Activity will improve tourism within the locality as it will create a safer road which will benefit all road users via widening, sealing and linemarking works. Additionally, tourism will not be adversely affected during the construction period as a detour route will be provided via State Mine Gully to the west.

☐ Title and relevant section of any applicable conservation action plan (CAP) for an asset of intergenerational significance (AIS) and the relevant AIS site number.

N/A - there are no relevant conservation action plans.

☒ Leasing, licensing and easement provisions (**Part 12**)

The proposed water pipe is to be the subject of an easement under s 153 of NPW Act as advised by NPWS in email correspondence of 23 April 2025. At the time of writing this REF, the Proponent has not received a draft easement from NPWS for review.

1.

☐ (for internal NPWS/EHG projects only) NPWS/EHG management powers and responsibilities (s 8 and s 12)

N/A - the Activity is not an internal NPWS/EHG project.

3.1.2 Wilderness Act 1987 (for activities in wilderness areas)

The Activity is not located on land identified within a wilderness area.

3.1.3 Biodiversity Conservation Act 2016

This REF is accompanied by an EIA (Attachment 6) which assesses the ecological impacts of the Activity and determines whether there will be any significant impacts upon threatened ecological communities, threatened species or Areas of Outstanding Biodiversity Value listed under the *Biodiversity Conservation Act 2016* (NSW) (**Biodiversity Conservation Act**). The Ecological Assessment concludes the Activity will result in no significant ecological impact. Accordingly, we consider the Activity to be consistent with the objectives of the Biodiversity Conservation Act.

Further, in accordance with Section 1.3 (k) of BC Act, the Activity has been designed with regard given to the biodiversity mitigation hierarchy, detailed in the following sections.

1. Avoidance – Site Selection and Planning

The final location of the Activity has been sited and designed to avoid impacts to biodiversity. In designing the Activity:

1. Impacts are avoided to the maximum extent necessary by utilising the existing road alignment and restricting clearing of vegetation to adjacent roadside areas, hence avoiding clearing of large tranches of adjacent vegetation.

2. Certain bends along the road have been assessed as to whether they could be upgraded to improve driver sight distance. These bends are identified in the Development Plans (Map 23, Attachment 2). However, this would require additional clearing of large tranches of vegetation and hence would result in an unacceptable ecological outcome.
3. Consideration has been given to realigning the road so it is all located on land managed by NPWS. However, this would not likely be feasible given adjacent steep slopes and additional vegetation clearing required.
4. We have considered whether the road could be realigned to utilise an existing cleared area generally located from CH 3300 to CH 3900 in the Development Plans (Attachment 2). However, this would result in the road being located closer to adjacent Endangered Ecological Community Newnes Plateau Shrub Swamp with subsequent potential for impacts and hence was not further investigated as it would likely result in an unacceptable ecological outcome.

2. Minimise – Construction Phase Management Measures

The following measures will be implemented to minimise the impacts of the Activity on biodiversity (with reference to the EIA, Attachment 6). These are presented as safeguards in Section 9 of this REF.

1. Measure 1:

Demarcation (using barrier tape or similar) and signage of the works area boundaries, established by the future head contractor prior to commencement of works, and maintained for the duration of works. Vegetation clearing and placement of equipment is to be excluded from areas outside the demarcated area. Site inductions are to be provided by the future head contractor to ensure all site workers and visitors are aware of any no-go areas.

2. Measure 2:

Establishment and maintenance of sediment and erosion control measures by the future head contractor in accordance with the Blue Book detailed in the Development Plans (Attachment 2). SEC measures to be installed prior to commencement of earthworks. Inspections are to be carried out by the head contractor at regular intervals (and immediately following a rainfall event) to ensure no excessive sediment accumulation and/or damage to measures. Any accumulated sediment to be removed and any required maintenance (e.g. replacement of measures) to be undertaken with measures reinstated prior to re-commencement of works. SEC measures are to be maintained in working order for the full duration of works and removed only upon completion of works.

3. Measure 3:

A suitably qualified ecologist is to undertake pre-clearance surveys within two weeks of any clearing activities to identify (among other things) environmental weeds within the Project Area. Weed control requirements will be incorporated into a pre-clearance assessment letter as required, and distributed by the Proponent and future head contractor to communicate location of sensitive items. Implementation of a pre-clearance weed survey and assessment letter will minimise impacts to biodiversity values within adjoining habitats.

4. Measure 4:

A suitably qualified ecologist is to undertake pre-clearance surveys within two weeks of any clearing activities to:

- a. Identify (among other things) fauna habitat items within the Project Area proposed to be removed (i.e. nests, tree hollows, dreys, logs), and
- b. Safely relocate any captured fauna to nearby habitat areas.

Upon completion, a pre-clearance assessment letter will be prepared and distributed by the client and future head contractor to communicate location of sensitive items. Implementation of a pre-clearance weed survey and assessment letter will minimise impacts to biodiversity values within adjoining habitats.

5. Measure 5:

Vegetation clearing shall be undertaken in the following two-staged process under the supervision of a suitably qualified ecologist:

- a. Initial phase: Clearing around habitat features identified during the pre-clearance survey. The features are to be left overnight to encourage fauna self-relocation.
- b. Second stage: Clearing of the habitat feature followed by an inspection. Any habitat trees are to be nudged prior to felling to encourage fauna self-relocation (where possible). No habitat tree is to be felled without the attending ecologist providing prior approval to the plant operator.

6. Measure 6:

Other provisions to protect any native fauna encountered during clearing activities, including:

- a. Briefing all people involved in the clearing works about the possibility of fauna being present
- b. Any animals disturbed or dislodged during clearance but not injured should be assisted to move into the adjacent bushland or other specified locations, and
- c. If any animals are injured during vegetation clearance, appropriate steps must be taken to humanely treat the animal under the advice of the attending ecologist (either taken to the nearest veterinary clinic for treatment, or if the animal is unlikely to survive taken to the vet to be humanely euthanised).

7. Measure 7:

Undertaking of additional threatened flora surveys prior to commencement of vegetation clearing works, to maximise detection of threatened flora considered to have the potential to occur. If threatened flora species are recorded, one of the following actions will occur:

- a. Where possible, threatened species will be avoided by the proposed works; and/or
- b. Development of an adaptive management strategy that would include the translocation of individuals (depending on the number and type of species recorded) and/or retirement of species credits for the species impacted.

If threatened species are recorded during the additional threatened species surveys, the consent authority will be notified of the species recorded, their location, as well as which of the above two options will be implemented.

8. Measure 8:

Prior to vegetation clearing or construction commencement, weeds in the Project Area will be identified during pre-clearing surveys and demarcated, controlled and disposed of separately to native plant material to prevent spread. Priority weeds recorded during pre-clearing surveys will be removed and disposed of according to the following protocols:

- a. Areas of priority weeds will not be mulched on-site, and will be removed;
- b. All priority weed material will be taken to an appropriate waste facility; and
- c. All priority material transferred off-site must be covered.

3. Offset – Management of Threatened Flora Species

Following avoid and minimise, there are limited residual impacts to threatened flora species (EIA, Attachment 6). Targeted threatened flora surveys undertaken to date have not detected any threatened flora species. Additional surveys are to be undertaken prior to commencement of vegetation clearing to maximise detection of threatened flora considered to have the potential to occur. If threatened flora species are recorded, one of the following actions will occur:

1. Where possible, threatened species will be avoided by the proposed works (for example, by considering alterations to the road alignment); and/or

2. Development of an adaptive management strategy that would include the translocation of individuals (depending on the number and type of species recorded) and/or retirement of species credits for the species impacted.

Residual flora impacts will therefore be offset in accordance with the above. Additionally, removal of hollow bearing trees will be offset at a 1:1 ratio with installation of salvaged tree hollows or nest boxes of similar size to the hollow being removed. The type, number and location of nest boxes to be installed will be detailed in the pre-clearance survey letter, to be issued to the consent authority. All nest boxes will be installed at least 3 m from the ground under the supervision of an ecologist, and within trees not containing hollows. Installation of salvaged hollows or nest boxes will preserve habitat values in the Project Area.

3.1.4 Rural Fires Act 1997

The Project Area is mapped as Vegetation Category 1 bushfire prone land pursuant to the *Rural Fires Act 1997* (NSW) (**Rural Fires Act**). The Activity is limited to the upgrade of an existing access road which will, other than to improve all weather access to the site and surrounding lands, have no implications for bushfire management. The Activity is therefore consistent with the provisions of the Rural Fires Act.

3.2 Environmental Planning and Assessment Act 1979

3.2.1 Assessment pathway

It is confirmed that a REF is the applicable assessment pathway if each of the following apply.

☒ The activity may be undertaken without development consent under the provisions of s 2.73(1)(a) of the Transport and Infrastructure SEPP as it is:

☒ on land reserved under the NPW Act or acquired under Part 11 of the NPW Act, **and**

☒ for a purpose authorised under the NPW Act.

☒ The activity is not designated development under Schedule 3 of the Environmental Planning and Assessment Regulation 2021

☒ The activity is not state significant infrastructure under Schedule 3(7) of the Planning Systems SEPP.

☒ The activity is not designated development under the s 2.7(2) of the Resilience and Hazards SEPP as:

☒ it is not on land mapped as littoral rainforest or coastal wetland, **or**

☐ it is on land mapped as littoral rainforest or coastal wetland, **and** that land is reserved (not acquired) under the NPW Act, **and** the activity is consistent with the adopted plan of management (s 2.7(6) of the Resilience and Hazards SEPP), **or**

☐ it is on land mapped as littoral rainforest or coastal wetland, **and** the activity is routine maintenance with adverse effects restricted to the minimum possible (s 2.7(4) of Transport and Infrastructure SEPP), **or**

☐ it is coastal protection works by a public authority and is either identified in a coastal management program, or is beach nourishment, temporary placement of sandbags or routine maintenance and repair of existing coastal protection works (s 2.16(2)(a) of Resilience and Hazards SEPP).

☒ The activity is not declared to be exempt development under an environmental planning instrument or fails to fully meet the requirements for exempt development.

3.2.2 Strategic plans

Is the activity proposed on land covered by a local strategic planning statement, regional strategic plan or district strategic plan made under Division 3.1 of the Environmental Planning and Assessment Act 1979?

☐ No

☒ Yes

The Project Area is located within the Lithgow LGA which is subject to the Central West and Orana Regional Plan 2041 (the **Regional Plan**). The Project Area is not specifically identified in the Regional Plan. Notwithstanding, the Activity is consistent with relevant provisions of the Regional Plan as follows:

Part 1, Objective 3, Strategy 3.1 relating to sustainable management of extractive resource land, as the Activity protects an existing resource extraction operation by upgrading an existing vehicle access route.

Part 2, Objective 5, Strategy 5.1 relating to 'high environmental value (biodiversity) land', as it maintains existing biodiversity values in the locality and results in no significant ecological impact (EIA, Attachment 6).

Part 4 Objective 9, Strategy 9.4, and Objective 23 Strategy 23.1 (both relating to Aboriginal heritage) as Aboriginal cultural significance will be appropriately conserved (AATR, Attachment 5).

The Activity is consistent with relevant provisions of the draft Lithgow 2040 Local Strategic Planning Statement as follows:

Theme 3 Economy, Action 8.1 as the Activity supports an existing extractive industry operation and does not result in any land use conflict.

3.3 Other relevant NSW legislation

3.3.1 Coal Mine Subsidence Compensation Act 2017

The Activity is not located on land identified within a mine subsidence district.

3.3.2 Fisheries Management Act 1994

The Activity will not affect fish or fish habitat, fish passage or marine vegetation. The Activity does not require a permit from NSW Department of Primary Industries – Fisheries (**NSW Fisheries**) for dredging or reclamation works under *Fisheries Management Act 1994* (NSW) (**Fisheries Management Act**), nor does the Activity trigger any other requirements under Fisheries Management Act (see Attachments 17 and 18).

3.3.3 Heritage Act 1977

Based on the Heritage Impact Statement (**HIS**) (Attachment 3), Heritage Memo (Attachment 20) and supplementary Heritage Impact Statement (**Supplementary HIS**) (Attachment 21), the Project Area does not contain any items registered under the section 170 register.

Two items registered under the State Heritage Register (**SHR**) are located in vicinity of the Activity, being heritage item '00542 Great Zig Zag Railway' and heritage item '00980 Blue Mountains Walking Tracks'. Potential impacts of the Activity to heritage item 00980 Blue Mountains Walking Tracks are specifically assessed in the Supplementary HIS, and a section 60 approval (fast track) under *Heritage Act 1977* (NSW) (**Heritage Act**) has been obtained (Attachment 22).

Overall, the Activity will not result in any adverse impacts to these heritage items (refer to Section 9.6 of this REF and accompanying heritage reporting).

3.3.4 Marine Estate Management Act 2014

The Project Area is not identified within a marine park or an aquatic reserve under the *Marine Estate Management Act 2014* (NSW) (**Fisheries Management Act**). Additionally, consultation has been undertaken with NSW Fisheries in respect of potential impacts on mapped key fish habitat where NSW Fisheries advised that a permit for dredging or reclamation under Part 7 of Fisheries Management Act is not required. Mitigation measures will mitigate any residual impacts on key fish habitat (see Section 4.3.2 of this REF and Attachment 18).

3.3.5 Water Management Act 2000

The Project Area traverses a drainage line mapped on the hydroline spatial data between CH 2500 and CH 2550 in the Development Plans (Map 12, Attachment 2) (Figure 2).

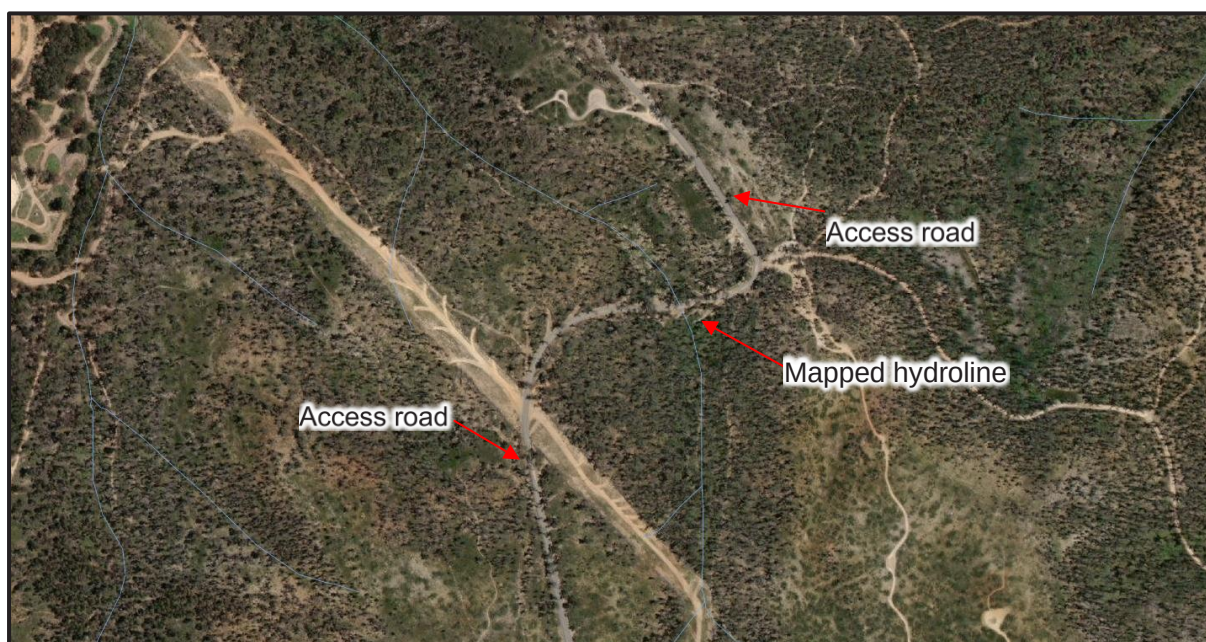


Figure 2: Extract of hydroline spatial data, subject drainage line is identified (Source: NSW Government, 2023).

Ordinarily, works within 40 m of a mapped watercourse would require a controlled activity approval under s 91 of the *Water Management Act 2000* (NSW). However, the Activity will not require a controlled activity approval as, in accordance with cl 23 of sch 4 of the *Water Management (General) Regulation 2018* (NSW) (**Water Management Regulation**), an exemption applies to a controlled activity approval for crossings or tracks over waterfront land. An extract of this clause is provided below:

23 Activities connected with construction of fencing, crossings or tracks

Any activity carried out in connection with the construction or use of fencing, or of a vehicular crossing or an access track, that does not impound water, being an activity carried out in, on or under waterfront land—

- (a) relating to a minor stream, and*
- (b) within a rural zone (other than a rural village) under an environmental planning instrument.*

The Activity meets the requirements of this exemption as:

1. It is in connection with construction and use of an access track.
2. It will not impound water given the drainage line is currently piped at the crossing with the access track, and that the Activity will retain and extend the piped crossing to maintain flow of water.

3. The subject drainage line is a 'minor stream' as defined in the Water Management Regulation as it is a second order stream that does not maintain a permanent flow of water.
4. The Activity in proximity to the drainage line is on land zoned RU3 Forestry pursuant to *Lithgow Local Environmental Plan 2014* (NSW), therefore a rural zone.

3.4 Does Commonwealth legislation apply?

3.4.1 Environment Protection and Biodiversity Conservation Act 1999

☐ The *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) applies as the activity is on land that contains the following, or the activity may affect:

☒ The EPBC Act does not apply as the activity will not affect any of the following:

- world heritage or national heritage values of a place on the World Heritage List or National Heritage List
- the ecology of a Ramsar wetland
- nationally listed threatened species and ecological communities or listed migratory species.

The EIA (Attachment 6) concludes the Activity will not result in any significant impacts on national listed threatened ecological communities, or threatened flora or fauna species.

3.5 Consistency with NPWS policy

Policy name	How proposal is consistent
Property Access Policy	The Activity is consistent with this policy as it will be undertaken in accordance with the Permit.

3.6 Summary of licences and approvals

3.6.1 Approval under the National Parks and Wildlife Act

Brief description of the type of approval sought
1. Approval of this REF, although not under the NPW Act, is required.
2. Consent under s 156A(2) of NPW Act for removal of vegetation is not required because the vegetation clearing is ancillary to the Activity for which a Part 5 approval (under EP&A Act) is sought.
3. An easement under s 153 of NPW Act is to be granted for the installation of the proposed water pipe.

3.6.2 Other approvals

The Activity requires approval under Part 5 of the EP&A Act.

Additionally, approval under section 60 (fast track) of the Heritage Act has been obtained for works in vicinity of SHR 00980 Blue Mountains Walking Tracks (Attachment 22).

3.6.3 Publication triggers

Triggers for publication of the Review of Environmental Factors

Permit or approval	Applicable?
Fisheries Management Act, sections 144, 201, 205 or 219	N/A
Heritage Act, section 57 (commonly known as a section 60)	Y
National Parks and Wildlife Act, section 90 (AHIP)	N/A
Protection of the Environment Operations Act 1997, sections 47–49 or 122	N/A

4. Consultation – general

4.1 Consultation required under Transport and Infrastructure State Environmental Planning Policy

Consultation with the following authorities is required as the proposal will affect the items ticked below.

4.1.1 Local Council (sections 2.10, 2.11, 2.12 and 2.14)

☐ local council infrastructure or services (such as stormwater, sewer, roads and footpaths)

In accordance with section 2.10, if the development involves excavation that is not minor or a road for which the council is the road authority under Roads Act 1993, then an supportive consultation is required.

☒ heritage items listed under the local environmental plan (LEP)

The Activity proposes works in vicinity of local heritage item 'I245 Railway Line Newnes – Zig Zag etc' listed under Lithgow Local Environmental Plan 2014 (NSW). NPWS requested the Proponent to consult with Council in accordance with the requirements of section 2.11 of *State Environmental Planning Policy (Transport and Infrastructure) 2021* (NSW) (**Transport and Infrastructure SEPP**). It is noted that section 2.11 of Transport and Infrastructure SEPP does not apply as the Activity is to be carried out by Clarence Sands (i.e. not a public authority), the local heritage item is also identified as a State heritage item (SHR00980) and the impacts of the Activity on the heritage significance are not more than minor or inconsequential.

Notwithstanding, the Council was consulted as to the proposed works in vicinity of the above heritage item as per the Council Heritage Consultation Letter (Attachment 23). The Council did not provide comment.

☐ flood patterns on flood-labile land

☐ land within the mapped coastal vulnerability area and the activity is inconsistent with a certified coastal management program for the land.

4.1.2 National park or other C1-zoned land (sections 2.15(2)(a) and 2.15(2)(b))

☒ land zoned C1 (formerly E1) or on/adjacent to land reserved or acquired under the NPW Act

4.1.3 Roads or maritime (section 2.15(2)(c) or Schedule 3)

Is the activity:

- ☐ a fixed or floating structure in navigable waters
- ☐ traffic-generating development on main roads?

4.1.4 Siding Spring Observatory (section 2.15(2)(d))

- ☐ increase the amount of artificial light in the dark night sky within 200 kilometres of the Siding Spring Observatory

4.1.5 Defence communications buffer (section 2.15(2)(e))

- ☐ located within the buffer around the defence communications facility near Morundah as mapped under the Lockhart, Narrandera or Urana LEPs

4.1.6 Mine subsidence area (section 2.15(2)(f))

- ☐ land in a mine subsidence district within the meaning of the Coal Mine Subsidence Compensation Act 2017.

4.2 Consultation requirements under National Parks and Wildlife Act for leases and licences

If the activity requires a lease or licence under s 151 or s 151H of the NPW Act, indicate if it requires:

- ☒ public consultation under s 151F
- ☒ referral to the NPW Advisory Council or another advisory committee under s 151G.

4.3 Targeted consultation

4.3.1 Adjacent landowners

Consultation with NSW Crown lands was undertaken in relation to the Activity in the following manner:

Meeting between Mr Daryl Lawrence from Crown lands, and Mr Andrew Helwig (Quarry Manager, Clarence Sands) on 17 August 2023 where it was indicated that Crown Lands was supportive in principle of the Activity.

A consultation letter (Attachment 9) describing the Proposal was provided on 12 January 2024 by email to Mr Daryl Lawrence. Mr Lawrence responded on 16 January 2024 in a letter (Attachment 10) indicating the Department of Crown Lands does not object to the overall project, but the Activity traverses several sections of Crown Public Road and appropriate approvals must be secured prior to works being undertaken on these sections of road. As land that is not managed by NPWS, upgrades to these sections of road are outside the scope of the REF and these parcels of land have been excluded from the REF. Refer to the Development Plans (Map 02, Attachment 2).

4.3.2 Wider community consultation and/or notification of works

The below table provides a summary of consultation undertaken with local community groups and government agencies.

Recipient	Method	Dated Issued		Response time given	Response received (Y/N)	Date issued	response
First round of consultation (First consultation letter, Attachment 9)							
Wilderness Australia	Email	27 2023	September	21 days	N	NA	
Destination Pagoda	Email	27 2023	September	21 days	Y, via third party	11 January 2024 (Attachment 12)	
Lithgow Environmental Group	Email	27 2023	September	21 days	Y, via third party	11 January 2024 (Attachment 12)	
NSW Fisheries	Email	27 2023	September	21 days	N	NA	
Second round of consultation (Second consultation letter, Attachment 13, updated proposal description and traffic management details)							
Wilderness Australia	Email	11 January 2024		14 days			
Destination Pagoda	Email	11 January 2024		14 days	Y, via third party	12 January 2024 (Attachment 15)	
Lithgow Environmental Group	Email	11 January 2024		14 days	Y, via third party	12 January 2024 (Attachment 15)	
NSW Fisheries	Email	11 January 2024		14 days	N		
NSW Police	Email	11 January 2024		21 days	N		
NSW State Emergency Service	Email	11 January 2024		21 days	N		
NSW Rural Fire Service	Email	11 January 2024		21 days	Y, via third party	29 February 2024 (Attachment 16)	
Zig Zag Railway	Email	11 January 2024		21 days			
Clarence Siding Sawmill	Email	11 January 2024		21 days	N		
Endeavour Energy	Email	11 January 2024		21 days	N		
Third round of consultation (Third consultation letter, Attachment 17)							
NSW Fisheries	Email	7 June 2024		14 days	Y	19 June 2024 (Attachment 18)	

4.3.3 Interest groups and/or notification

See above.

5. Consultation – Aboriginal communities

5.1 Native title notification requirements

The following responses are based on NPWS email correspondence of 3 April 2025.

1. Is the land subject to an Indigenous land use agreement (ILUA)?

- ☒ No
☐ Yes

There is no ILUA relevant to the Project Area. If there was an ILUA, it would contain the future acts procedure that needs to be followed.

2. Has native title been **extinguished**?

- ☒ No or unclear
☐ Yes

The majority of the Activity is to occur on land where native title has already been extinguished. This is due to the prior construction of the road and its ancillary works.

There are small sections of the Activity that are wider than the existing footprint (and its ancillary works footprint). The parts of the road that require widening are considered to be new works and Native Title is assumed to exist at these locations.

3. Has there been a determination of native title applicable to the land or is there a native title claim pending (check the National Native Title Tribunal website)?

- ☐ No
☒ Yes

The Warrabinga-Wiradjuri #7 registered native title claim exists over the land where the Activity is to occur.

4. If native title is not confirmed as extinguished, is the activity occurring on land reserved as park on or before 23 December 1996 **and** is an act in accordance with the purpose of reservation **and**
- a. is either a 'public work' as per subdivision 24J of the Native Title Act (e.g. a building or other structure that is fixed to the landscape, a road or bridge, a well or a bore, or involves major earthworks)
 - or**
 - b. involves the grant of a lease?

- ☒ No
☐ Yes

The Gardens of Stone State Conservation Area was reserved after 23 December 1996.

5. If native title is not confirmed as extinguished and the circumstances of Question 4 do not otherwise apply, is the activity either:
- a. a facility for service to the public (as defined in subdivision 24K of the Native Title Act)
 - or**
 - b. a low-level activity (as defined in subdivision 24L of the Native Title Act)?

- ☐ No
☒ Yes

Yes to 5(a). The Activity in areas where native title is not confirmed as extinguished can be validly done under Subdivision 24KA, where a road is considered to be a 'facility for services to the public'.

As the Activity can be validly done under Subdivision 24KA, there is no procedural requirement to issue a notification letter to the relevant native title holders/ claimants/or their legal representatives.

5.2 Parks under other joint management arrangements

Is the park's management subject to another joint management arrangement such as a memorandum of understanding?

- ☒ No
☐ Yes

5.3 Other parks

Consultation with relevant Aboriginal stakeholders was undertaken as part of the AATR (Attachment 5). A site survey was undertaken on 26 January 2024. Relevant attendees during that site survey included Kelsey Williams, a representative of Warrabinga Native Title Claimants Aboriginal Corporation, given the Project Area is included in land subject to Warrabinga-Wiradjuri #7 Native Title Claim under Native Title Act. During the site survey, Kelsey Williams expressed satisfaction with the survey methods and advised that the survey findings and proposed management recommendations were reasonable. The Bathurst Local Aboriginal Land Corporation (**LALC**) were invited to attend but could not provide a representative on that day.

It is noted representatives of the Bathurst LALC and Warrabinga-Wiradjuri #7 Native Title Claim were also invited to participate in a visual inspection as part of the Aboriginal Due Diligence Report (**ADDR**) (Attachment 4) prior to the 26 January 2024 survey, but were not able to attend.

6. Proposed activity (or activities)

6.1 Location of activity

Description of location	Refer to Section 8.1 of this REF.
Site commonly known as If applicable	N/A
Park name Lands reserved under NPW Act	Gardens of Stone State Conservation Area.
Other tenures Include lands acquired under Part 11 of the NPW Act	Refer to Section 1 of this REF.
Lot/DP If available	Refer to Section 1 of this REF.
Street address	N/A

If available			
Site reference	Easting: 150.23078	Northing: -33.44434	MGA zone: 56

6.2 Description of the proposed activity

The Activity comprises the following works:

1. Removal of 97 trees and vegetation clearing as shown on the Development Plans (Attachment 2).
2. Earthworks comprising minor cut/fill to facilitate a smooth road surface and new roadside drainage swales.
3. Stormwater drainage works, including new roadside drainage swales, retention of existing mitre drains and replacement / extension of existing stormwater pipes to suit new road width as required.
4. Sealing of the road using 50-100 mm thick asphalt.
5. Linemarking to demarcate edge of carriageway.
6. Installation of a water pipe adjacent to the road.
7. Installation of advisory speed signs at designated bends along the road.

Details are provided on the Development Plans (Attachment 2).

6.2.1 The proposed activity: pre-construction, construction, operation and remediation

Final construction sequencing is to be confirmed and endorsed by the future head contractor. It is anticipated that the Activity will be staged as follows:

Pre construction stage:

1. Marking out of road corridor.
2. Establishment of sediment and erosion control measures.
3. Vegetation clearing and tree removal.

Construction stage:

1. Install drainage works.
2. Install nest boxes.
3. Undertake earthworks.
4. Road sealing, linemarking and signage.

A Construction Traffic Management Plan (**CTMP**) has been prepared by Road and Rail NSW Pty Ltd (2023) (Attachment 7) which details measures to manage construction traffic during the works and include Traffic Guidance Schemes (**TGSs**) to be implemented during works. The road is to be closed to the general public from Monday to Friday (between 8 am and 6 pm) and on certain Saturdays (between 8 am and 1 pm) for installation of stormwater pipes underneath the road.

Alternative public access to the GoSSCA will be available by State Mine Gully Road and signage indicating road closure and alternative access will be placed along the road and maintained for the works period. For all other traffic, a half road closure is to be implemented during weekdays and traffic will be directed through the works area by appointed traffic controllers in accordance with the TGSs.

Operation of the Activity involves use of the access road, which is to remain in perpetuity (i.e. no remediation).

6.2.2 The activity footprint (size of the area of impact)

The Activity footprint is approximately 6.17 ha based on the EIA (Attachment 6).

6.2.3 Proposed construction methods, materials and equipment

Standard practice road making methods and material will be used, including:

1. Use of road making equipment to achieve final grades.
2. Compaction for road making materials.
3. Placement of asphalt.

An indicative list of construction plant and equipment is as follows:

1. Excavator.
2. Grader.
3. Dump truck.
4. Roller.
5. Paving machine.

6.2.4 Receival, storage and on-site management for materials used in construction

There will be no materials storage or stockpiling as road making materials will be imported and placed in final locations. As per the CTMP (Attachment 7), car parking for contractors will be able to be provided along the road near the works area, or on fire trails or other identified safe areas.

6.2.5 Earthworks or site clearing including extent of vegetation to be removed

Earthworks will involve minor cut/fill along the road to create a smooth surface (generally < 1 m, where required). Based on the EIA (Attachment 6), approximately 0.5 – 1.5 ha of vegetation is to be removed, including 97 trees.

6.2.6 Environmental safeguards and mitigation measures

The Activity is not anticipated to result in any significant adverse impacts. Notwithstanding, environmental safeguards will be implemented during the construction phase to protect the surrounding environment. Details of these safeguards are provided in Section 9 of this REF.

6.2.7 Sustainability measures – including choice of materials and water/energy efficiency

Proposed earthworks are expected to be balanced cut and fill. Road material including asphalt will be locally sourced where available. The Activity is not expected to have any specific considerations for water / energy efficiency.

6.2.8 Construction timetable and staging and hours of operation

Exact timeline is to be confirmed. Construction timeframe is as per Section 1 of this REF. At this stage, construction hours are as follows:

1. Monday to Friday: 8 am to 6 pm.
2. Saturday: 8 am to 1 pm.
3. Sunday and public holidays: No works.

We note that the NSW EPA Noise Policy for Industry defines 'time of day' as follows:

1. Day: the period from 7 am to 6 pm Monday to Saturday or 8 am to 6 pm on Sundays and public holidays.
2. Evening: the period from 6 pm to 10 pm.
3. Night: the remaining periods.

The Activity is therefore not to be carried out at night.

7. Reasons for the activity and consideration of alternatives

7.1 Objectives and reasons for the proposal

The objectives of the Activity are to:

1. Improve the road condition to create a safer, more suitable haulage route.
2. Minimise ongoing generation of dust caused by vehicles using an unsealed road.
3. Minimise risk of ongoing erosion and sedimentation caused by an unsealed road surface and substandard road drainage.
4. Minimise the need for ongoing road maintenance and associated risks for environmental harm.

7.2 Consideration of alternatives

Alternative 1 – Do nothing:

The 'do nothing' option is less appropriate as it would leave the existing access road in its current unsealed condition with dust generation, ongoing erosion and sedimentation issues and the burden of ongoing road maintenance on NPWS and the Proponent.

Alternative 2 – Alternate access route via State Mine Gully Road:

This option is not feasible as it would be in contradiction of condition (p) of the Quarry consent prohibiting haulage use of State Mine Gully Road as haulage route to the Quarry.

Alternative 3 – Realignment of existing access road

This option is not feasible as it would require extensive vegetation clearing and result in an unacceptable ecological outcome.

7.3 Justification for preferred option

The Activity is considered to be the most preferred option to achieve the Activity objectives for the following reasons:

1. It will create a safer, more suitable haulage route by widening and grading the existing road surface and providing clearly indicated traffic lanes.

2. It will eliminate dust generation and minimise ongoing erosion and sedimentation through sealing and providing more formalised drainage channels.
3. Ongoing maintenance will be minor (e.g. fixing localised potholes) in comparison to current (or alternative) maintenance requirements.

7.4 Site suitability

It is understood Section 7.4 of this REF applies to Activities requiring the grant of a lease or licence under s 151 of the NPW Act. The Activity does not require a lease or licence, and therefore this section is not relevant.

Site character	N/A
Landscape context	N/A
Application of site suitability matrix	N/A
Strategic site assessment (if required by the matrix)	N/A

8. Description of the existing environment

8.1 Overview of the project area

The Project Area is located along a section of Old Bells Line of Road, Clarence approximately 5 km in length. The Project Area is generally cleared of vegetation and provides an unsealed vehicle access to the Quarry through land managed by NPWS by virtue of the Permit. The Activity is situated largely within NPWS land and hence the local area is generally undeveloped and remote. Land adjoining the road is extensively vegetated, with adjacent developments along the road limited to the Hanson Sand Quarry to the east (at approximate chainages of CH 4875 – CH 4300) as per the Development Plans (Maps 18 and 19, Attachment 2) and other unsealed access tracks. Grades vary over the length of the road, generally topography ranges from 1125 mAHD at the northern end (i.e. towards the Quarry) to its highest point of 1175 mAHD approximately 1 km north of Chifley Road as per the Development Plans (Maps 19-21, Attachment 2).

The Project Area is located within the GoSSCA, and borders the Wollemi National Park to the north and east, and Blue Mountains National Park to the west. In the broader context, the Project Area is approximately 10 km west of Lithgow and approximately 100 km east of Sydney CBD.

8.2 Natural values

8.2.1 Geology, geomorphology and topography

NSW Department of Planning, Industry & Environment eSPADE (eSPADE) website provides that the site contains multiple soil landscape profiles, the largest being Mount Sinai (MS) soil landscape (Figure 3).

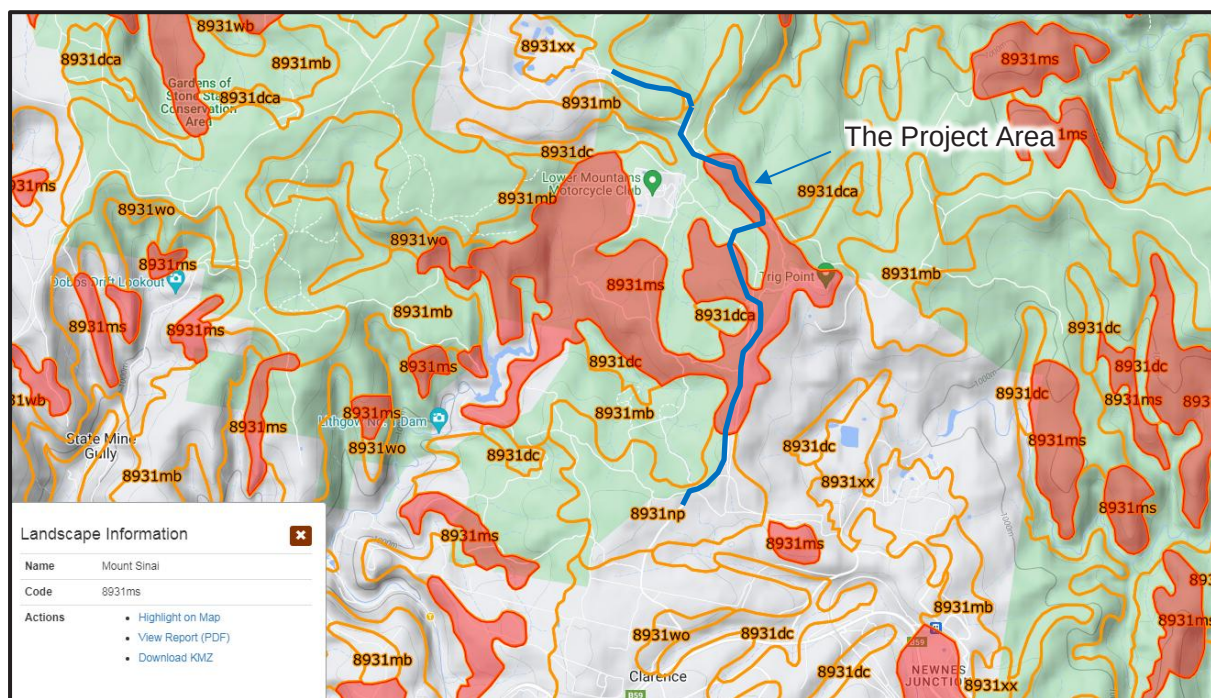


Figure 3: Extract of eSPADE tool, MS soil landscape shown in red (Source: NSW Government, 2023).

eSPADE gives the following geological and topographical information in relation to the MS soil landscape:

1. Geology is of the Narrabeen Group including the Banks Wall Sandstone, Mount York Claystone and Burra-Moko Head Sandstone Members of the Grose Sandstone Formation and the underlying Caley Formation.
2. Lithology is predominately quartz sandstone and quartz-lithic sandstone occasionally interbedded with thin ironstone, conglomerate, red, grey and green claystone and shale lenses.
3. Topography is narrow rocky convex crests and rolling to steep hills. Slopes are steep to moderately inclined with slope gradients typically more than 30%.

Limitations of the MS soil landscape to development include extreme water erosion hazard, rock outcrop, steep slopes, rock fall hazard, wind erosion hazard and stony, shallow, acid, noncohesive highly permeable soils of low fertility.

8.2.2 Soil types and properties (including contamination)

eSPADE describes dominant soil types of the MS soil landscape as including single grained loose pebbly quartz sand (topsoil), brownish black loamy sand (topsoil), dull yellow orange loamy sand (subsoil) and bright yellowish brown clayey sand (subsoil). Soil limitations include high erodibility and high permeability. The Project Area is unlikely to be contaminated given its previous and current uses.

8.2.3 Watercourses, waterbodies and wetlands (including their catchment values)

As identified in Section 3.3.5 of this REF, there are a number of mapped drainage lines in vicinity of the Project Area, one of which traverses Old Bells Line of Road, and is currently piped at the road crossing. This drainage is mapped as a 2nd order stream as per the Strahler system of watercourse classification. There are no other waterbodies or wetlands present.

Additionally, the majority of the Project Area is located within the Sydney Drinking Water Catchment. The Activity will improve the road condition which will have a natural or beneficial impact on water quality. Refer to Section 10.3 of this REF and Attachment 8 for further details.

8.2.4 Coasts and estuaries

The Activity is not located near any coasts or estuaries.

8.2.5 Biodiversity

The following section is provided with input from the EIA (Attachment 6).

Overview of terrestrial and aquatic biodiversity

Based on a review of NSW BioNet Atlas (EES 2021) and EPBC Protected Matters Search Tool (DAWE 2021) and ecological field surveys, the following terrestrial vegetation is present within the Project Area:

1. PCT 3688 'Newnes Plateau Silvertop Ash Woodland'.
2. PCT 3694 'Upper Blue Mountains Ridgetop Woodland'.
3. PCT 3691 'Upper Blue Mountains Fringing Swamp Woodland'.

Additionally, the Project Area is located in proximity to occurrences of the Endangered Ecological Community Newnes Plateau Shrubs Swamp (**EEC Newnes Swamp**).

Areas of outstanding biodiversity value or critical habitat

The site does not contain any areas of outstanding biodiversity value under the Biodiversity Conservation Act or critical habitat under the *Fisheries Management Act 1994* (NSW).

Environmental assets of intergenerational significance (AIS)

The site does not contain any AISs.

Threatened ecological communities

No threatened vegetation communities are present within the Project Area, however as identified above the Project Area is located in proximity to occurrences of Newnes Swamp EEC.

Threatened species and populations

A number of threatened flora and fauna species have been recorded in the locality and have the potential to occur in the site. However, based on the outcome of site surveys:

1. No threatened flora species were recorded within the Project Area.
2. One threatened fauna species being *Petroica boodang* (Scarlet Robin) was detected.

Refer to Section 9 of this REF for an assessment of ecological impacts.

8.3 Cultural values

8.3.1 Aboriginal cultural heritage

An ADDR has been prepared (Attachment 4). The ADDR documents the outcomes of a site walkover, review of the AHIMS database and an archaeological literature review. Based on the ADDR:

1. The road traverses several important landscape features within the site (these including ridge tops and ridge lines, and land within 200 m of seasonal watercourses), and
2. It was recommended to undertake a further Aboriginal archaeological and cultural assessment to identify Aboriginal objects are located within the Project Area and assess if they would be harmed by the Activity.

Subsequent to the ADDR, an AATR (Attachment 5) was prepared to confirm presence of Aboriginal objects in the Project Area and gather enough information to assess the significance of any Aboriginal objects located in the Project Area. The AATR included a site survey with an attendee from the Warrabinga Native Title Claimants Aboriginal Corporation, who advised the outcomes of the survey and proposed management recommendations were reasonable.

The AATR indicates that chains of ridgelines (such as the one the Activity traverses) may have been used for travel paths by Aboriginal people. However, the Project Area is considered unlikely to have been subject to extended camping episodes given a lack of nearby water. The AATR concludes that:

1. No AHIMS registered sites are located in the Project Area. Two AHIMS registered sites are located within 500 m of the Project Area.
2. No Aboriginal objects or culturally modified trees were identified in the Project Area and it is considered unlikely that Aboriginal objects are present in given existing levels of soil disturbance.
3. One area of PAD was identified in the Project Area (PAD01) which was further investigated as detailed in the Addendum Report (Attachment 19). No Aboriginal objects or areas of archaeological potential were identified in PAD01.

Refer to Section 9.5 of this REF for an assessment of impacts to Aboriginal cultural significance.

8.3.2 Historic heritage values

A HIS (Attachment 3), Heritage Memo (Attachment 20) and Supplementary HIS (Attachment 21) have been prepared to assess the impact of the Activity on surrounding heritage which includes the following mapped heritage items / other areas:

1. Local heritage item 'I245 Railway Line Newnes – Zig Zag'.
2. State heritage item '00524 Great Zig Zag Railway'.
3. State heritage item '00980 Blue Mountains Walking Tracks'.
4. World Heritage item 'ID 05127 Greater Blue Mountains Area'.

The Activity is located in close proximity to the curtilage of local heritage item 'I245 Railway Line Newnes – Zig Zag'. Consultation with local community groups indicated that part of the Project Area also contains a former Oil Shale Railway easement, which overlaps with heritage item 'I245'. Refer to Section 9 of this REF for an assessment of heritage impacts.

8.4 Social values

8.4.1 Recreation values

While the Plan of Management does not identify any recreation values for land in vicinity of the Activity, the road is used by the general public to access scenic and recreational sites located within the

GoSSCA and adjacent national parks. Community consultation is discussed in Section 4 of this REF, first consultation letter (Attachment 9) and second consultation letter (Attachment 13), concluding that comments raised by the community have been adequately addressed. Construction-phase impacts of the Activity on other road users is provided in Section 9 of this REF.

8.4.2 Scenic and visually significant areas

The Plan of Management does not identify any scenic or visually significant areas in proximity to the Activity. Additionally, the Activity is not located on land that is in proximity to any walking tracks or lookouts.

8.4.3 Education and scientific values

The Plan of Management does not identify any education or scientific values in proximity to the Activity.

8.4.4 Interests of external stakeholders

Refer to Section 8.4.1 above.

8.5 Matters of National Environmental Significance

Based on the EIA (Attachment 6), the Activity does not require a referral to the Commonwealth Department of Agriculture, Water and Environment under the EPBC Act.

9. Impact assessment

9.1 Physical and chemical impacts during all stages of the activity

Is the proposed activity likely to...	Applicable? *	Impact level (negligible; or low, medium or high adverse; or positive; or NA)	Reasons (describe the type, nature and extent of impact, taking into account the receiving environment and proposed safeguards which will limit the impact)	Safeguards/mitigation measures
1. impact on soil quality or land stability?	☒	Positive and negligible	<u>Soil quality:</u> The Activity will have no impacts on soil quality as any road base material to be imported will be Virgin Excavated Natural Material (VENM) or be subject of NSW EPA's resource recovery orders and therefore suitable for the intended use. <u>Land stability:</u> The Activity is likely to improve land stability as road sealing and provision of formalised roadside drainage will reduce the risk of ongoing erosion and sedimentation. There will be negligible impacts during construction as safeguards will be implemented to minimise impacts.	Safeguard 1: Establishment and maintenance of sediment and erosion control measures by the future head contractor in accordance with the Blue Book detailed in the Development Plans (Attachment 2). SEC measures to be installed prior to commencement of earthworks. Inspections are to be carried out by the head contractor at regular intervals (and immediately following a rainfall event) to ensure no excessive sediment accumulation and/or damage to measures. Any accumulated sediment to be removed and any required maintenance (e.g. replacement of measures) to be undertaken with measures reinstated prior to re-commencement of works. SEC measures are to be maintained in working order for the full duration of works and removed only upon completion of works. Safeguard 2: Works are to be undertaken in a progressive manner (where possible) to minimise extent of disturbed areas and reduce risk of erosion and sedimentation. This may be achieved by dividing the road into 'segments', subject to the future head contractor. The future head contractor

Is the proposed activity likely to...	Applicable? *	Impact level (negligible; or low, medium or high adverse; or positive; or NA)	Reasons (describe the type, nature and extent of impact, taking into account the receiving environment and proposed safeguards which will limit the impact)	Safeguards/mitigation measures
				shall minimise 'open' work areas for the full duration of works. Safeguard 3: Demarcation of works area using barrier tape (or similar) to avoid unnecessary soil disturbance. Demarcation is to be undertaken by the future head contractor prior to commencement of works, and is to be maintained for the full duration of works.
2. affect a waterbody, watercourse, wetland or natural drainage system – either physically or chemically (e.g. due to runoff or pollution)?	☒	Negligible	The Activity will have negligible physical impacts on mapped drainage lines because: 1. The Activity is located in proximity to one mapped drainage line which is already piped under Old Bells Line of Road. Extension of the existing pipe to accommodate the width of the upgraded road will maintain water flows consistent with the existing drainage pattern, with no physical impacts. 2. Provision of riprap protection at pipe outlets will minimise flow rates, avoiding risk of localised erosion and sedimentation. 3. Road sealing will minimise dust generation and reduce risk of sedimentation during operation phase, compared to the existing condition. 4. Other mapped drainage lines are located distant to the Activity, also noting mapped as 'key fish habitat' is located at an approximate 140 m distance from the Activity (Map 22, Attachment 2). Mitigation measures will mitigate residual risk of impacts to mapped 'key fish habitat'	Safeguard 1: Establishment and maintenance of sediment and erosion control measures by the future head contractor in accordance with the Blue Book detailed in the Development Plans (Attachment 2). SEC measures to be installed prior to commencement of earthworks. Inspections are to be carried out by the head contractor at regular intervals (and immediately following a rainfall event) to ensure no excessive sediment accumulation and/or damage to measures. Any accumulated sediment to be removed and any required maintenance (e.g. replacement of measures) to be undertaken with measures reinstated prior to re-commencement of works. SEC measures are to be maintained in working order for the full duration of works and removed only upon completion of works. Safeguard 2: Future head contractor to ensure that all plant and equipment are maintained in proper and efficient

Review of Environmental Factors: Quarry Access Road Upgrades

Is the proposed activity likely to...	Applicable? *	Impact level (negligible; or low, medium or high adverse; or positive; or NA)	Reasons (describe the type, nature and extent of impact, taking into account the receiving environment and proposed safeguards which will limit the impact)	Safeguards/mitigation measures
			(Attachment 18). The Activity is further unlikely to result in any material impacts on these drainage lines given the separation distance. The Activity will have no chemical impacts on surrounding waterways because there will be no storage areas or stockpiling of materials, hence avoiding risk of accidental spillages and chemical leaks. Materials used in road making will be placed immediately into final locations following importation to site.	condition and operated in a proper and efficient manner, for the full duration of works. This is to avoid any leaks, spills and to reduce noise emissions caused by inefficiency. Any maintenance works to the plant /equipment shall be carried out at the quarry. Safeguard 3: Demarcation of works area using barrier tape (or similar) to avoid unnecessary soil disturbance. Demarcation is to be undertaken by the future head contractor prior to commencement of works, and is to be maintained for the full duration of works.
3. change flood or tidal regimes, or be affected by flooding?	☐		N/A	N/A
4. affect or be affected by coastal processes and coastal hazards, including those under climate change projections (e.g. sea level rise)?	☐		N/A	N/A
5. involve the use, storage or transport of hazardous substances, or use or generate chemicals which may	☐		N/A	N/A

Is the proposed activity likely to...	Applicable? *	Impact level (negligible; or low, medium or high adverse; or positive; or NA)	Reasons (describe the type, nature and extent of impact, taking into account the receiving environment and proposed safeguards which will limit the impact)	Safeguards/mitigation measures
build up residues in the environment?				
6. involve the generation or disposal of gaseous, liquid or solid wastes or emissions?	☐		N/A	N/A
7. involve the emission of dust, odours, noise, vibration or radiation?	☒	Positive and negligible	Following completion of works, the Activity will reduce the emission of dust and noise due to sealing works. Construction phase works will result in some noise and vibration, however this is considered acceptable as works are temporary in nature and there are no nearby sensitive receivers.	Safeguard 1: The future head contractor is to ensure that all plant and equipment are maintained in proper and efficient condition and operated in a proper and efficient manner, for the full duration of works. This is to avoid risk of any leaks, spills and to reduce noise emissions caused by inefficiency. Any maintenance works to the plant / equipment shall be carried out at the quarry.

9.2 Biodiversity impacts during all stages of the activity

Is the proposed activity likely to...	Applicable? *	Impact level (negligible; or low, medium or high adverse; or positive; or NA)	Reasons (describe the type, nature and extent of impact, taking into account the receiving environment and proposed safeguards which will limit the impact)	Safeguards/mitigation measures
1. affect any declared area of outstanding biodiversity value or	☐		N/A	N/A

Is the proposed activity likely to...	Applicable? *	Impact level (negligible; or low, medium or high adverse; or positive; or NA)	Reasons (describe the type, nature and extent of impact, taking into account the receiving environment and proposed safeguards which will limit the impact)	Safeguards/mitigation measures
critical habitat or environmental asset of intergenerational significance?				
2. result in the clearing or modification of vegetation, including ecological communities and plant community types of conservation significance? ^	☒	Low	The Activity will require clearing of approximately 0.5 – 1.5 ha of vegetation consisting of the following vegetation communities described in Section 8.5 of this REF and EIA (Attachment 6): 1. PCT 3688 Newnes Plateau Silvertop Ash Woodland. 2. PCT 3694 Upper Blue Mountains Ridgetop Woodland. 3. PCT 3691 Upper Blue Mountains Fringing Swamp Woodland. The vegetation clearing is considered acceptable given the residual amount of vegetation to be retained in the locality, including approximately 31.84 ha of the above vegetation communities in proximity to the site. Additionally, the Activity is located in proximity to occurrences of the EEC Newnes Swamp. However, a test of significance prepared as part of the EIA (Attachment 6) assesses any potential impacts to the EEC as a result of the Activity and concludes that the Activity is unlikely to have significant impacts given: 1. No direct clearing of EEC Newnes Swamp is proposed and no fragmentation of potential habitat for the EEC Newnes Swamp will occur.	Safeguard 1: Demarcation (using barrier tape or similar) and signage of the works area boundaries, established by the future head contractor prior to commencement of works, and maintained for the duration of works. Vegetation clearing and placement of equipment is to be excluded from areas outside the demarcated area. Site inductions are to be provided by the future head contractor to ensure all site workers and visitors are aware of any no-go areas. Safeguard 2: Establishment and maintenance of sediment and erosion control measures by the future head contractor in accordance with the Blue Book detailed in the Development Plans (Attachment 2). SEC measures to be installed prior to commencement of earthworks. Inspections are to be carried out by the head contractor at regular intervals (and immediately following a rainfall event) to ensure no excessive sediment accumulation and/or damage to measures. Any accumulated sediment to be removed and any required maintenance (e.g. replacement of measures) to be undertaken with measures reinstated prior to re-commencement of works. SEC measures are to be maintained in working

Is the proposed activity likely to...	Applicable? *	Impact level (negligible; or low, medium or high adverse; or positive; or NA)	Reasons (describe the type, nature and extent of impact, taking into account the receiving environment and proposed safeguards which will limit the impact)	Safeguards/mitigation measures
			2. Indirect impacts include erosion, sedimentation and alterations to hydrological conditions which may exacerbate weed invasion are limited to the construction phase which is temporary in nature, and measures are to be implemented to manage indirect impacts.	order for the full duration of works and removed only upon completion of works. Safeguard 3: A suitably qualified ecologist is to undertake pre-clearance surveys within two weeks of any clearing activities to identify (among other things) environmental weeds within the Project Area. Weed control requirements will be incorporated into a pre-clearance assessment letter as required, and distributed by the client and future head contractor to communicate location of sensitive items. Implementation of a pre-clearance weed survey and assessment letter will minimise impacts to biodiversity values within adjoining habitats.
3. endanger, displace or disturb terrestrial or aquatic fauna, including fauna of conservation significance, or create a barrier to their movement? ^	☒	Low	Fauna surveys undertaken as part of the EIA (Attachment 6) indicate that the Project Area provides potential habitat in hollow bearing trees and logs, and foraging resources. One threatened species being Petroica boodang (Scarlet Robin) was detected within the site, and 28 threatened fauna species have the potential to occur in the Project Area. A maximum of 21 hollow bearing trees containing 26 tree hollows will be removed. This is a 'worst-case' scenario noting that 12 of the 21 trees are outside the works extent and likely be retained.	Safeguard 1: A suitably qualified ecologist is to undertake pre-clearance fauna surveys within two weeks of any clearing activities to: 1. Identify (among other things) fauna habitat items within the Project Area proposed to be removed (i.e. nests, tree hollows, dreys, logs), and 2. Safely relocate any captured fauna to nearby habitat areas. Upon completion, a pre-clearance assessment letter will be prepared and distributed by the client and future head contractor to communicate location of sensitive items.

Is the proposed activity likely to...	Applicable? *	Impact level (negligible; or low, medium or high adverse; or positive; or NA)	Reasons (describe the type, nature and extent of impact, taking into account the receiving environment and proposed safeguards which will limit the impact)	Safeguards/mitigation measures
			In considering the above and with reference to the EIA (Attachment 6), impacts to fauna are acceptable given: 1. Only small areas of habitat are available in the Project Area with abundant areas available in adjacent vegetated areas for foraging and roosting resources. Additionally, many threatened fauna species with potential to occur in the Project Area are highly mobile or aerial and are expected to only utilise habitat within the Project Area on an occasional or opportunistic basis. 2. Impacts to habitat are expected to be localised and not considered to cause a substantial change in the habitat of the potentially occurring threatened fauna species. Tests of significance conclude the Activity is unlikely to significantly affect the potentially occurring threatened fauna species. 3. Other indirect impacts including those such as edge effects, habitat fragmentation, and increased erosion, sedimentation and pollution during construction are unlikely to result in impacts given habitat within the Project Area is already fragmented and edge effected as a result of previous clearing for the existing road, and safeguards will be implemented to minimise impacts to fauna during construction works. Further, the Activity is unlikely to result in any significant impacts to aquatic fauna, in particular to mapped key fish habitat given:	Implementation of a pre-clearance fauna survey and assessment letter will minimise impacts to fauna. Safeguard 2: Vegetation clearing shall be undertaken in the following two staged process under the supervision of a suitably qualified ecologist: 1. Initial phase: Clearing around habitat features identified during the pre-clearance fauna survey. The features are to be left overnight to encourage fauna self-relocation. 2. Second stage: Clearing of the habitat feature followed by an inspection. Any habitat trees are to be nudged prior to felling to encourage fauna self-relocation (where possible). No habitat tree is to be felled without the attending ecologist providing prior approval to the plant operator. Safeguard 3: Other provisions to protect any native fauna encountered during clearing activities, including: 1. Briefing all people involved in the clearing works about the possibility of fauna being present 2. Any animals disturbed or dislodged during clearance but not injured should be assisted to move into the adjacent bushland or other specified locations, and 3. If any animals are injured during vegetation clearance, appropriate steps must be taken to humanely treat the animal under the advice of the attending ecologist (either taken to the nearest veterinary clinic for treatment, or if the animal is

Is the proposed activity likely to...	Applicable? *	Impact level (negligible; or low, medium or high adverse; or positive; or NA)	Reasons (describe the type, nature and extent of impact, taking into account the receiving environment and proposed safeguards which will limit the impact)	Safeguards/mitigation measures
			1. The Activity is located with considerable distance from the mapped key fish habitat with the nearest point being 148 m away (Map 22, Attachment 2). 2. The existing access track is located on a ridgeline resulting in parts of the runoff draining away from the mapped key fish habitat. 3. Works proposed in vicinity of the mapped drainage line that the existing road traverses are limited to extension of the existing pipe to accommodate the width of the upgraded road. 4. Other mapped drainage lines are located distant to the Activity.	unlikely to survive taken to the vet to be humanely euthanised). Safeguard 4: Removal of hollow bearing trees will be offset at a 1:1 ratio with installation of salvaged tree hollows or nest boxes of similar size to the hollow being removed. The type, number and location of nest boxes to be installed will be detailed in the pre-clearance survey letter, to be issued to the consent authority. All nest boxes will be installed at least 3 m from the ground under the supervision of an ecologist, and within trees not containing hollows. Installation of salvaged hollows or nest boxes will preserve habitat values in the Project Area. Details of type of nest boxes to be installed are provided in Attachment 6.
4. result in the removal of protected flora or plants or fungi of conservation significance? ^	☒	Negligible	Based on a review of NSW BioNet Atlas (EES 2021) and EPBC Protected Matters Search Tool (DAWE 2021), twelve threatened flora species listed under the BC Act and/or EPBC Act are considered to have potential habitat in the Project Area. However, no threatened flora species were found during targeted threatened flora surveys undertaken on 8 and 9 May 2023, nor on subsequent surveys on 30 October 2023. The Activity is unlikely to result on any impacts to protected flora given only small areas of habitat to be removed within the Project Area, and no threatened flora species found during site surveys. It is noted	Safeguard 1: Undertaking of additional threatened flora surveys prior to commencement of vegetation clearing works, to maximise detection of threatened flora considered to have the potential to occur. If threatened flora species are recorded, one of the following actions will occur: 1. Where possible, threatened species will be avoided by the proposed works; and/or 2. Development of an adaptive management strategy that would include the translocation of individuals (depending on the number and type of species

Is the proposed activity likely to...	Applicable? *	Impact level (negligible; or low, medium or high adverse; or positive; or NA)	Reasons (describe the type, nature and extent of impact, taking into account the receiving environment and proposed safeguards which will limit the impact)	Safeguards/mitigation measures
			that two species, being <i>Genoplesium superbum</i> and <i>Veronica blakelyi</i>, flower during December to March and during summer, respectively and hence these species may have been undetectable during site surveys. Notwithstanding, surveys conducted to date have not detected individuals in either of the <i>Genoplesium</i> or <i>Veronica</i> genera and therefore neither of these species are considered likely to occur or be impacted. Measures can be implemented to manage indirect impacts, these including weed invasion, erosion, sedimentation and edge effects.	recorded) and/or retirement of species credits for the species impacted. If threatened species are recorded during the additional threatened species surveys, the consent authority will be notified of the species recorded, their location, as well as which of the above two options will be implemented. Safeguard 2: Establishment and maintenance of sediment and erosion control measures by the future head contractor in accordance with the Blue Book detailed in the Development Plans (Attachment 2). SEC measures to be installed prior to commencement of earthworks. Inspections are to be carried out by the head contractor at regular intervals (and immediately following a rainfall event) to ensure no excessive sediment accumulation and/or damage to measures. Any accumulated sediment to be removed and any required maintenance (e.g. replacement of measures) to be undertaken with measures reinstated prior to re-commencement of works. SEC measures are to be maintained in working order for the full duration of works and removed only upon completion of works. Safeguard 3: Prior to vegetation clearing or construction commencement, weeds in the Project Area will be identified during pre-clearing surveys and demarcated, controlled and disposed of separately to native plant material to prevent spread. Priority weeds recorded

Is the proposed activity likely to...	Applicable? *	Impact level (negligible; or low, medium or high adverse; or positive; or NA)	Reasons (describe the type, nature and extent of impact, taking into account the receiving environment and proposed safeguards which will limit the impact)	Safeguards/mitigation measures
				during pre-clearing surveys will be removed and disposed of according to the following protocols: 1. Areas of priority weeds will not be mulched on-site, and will be removed; 2. All priority weed material will be taken to an appropriate waste facility; and 3. All priority material transferred off-site must be covered.
6. contribute to a key threatening process to biodiversity or ecological integrity?	☒	Negligible	Tests of significance have been undertaken for the following, detailed in the EIA (Attachment 6): 1. EEC Newnes Swamp. 2. Potentially occurring local populations of threatened flora species. 3. Potentially occurring local populations of threatened fauna. In respect of key threatening processes, the Activity: 1. May result in the key threatening processes 'invasion and establishment of exotic vines and scramblers' and 'invasion of native plant communities by exotic perennial grasses', and 2. Will result in the key threatening process 'clearing of native vegetation' in respect of potentially occurring local populations of threatened flora species / fauna. No significant impacts resulting from key threatening processes are considered to occur as a result of the Activity, given many of these key threatening	Safeguard 1: Establishment and maintenance of sediment and erosion control measures by the future head contractor in accordance with the Blue Book detailed in the Development Plans (Attachment 2). SEC measures to be installed prior to commencement of earthworks. Inspections are to be carried out by the head contractor at regular intervals (and immediately following a rainfall event) to ensure no excessive sediment accumulation and/or damage to measures. Any accumulated sediment to be removed and any required maintenance (e.g. replacement of measures) to be undertaken with measures reinstated prior to re-commencement of works. SEC measures are to be maintained in working order for the full duration of works and removed only upon completion of works. Safeguard 2: Undertaking of additional threatened flora surveys prior to commencement of vegetation clearing works, to maximise detection of threatened flora considered to

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Is the proposed activity likely to...	Applicable? *	Impact level (negligible; or low, medium or high adverse; or positive; or NA)	Reasons (describe the type, nature and extent of impact, taking into account the receiving environment and proposed safeguards which will limit the impact)	Safeguards/mitigation measures
			processes are already occurring and the increase in impacts of these processes as a result of the Activity is considered to be minor and can be managed with the implementation of mitigation measures.	have the potential to occur. If threatened flora species are recorded, one of the following actions will occur: 1. Where possible, threatened species will be avoided by the proposed works; and/or 2. Development of an adaptive management strategy that would include the translocation of individuals (depending on the number and type of species recorded) and/or retirement of species credits for the species impacted. If threatened species are recorded during the additional threatened species surveys, the consent authority will be notified of the species recorded, their location, as well as which of the above two options will be implemented. Safeguard 3: Removal of hollow bearing trees will be offset at a 1:1 ratio with installation of salvaged tree hollows or nest boxes of similar size to the hollow being removed. The type, number and location of nest boxes to be installed will be detailed in the pre-clearance survey letter, to be issued to the consent authority. All nest boxes will be installed at least 3 m from the ground under the supervision of an ecologist, and within trees not containing hollows. Installation of salvaged hollows or nest boxes will preserve habitat values in the Project Area. Details of type of nest boxes to be installed are provided in Attachment 6.
7. introduce weeds, pathogens, pest animals	☒	Negligible	The Activity has potential to result in weed invasion through movement of weed propagules during	Safeguard 1:

Is the proposed activity likely to...	Applicable? *	Impact level (negligible; or low, medium or high adverse; or positive; or NA)	Reasons (describe the type, nature and extent of impact, taking into account the receiving environment and proposed safeguards which will limit the impact)	Safeguards/mitigation measures
or genetically modified organisms into an area?			vegetation clearing and earthworks activities. However, these impacts would arise only during the construction phase which is temporary in nature, and measures are to be implemented to manage indirect impacts.	A suitably qualified ecologist is to undertake pre-clearance surveys within two weeks of any clearing activities to identify (among other things) environmental weeds within the Project Area. Weed control requirements will be incorporated into a pre-clearance assessment letter as required, and distributed by the client and future head contractor to communicate location of sensitive items. Implementation of a pre-clearance weed survey and assessment letter will minimise impacts to biodiversity values within adjoining habitats. Safeguard 2: Prior to vegetation clearing or construction commencement, weeds in the Project Area will be identified during pre-clearing surveys and demarcated, controlled and disposed of separately to native plant material to prevent spread. Priority weeds recorded during pre-clearing surveys will be removed and disposed of according to the following protocols: 1. Areas of priority weeds will not be mulched on-site, and will be removed; 2. All priority weed material will be taken to an appropriate waste facility; and 3. All priority material transferred off-site must be covered.

9.3 Community impacts during all stages of the activity

Is the proposed activity likely to...	Applicable? *	Impact level (negligible; or low, medium or high adverse; or positive; or NA)	Reasons (describe the type, nature and extent of impact, taking into account the receiving environment and proposed safeguards which will limit the impact)	Safeguards/mitigation measures
1. affect community services or infrastructure?	☒	Low	During construction, the relevant section of Old Bells Line of Road will be closed to the general public from Monday to Friday (between 8 am and 6 pm) and on certain Saturdays (between 8 am and 1 pm) for installation of stormwater pipes underneath the road. For all other traffic during weekdays, this including quarry haulage, NPWS vehicles and emergency services, a half road closure approach will be implemented under appropriate traffic control. The proposed traffic arrangements are acceptable given: 1. Construction works are temporary in nature and the road will be reopened following completion of daily works. 2. Road closures will not occur during school holidays and long weekend periods, avoiding delays during periods of busy traffic activity. 3. Alternative access for the public to the GoSSCA and adjacent national parks will be available by State Mine Gully Road. It is acknowledged the road closure may result in some disruption to community access to the GoSSCA and adjacent national parks (albeit with an alternative access route provided). However, road safety will be improved following completion of works as a smoother road surface with clearly indicated	Safeguard 1: As identified in CTMP (Attachment 7), signage shall be erected by the future head contractor two weeks before commencement of works at the two ends of Old Bells Line of Road, specifically east of State Mine Gully Road (i.e. past the quarry) and at the Zig Zag railway car park. Information on the sign shall include clear indication of: 1. Road closure times and overall dates for the works period. 2. Details and contact numbers. 3. Detour via State Mine Gully Road (for the sign installed at the Zig Zag railway car park location).

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Is the proposed activity likely to...	Applicable? *	Impact level (negligible; or low, medium or high adverse; or positive; or NA)	Reasons (describe the type, nature and extent of impact, taking into account the receiving environment and proposed safeguards which will limit the impact)	Safeguards/mitigation measures
			traffic lanes will be created. On balance, the Activity is deemed to have an overall low impact.	
2. affect sites important to the local or broader community for their recreational or other values or access to these sites?	☒	Negligible	It is understood that Old Bells Line of Road is used to access areas to the north including GoSSCA and adjacent national parks, which provide scenic and recreational sites / activities. The Activity is unlikely to result in any adverse impacts for reasons given in relation to whether the proposed activity is likely to affect community services or infrastructure (above).	Safeguard 1: As identified in CTMP (Attachment 7), signage shall be erected by the future head contractor two weeks before commencement of works at the two ends of Old Bells Line of Road, specifically east of State Mine Gully Road (i.e. past the quarry) and at the Zig Zag railway car park. Information on the sign shall include clear indication of: 1. Road closure times and overall dates for the works period. 2. Details and contact numbers. 3. Detour via State Mine Gully Road (for the sign installed at the Zig Zag railway car park location).
3. affect economic factors, including employment, industry and property value?	☒	Positive	The Activity will result in positive economic outcomes, given: 1. It will improve vehicular access to the Quarry which will support an existing extractive industry operation. 2. Employment will be generated during construction.	N/A
4. have an impact on the safety of the community?	☒	Positive	The Activity will have a positive effect on the safety of the community by providing an access road that has a smoother surface, is sealed and has clear traffic lanes via linemarking works.	N/A

Is the proposed activity likely to...	Applicable? *	Impact level (negligible; or low, medium or high adverse; or positive; or NA)	Reasons (describe the type, nature and extent of impact, taking into account the receiving environment and proposed safeguards which will limit the impact)	Safeguards/mitigation measures
5. cause a bushfire risk?	☐		N/A	N/A
6. affect the visual or scenic landscape?	☐		N/A	N/A

9.4 Natural resource impacts during all stages of the activity

Is the proposed activity likely to...	Applicable? *	Impact level (negligible; or low, medium or high adverse; or positive; or NA)	Reasons (describe the type, nature and extent of impact, taking into account the receiving environment and proposed safeguards which will limit the impact)	Safeguards/mitigation measures
1. result in the degradation of the park or any other area reserved for conservation purposes?	☐		N/A	N/A
2. affect the use of, or the community's ability to use, natural resources?	☒	Negligible	The Activity will not adversely affect the use (or community's ability to use): 1. <u>Air</u>: as the Activity will reduce dust generation following completion of works due to sealing, improving local air quality. 2. <u>Water</u>: as the Activity will result in a neutral or beneficial effect on water quality (Attachment 8).	Safeguard 1: Establishment and maintenance of sediment and erosion control measures by the future head contractor in accordance with the Blue Book detailed in the Development Plans (Attachment 2). SEC measures to be installed prior to commencement of earthworks. Inspections are to be carried out by the head contractor at regular intervals (and immediately following a rainfall event) to ensure no excessive sediment accumulation

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Is the proposed activity likely to...	Applicable? *	Impact level (negligible; or low, medium or high adverse; or positive; or NA)	Reasons (describe the type, nature and extent of impact, taking into account the receiving environment and proposed safeguards which will limit the impact)	Safeguards/mitigation measures
				and/or damage to measures. Any accumulated sediment to be removed and any required maintenance (e.g. replacement of measures) to be undertaken with measures reinstated prior to re-commencement of works. SEC measures are to be maintained in working order for the full duration of works and removed only upon completion of works. Safeguard 2: Future head contractor to undertake works in a progressive manner (where possible) to minimise extent of disturbed areas and reduce risk of erosion and sedimentation. This may be achieved by dividing the road into 'segments', subject to the future head contractor. The future head contractor shall minimise 'open' work areas for the full duration of works. Safeguard 3: Demarcation of works area using barrier tape (or similar) to avoid unnecessary soil disturbance. Demarcation is to be undertaken by the head contractor prior to commencement of works, and is to be maintained for the full duration of works.
3. involve the use, wastage, destruction or depletion of natural resources including water, fuels, timber or extractive materials?	☒	Positive	Proposed earthworks are expected to be balanced cut and fill. Where possible, the Activity shall import road base material which shall be locally sourced.	N/A

Is the proposed activity likely to...	Applicable? *	Impact level (negligible; or low, medium or high adverse; or positive; or NA)	Reasons (describe the type, nature and extent of impact, taking into account the receiving environment and proposed safeguards which will limit the impact)	Safeguards/mitigation measures
4. provide for the sustainable and efficient use of water and energy?	☐		N/A	N/A

9.5 Aboriginal cultural heritage impacts during all stages of the activity

Is the proposed activity likely to...	Applicable? *	Impact level (negligible; or low, medium or high adverse; or positive; or NA)	Reasons (describe the type, nature and extent of impact, taking into account the receiving environment and proposed safeguards which will limit the impact)	Safeguards/mitigation measures
1. disturb the ground surface or any vegetation likely to contain culturally modified trees?	☒	Low	The Activity will involve ground disturbance through proposed earthworks. However, based on the AATR (Attachment 5): 1. No Aboriginal objects were identified in the Project Area and it is considered unlikely that Aboriginal objects are present in given existing levels of soil disturbance as well as discrete areas of the Project Area which are subject to wind and rain erosion and hence unlikely to preserve stratified archaeological remains. Further, areas where soil has not been visibly disturbed contain only very shallow sandy profiles and are unlikely to hold archaeological deposits. 2. No culturally modified trees were identified in the Project Area.	Safeguard 1: A heritage induction should be provided by the future head contractor to all personnel as part of the site induction, so that they are aware of their obligations under the NPW Act. The induction is to make any onsite personnel aware that penalties apply for harm to an Aboriginal object, to define that harm can include destruction, defacing, damaging or moving an Aboriginal object, and that Aboriginal objects or suspected Aboriginal objects are to be reported to Heritage NSW and penalties apply for non-compliance. Development of a heritage induction should involve consultation with Aboriginal stakeholders. Safeguard 2:

Is the proposed activity likely to...	Applicable? *	Impact level (negligible; or low, medium or high adverse; or positive; or NA)	Reasons (describe the type, nature and extent of impact, taking into account the receiving environment and proposed safeguards which will limit the impact)	Safeguards/mitigation measures
			The Activity is therefore unlikely to result in any adverse impacts to Aboriginal cultural heritage given the above. Safeguards are provided to mitigate residual risk of impacts.	Implementation of a UFP by the future head contractor during construction works. If unanticipated suspected Aboriginal objects are uncovered at any time, the following steps should be undertaken: 1. Cease all activity within the vicinity of the find. 2. Leave the material in place and protect it from harm. 3. Take note of the details of the material and its location, take a photograph of the find in situ, preferably with a scale. 4. Inform the site manager/ area supervisor, who would then inform the superintendent/ principal. Once the find has been secured, a suitably qualified archaeologist should be contacted to assess the significance of the find and determine management requirements. 5. If the find is identified as an Aboriginal object: a. Heritage NSW and Registered Aboriginal Parties (RAPs) must be notified and consulted b. A methodology for long-term storage of the find must be developed in consultation with RAPs c. The Aboriginal object should be registered on AHIMS d. Further archaeological mitigation and an AHIP may be required prior to works recommencing. 6. Works should not recommence until written consent is received from the project archaeologist and/or Heritage NSW.

Is the proposed activity likely to...	Applicable? *	Impact level (negligible; or low, medium or high adverse; or positive; or NA)	Reasons (describe the type, nature and extent of impact, taking into account the receiving environment and proposed safeguards which will limit the impact)	Safeguards/mitigation measures
				Safeguard 3: If suspected human skeletal remains are uncovered at any time during the construction works, the following steps should be undertaken by the future head contractor: 1. Cease all activity in the vicinity of the find. 2. Leave the remains in place and protect them from harm. 3. Notify NSW Police. 4. Engage a forensic anthropologist and archaeologist where required. 5. Notify Heritage NSW via the Environment Line 131555 to provide details of the remains and their location. Excavation activity will not recommence unless authorised in writing by Heritage NSW and/or NSW Police/NSW Coroner. Safeguard 4: Any changes made to the project should be assessed by an archaeologist in consultation with Aboriginal stakeholders.
3. affect or occur near known Aboriginal objects, Aboriginal places or an Aboriginal	☒	Negligible	Based on the AATR (Attachment 5), no Aboriginal objects or places are located in the Project Area. The Project Area does not contain and is not located in vicinity of any Aboriginal cultural asset of intergenerational significance. Safeguards are provided to mitigate residual risk of impacts.	As above.

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Is the proposed activity likely to...	Applicable? *	Impact level (negligible; or low, medium or high adverse; or positive; or NA)	Reasons (describe the type, nature and extent of impact, taking into account the receiving environment and proposed safeguards which will limit the impact)	Safeguards/mitigation measures
cultural asset of intergenerational significance? If so, can impacts be avoided? How?				
1. affect areas: - within 200 m of waters - within a sand dune system - on a ridge top, ridge line or headland - within 200 m below or above a cliff face - in or within 20 m of a cave, rock shelter or a cave mouth? If so, can impacts be avoided? How?	☐		Based on the ADDR (Attachment 4), the Activity is: 1. Located within 200 m of seasonal watercourses. 2. Traversing ridge tops and ridge lines. 3. Possibly located within 200 m of a cliff face and within 20 m of a cave, rock shelter or cave mouth. However, based on the AATR (Attachment 5) the Activity is unlikely to result in any adverse impacts to Aboriginal heritage given no identified Aboriginal objects were identified in the Project Area, given existing levels of site disturbance. One area of PAD was identified in the Project Area (PAD01). PAD01 was further investigated as detailed in the Addendum Report (Attachment 20) and no Aboriginal objects or areas of archaeological potential were identified in PAD01.	As above.
4. affect wild resources which are used or valued by the Aboriginal community or affect	☐	N/A	N/A	N/A

Is the proposed activity likely to...	Applicable? *	Impact level (negligible; or low, medium or high adverse; or positive; or NA)	Reasons (describe the type, nature and extent of impact, taking into account the receiving environment and proposed safeguards which will limit the impact)	Safeguards/mitigation measures
access to these resources?				
5. affect access to culturally important locations?	☐	N/A	N/A	N/A

9.6 Other cultural heritage impacts during all stages of the activity

Is the proposed activity likely to...	Applicable? *	Impact level (negligible; or low, medium or high adverse; or positive; or NA)	Reasons (describe the type, nature and extent of impact, taking into account the receiving environment and proposed safeguards which will limit the impact)	Safeguards/mitigation measures
1. affect or occur near places, buildings or landscapes of heritage significance? ^	☒	Low	As identified in Section 8.3.2 of this REF and the HIS (Attachment 3) and Supplementary HIS (Attachment 21), the Activity is located in proximity to the following mapped heritage items / other areas: 1. Local heritage item 'I245 Railway Line Newnes – Zig Zag'. 2. State heritage item '00524 Great Zig Zag Railway'. 3. State heritage item '00980 Blue Mountains Walking Tracks'. 4. World Heritage item 'ID 05127 Greater Blue Mountains Area'.	Safeguard 1: Implementation of a UFP by the future head contractor to ensure appropriate management in the unlikely event any unexpected archaeological remains not identified in Attachment 5 are uncovered during any excavation works. Steps for the UFP are outlined as follows: 1. Staff involved with ground disturbing works must be made aware of the UFP. Clear lines of communication must be established for the reporting of any such finds and for procedures to be rapidly implemented. In the event of an unexpected find:

Is the proposed activity likely to...	Applicable? *	Impact level (negligible; or low, medium or high adverse; or positive; or NA)	Reasons (describe the type, nature and extent of impact, taking into account the receiving environment and proposed safeguards which will limit the impact)	Safeguards/mitigation measures
			The HIS (Attachment 3) also notes the Activity is located in the GoSSCA, gazetted under the NPW Act. The Activity will not result in any adverse impacts to the heritage significance of the above heritage items / other areas for the following reasons: 1. <u>Local heritage item I245</u>: The Project Area is unlikely to contain physical evidence in the former railway in the form of ballast, track formations, rails and sleepers, and associated drains and services due to its removal in 1940, leaving only the alignment of the former railway. The Activity will not alter the alignment of the railway. 2. <u>Great Zig Zag Railway and Greater Blue Mountains Area</u>: the Activity is unlikely to result in any material heritage impacts given the separation distance. 3. <u>Blue Mountains Walking Tracks</u>: no walking tracks are situated in or near the Project Area. 4. <u>GoSSCA</u>: the Activity would prevent further erosion via road sealing and formal drainage. Additionally, the Activity would not result in any adverse visual impacts to the GoSSCA as proposed vegetation clearing is restricted to a small, localised section and would not detrimentally alter the visual character of the wider area.	a. All ground disturbing work within 20 metres of the find must cease b. The find must not be moved c. The find must be appropriately protected from potential damage d. A qualified historical archaeologist must be engaged to: i. Assist in assessment of the nature, extent, and significance of find ii. Provide management recommendations, which may include the need for further assessment and archaeological investigations iii. Provide a Section 146 notification to Heritage NSW if the remains are assessed as being relics of local significance or above 2. Should unexpected 'relics' be discovered during works Heritage NSW, Department of Planning and Environment (as delegate of the Heritage Council) is to be notified of the discovery of any unexpected relics in accordance with Section 146 of the NSW <i>Heritage Act 1977</i>. Depending on the nature of the discovery, additional assessment and management strategies may be required prior to the recommencement of excavation in the affected area.
2. impact on relics or moveable heritage	☒	Low	Based on the HIS (Attachment 3), it is not anticipated the Project Area will contain archaeological 'relics' as	Safeguard 1:

Is the proposed activity likely to...	Applicable? *	Impact level (negligible; or low, medium or high adverse; or positive; or NA)	Reasons (describe the type, nature and extent of impact, taking into account the receiving environment and proposed safeguards which will limit the impact)	Safeguards/mitigation measures
items, or an area with a high likelihood of containing relics? ^			defined in the <i>Heritage Act 1977</i> (NSW), and the Activity will not result in any adverse impacts to archaeological resources.	Should unexpected 'relics' be discovered during works Heritage NSW, Department of Planning and Environment (as delegate of the Heritage Council) is to be notified of the discovery of any unexpected relics in accordance with Section 146 of the NSW <i>Heritage Act 1977</i> . Depending on the nature of the discovery, additional assessment and management strategies may be required prior to the recommencement of excavation in the affected area.
3. impact on vegetation of cultural landscape value (e.g. gardens and settings, introduced exotic species, or evidence of broader remnant land uses)?	☐		N/A	N/A

9.7 Impacts on matters of national environmental significance under the Environment Protection and Biodiversity Conservation Act during all stages of the activity

Is the proposal likely to affect MNES, including:	Applicable? *	Likely impact (negligible, low, medium or high adverse; or positive; or N/A)	Reasons (describe the type, nature and extent of impact, taking into account the receiving environment and proposed safeguards which will limit the impact)	Safeguards/mitigation measures
1. listed threatened species or ecological communities)?	☒	Negligible	Based on the EIA (Attachment 6): 1. None of the vegetation communities identified during the desktop assessment or site surveys within the Project Area conform to a threatened ecological community listed under either the BC Act and/or EPBC Act. 2. The Activity is unlikely to result in significant impacts to the EEC Newnes Swamp, given: a. No direct clearing of EEC Newnes Swamp is proposed and no fragmentation of potential habitat for the EEC Newnes Swamp will occur. b. Indirect impacts include erosion, sedimentation and alterations to hydrological conditions which may exacerbate weed invasion are limited to the construction phase which is temporary in nature, and measures are to be implemented to manage indirect impacts. 3. The Activity is unlikely to result in significant impacts to any of the twelve threatened flora species identified under the BC Act and/or EPBC Act, given: a. None were found during site surveys.	Safeguard 1: Establishment and maintenance of sediment and erosion control measures by the future head contractor in accordance with the Blue Book detailed in the Development Plans (Attachment 2). SEC measures to be installed prior to commencement of earthworks. Inspections are to be carried out by the head contractor at regular intervals (and immediately following a rainfall event) to ensure no excessive sediment accumulation and/or damage to measures. Any accumulated sediment to be removed and any required maintenance (e.g. replacement of measures) to be undertaken with measures reinstated prior to re-commencement of works. SEC measures are to be maintained in working order for the full duration of works and removed only upon completion of works. Safeguard 2: Undertaking of additional threatened flora surveys prior to commencement of vegetation clearing works, to maximise detection of threatened flora considered to have the potential to occur. If threatened flora species are recorded, one of the following actions will occur: 1. Where possible, threatened species will be avoided by the proposed works; and/or

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Is the proposal likely to affect MNES, including:	Applicable? *	Likely impact (negligible, low, medium or high adverse; or positive; or N/A)	Reasons (describe the type, nature and extent of impact, taking into account the receiving environment and proposed safeguards which will limit the impact)	Safeguards/mitigation measures
			b. Only small areas of habitat are to be removed.	2. Development of an adaptive management strategy that would include the translocation of individuals (depending on the number and type of species recorded) and/or retirement of species credits for the species impacted. If threatened species are recorded during the additional threatened species surveys, the consent authority will be notified of the species recorded, their location, as well as which of the above two options will be implemented.
2. listed migratory species?	☐		N/A	N/A
3. the ecology of Ramsar wetlands?	☐		N/A	N/A
4. world heritage values of World Heritage properties?	☒	Negligible	Based on the HIS (Attachment 3), the Activity will not result in any adverse impacts (including risk of erosion and sedimentation impacts) to World Heritage item 'ID 05127 Greater Blue Mountains Area' given the separation distance to the Project Area.	N/A
5. the national heritage values of national heritage places?	☐		N/A	N/A

9.8 Cumulative impacts during all stages of the activity

When considered with other projects, is the proposed activity likely to affect...	Applicable? *	Impact level (negligible; or low, medium or high adverse; or positive; or NA)	Reasons (describe the type, nature and extent of impact, taking into account the receiving environment and proposed safeguards which will limit the impact)	Safeguards/mitigation measures
1. natural landscape or biodiversity values through cumulative impacts?	☒	Negligible	The Activity is unlikely to result in cumulative impacts given the isolated location of the Project Area.	Safeguards provided in biodiversity related sections above.
2. cultural (Aboriginal, shared and historic heritage) values through cumulative impacts?	☐			
3. social (amenity, recreation, education) values through cumulative impacts?	☐			
4. the community through cumulative impacts on any other part of environment (e.g. due to traffic, waste generation or perceived over-development?	☒	Negligible.	The Activity is unlikely to result in adverse cumulative impacts affecting the community, given: 1. It is not proposed to increase the volume of quarry traffic using the road. 2. Road safety will be improved following completion of works as a smoother road surface with clearly indicated traffic lanes will be created. 3. It is proposed to use the existing road alignment and widen where necessary to establish the road corridor which avoids unnecessary clearing of large tranches of adjacent vegetation should an alternative alignment be proposed, hence is not considered to be an 'overdevelopment' of the Project Area.	Safeguard 1: With reference to the CTMP (Attachment 7), signage shall be erected by the future head contractor two weeks before commencement of works at the two ends of Old Bells Line of Road, specifically east of State Mine Gully Road (i.e. past the quarry) and at the Zig Zag railway car park. Information on the sign shall include clear indication of: 1. Road closure times and overall dates for the works period. 2. Details and contact numbers. 3. Detour via State Mine Gully Road (for the sign installed at the Zig Zag railway car park location).

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When considered with other projects, is the proposed activity likely to affect...	Applicable? *	Impact level (negligible; or low, medium or high adverse; or positive; or NA)	Reasons (describe the type, nature and extent of impact, taking into account the receiving environment and proposed safeguards which will limit the impact)	Safeguards/mitigation measures

10. Proposals requiring additional information

10.1 Lease or licence proposals under s 151 National Parks and Wildlife Act

Proponents must complete and submit a **sustainability assessment** together with the REF. Under NPWS policy this requirement **also** applies where NPWS is the proponent for projects of the kind listed in s 151A of the NPW Act.

For information on the sustainability assessment criteria and guidelines, including assessment templates, go to the [Sustainability assessments page](#).

Indicate which sustainability assessment is attached:

- ☐ special activities or uses involving more than 400 people
– Sustainability Assessment **Template 2**
- ☐ built structures and facilities
– Sustainability Assessment **Template 3**.

Note that for **minor activities and uses** (usually events and similar proposals involving fewer than 400 people), a streamlined and combined REF and sustainability assessment template is available (**Template 1**).

10.2 Telecommunications facilities

10.2.1 Consideration of matters listed under s 153D National Parks and Wildlife Act

Factors requiring consideration	Response
1. Are there feasible alternative sites for the facility on land that is not reserved under the NPW Act?	N/A
2. Does the site of any aboveground facility cover the minimum area possible?	N/A
3. Is the facility to be designed and constructed to minimise risk of damage to the facility from bushfires?	N/A
4. Has the site and construction of the facility been selected to, as far as practicable, minimise visual impact?	N/A
5. Is it feasible to use an existing means of access to the site?	N/A
6. Is the facility essential for the provision of telecommunications services for land reserved under the NPW Act or for surrounding areas to be served by the facility?	N/A
7. Will the facility be removed and the site restored as soon as possible after the facility becomes redundant (e.g. due to changes in technology)?	N/A
8. Has the site been selected after taking into account the objectives set out in any plan of management relating to the land?	N/A
9. If feasible, will the facility be co-located with an existing structure or located at a site that is	N/A

Factors requiring consideration	Response
already disturbed by an existing lease, licence, easement or right of way. If co-location is proposed, please indicate if: ☐ the proponent will be the owner of the facility ☐ the proponent will be a co-user of the facility.	

10.2.2 Provision and maintenance of an asset protection zone

NPWS requires telecommunication facilities to be protected by asset protection zones (APZs) consistent with the *Telecommunications Towers in Bush Fire Prone Areas – Practice Note 1/11*, unless the Rural Fire Service (RFS) endorses a different approach (e.g. no APZ or a lesser APZ).

1. Is the proposed telecommunication facility protected by an APZ that is already consistent with the RFS Practice Note?

- ☐ No
- ☐ Yes

N/A

2. Does the activity's scope include establishment of an APZ consistent with the RFS Practice Note?

- ☐ No
- ☐ Yes

N/A

3. If the proposed facility will not have an APZ consistent with the RFS Practice Note, has consultation occurred with the RFS?

N/A

10.3 Activities within the Sydney Drinking Water Catchment

Activities within the catchment are subject to the provisions of the Chapter 8 of the Biodiversity and Conservation SEPP. The following factors require consideration.

Factors requiring consideration	Response
1. Does the activity incorporate any current recommended practices and performance standards endorsed or published by Water NSW that relate to the protection of water quality?	Refer to the assessment letter (Attachment 8) for an assessment of the Activity against the revised content requirements for Section 10.3 'Activities within regulated catchments'.
2. If the activity does not incorporate current practices or standards referred to in question 1, how will the activity achieve outcomes not less than these?	
3. Will the activity have a neutral or beneficial effect on water quality?	

10.4 Activities in River Murray riverine land

The matters listed under s 5.9 of the Biodiversity and Conservation SEPP have been considered in the following table.

Table X. Consideration of the planning principles for activities in River Murray riverine lands

Matters related to relevant planning principles	Response
Access	N/A
1. Will the activity alienate or obstruct access to the foreshore of the River Murray?	
2. Will the activity adversely impact the stability of riverbanks and vegetation growth due to uncontrolled access?	
Bank disturbance	N/A
3. Will the activity disturb the shape of the bank and riparian vegetation?	
Flooding	N/A
4. Where the activity is occurring on land subject to inundation by floodwater:	
a. Are there hazards involved in developing the land?	
b. Will the activity have a redistributive effect on floodwater?	
c. Will the activity pose a pollution threat in the event of a flood?	
d. Will the activity add to cumulative effects on the behaviour of floodwater?	
e. Will infrastructure developed as part of the activity need to be replaced in the event of a flood? If so, at what cost?	
Land degradation	N/A
5. Will the activity seek to avoid or reduce land degradation processes such as erosion, native vegetation decline, pollution of ground or surface water, groundwater accession, salination and soil acidity, and adverse effects on the quality of terrestrial and aquatic habitats?	
Landscape	N/A
6. What measures will be taken to protect and enhance the riverine landscape (e.g. by maintaining native vegetation along the riverbank and adjacent land, rehabilitating degraded sites and stabilising and revegetating riverbanks with appropriate species)?	
Water quality	N/A
7. Will the activity seek to reduce pollution caused by salts and nutrients entering the River Murray or otherwise improve the quality of water in the River Murray?	
Wetlands	N/A
8. Where the activity may affect wetlands:	
a. Will the activity provide for a hydrological regime appropriate for the maintenance or restoration of the productive capacity of the wetland?	

Matters related to relevant planning principles	Response
b. Are measures such as a vegetated buffer incorporated into the activity to mitigate adverse effects on wetland values?	

11. Summary of impacts and conclusions

Environmental factor	Consideration	Significance of impact*
(a) the environmental impact on the community	Social, economic and cultural impacts as described in sections 9.3, 9.5 and 9.6	Not significant
(b) the transformation of the locality	Human and non-human environment as described in sections 9.1, 9.2 and 9.4	Not significant
(c) the environmental impact on the ecosystems of the locality	Amount of clearing, loss of ecological integrity, habitat connectivity/ fragmentation and changes to hydrology (both surface and groundwater) as described in sections 9.1, 9.2 and 9.4 and, for nationally listed threatened ecological communities, in section 9.7.	Not significant
(d) reduction of the aesthetic, recreational, scientific or other environmental quality or value of the locality	Visual, recreational, scientific and other impacts as described in section 9.3.	Not significant
(e) the effects on any locality, place or building that has— (i) aesthetic, anthropological, archaeological, architectural, cultural, historical, scientific or social significance, or (ii) other special value for present or future generations	Impacts to Aboriginal and historic heritage associated with a locality (including intangible cultural significance), architectural heritage, social/community values and identity, scenic values and others, as described in sections 9.3, 9.5 and 9.6 and (for MNES heritage places) section 9.7.	Not significant
(f) the impact on the habitat of protected animals, within the meaning of the Biodiversity Conservation Act	Impacts to all native terrestrial species, including but not limited to threatened species, and their habitat requirements, as described in section 9.2.	Not significant
(g) the endangering of a species of animal, plant or other form of life, whether living on land, in water or in the air	Impacts to all listed terrestrial and aquatic species, and whether the proposal increases the impact of key threatening processes, as described in section 9.2	Not significant
(h) long-term effects on the environment	Long-term residual impacts to ecological, social and economic values as described in all parts of section 9.	Not significant
(i) degradation of the quality of the environment	Ongoing residual impacts to ecological, social and economic as described in section 9.4.	Not significant
(j) risk to the safety of the environment	Impacts to public and work health and safety, from contamination, bushfires, sea level rise, flood, storm surge, wind speeds, extreme heat, rockfall and landslip, and other risks likely to increase due to climate change as described in sections 9.1, 9.3 and 9.4.	Not significant

Environmental factor	Consideration	Significance of impact*
(k) reduction in the range of beneficial uses of the environment	Impacts to natural resources, community resources and existing uses as described in sections 9.3 and 9.4.	Not significant
(l) pollution of the environment	Impacts due to air pollution (including odours and greenhouse gases); water pollution (water quality health); soil contamination; noise and vibration (including consideration of sensitive receptors); or light pollution, as described in sections 9.1 and 9.3.	Not significant
(m) environmental problems associated with the disposal of waste	Transportation, disposal and contamination impacts as described in section 9.3.	Not significant
(n) increased demands on natural or other resources that are, or are likely to become, in short supply	Impacts to land, soil, water, gravel, minerals and energy supply as described in section 9.4.	Not significant
(o) the cumulative environmental effect with other existing or likely future activities	The negative synergisms with existing development or future activities as considered in section 9.8.	Not significant
(p) the impact on coastal processes and coastal hazards, including those under projected climate change conditions	Impacts arising from the proposed activity on coastal processes, and impacts on the proposed activity from those coastal processes and hazards, both current and future, as considered in section 9.1.	Not significant
(q) applicable local strategic planning statements, regional strategic plans or district strategic plans made under the Act, Division 3.1	Inconsistency with the objectives, policies and actions identified in local, district and regional plans, as considered in section 3.2.2.	Not significant
(r) other relevant environmental factors.	Any other factors relevant in assessing impacts on the environment to the fullest extent, such as native title.	Not significant

In conclusion indicate if:

- There is likely to be a significant effect on the environment and an environmental impact statement is required
 - ☒ No
 - ☐ Yes

Reason(s):

- There is likely to be a significant effect on threatened species, populations, ecological communities or their habitats and a species impact statement is required
 - ☒ No

Review of Environmental Factors: Quarry Access Road Upgrades

☐ Yes

Reason(s):

- The activity is likely to have a significant impact on matters of national environmental significance listed under the Cwth Environment Protection and Biodiversity Conservation Act

☒ No

☐ Yes

Reason(s):

- The activity will require certification to the Building Code of Australia, Disability (Access to Premises – Buildings) Standards 2010 or Australian Standards in accordance with the NPWS Construction Assessment Procedures

☐ No

☒ Yes

12. Supporting documentation

Please provide details of documentation included with this application.

Document title	Author	Date
1. Attachment 1: Forestry Corporation Permit MIN1000022	Forestry Corporation	02/10/2020
2. Attachment 2: Development Plans	Martens & Associates	18/03/2024
3. Attachment 3: Heritage Impact Statement	Artefact	22/02/2024
4. Attachment 4: Aboriginal Due Diligence Report	Artefact	26/02/2024
5. Attachment 5: Aboriginal Archaeological Technical Report	Artefact	22/02/2024
6. Attachment 6: Ecological Impact Assessment	Cumberland Ecology	13/02/2024
7. Attachment 7: Construction Traffic Management Plan	Road and Rail NSW	22/02/2024
8. Attachment 8: Section 10.3 Activities in regulated catchments assessment	Martens & Associates	19/03/2024
9. Attachment 9: First consultation letter	Martens & Associates	27/09/2023
10. Attachment 10: Crown response letter	Crown Lands	16/01/2024
11. Attachment 11: First NSW Fisheries letter	Martens & Associates	27/09/2023
12. Attachment 12: Mr Keith Muir first response letter	Martens & Associates	11/01/2024
13. Attachment 13: Second consultation letter	Martens & Associates	11/01/2024
14. Attachment 14: Second NSW Fisheries letter	Martens & Associates	11/01/2024
15. Attachment 15: Mr Keith Muir second response	Andrew Helwig (Clarence Sands Quarry)	12/01/2024
16. Attachment 16: Mr Philip Dent response letter	Martens & Associates	29/02/2024
17. Attachment 17: Third NSW Fisheries letter	Martens & Associates	07/06/2024
18. Attachment 18: NSW Fisheries response	NSW Fisheries	19/06/2024
19. Attachment 19: Addendum Aboriginal Archaeological Technical Report	Artefact	30/05/2024
20. Attachment 20: Heritage Memo	Artefact	11/07/2024
21. Attachment 21: Supplementary Heritage Impact Statement	Artefact	03/01/2025
22. Attachment 22: Section 60 Approval	NSW Department of Climate Change, Energy, the Environment and Water	07/02/2025
23. Attachment 23: Council Heritage Consultation Letter	Martens & Associates	11/04/2025

13. Fees for external proponents

Proponents external to NPWS are required to pay an initial fee of \$220 (a final fee is also required before determination of the REF).

- ☒ \$220 payment/cheque for initial fee is enclosed
- ☐ A waiver of fees is requested for the following reasons:

14. Declarations

Signature

J. Watkins

Name (printed)

Jason Watkins

Position

Senior Town Planner, Project Manager

Date

06/05/2025

By endorsing the REF, the proponent confirms that the information in the REF is accurate and adequate to ensure that all potential impacts of the activity can be identified.

Signature

AJ Helwig

Name (printed)

Andrew Helwig

Position

Quarry Manager

Date

6.5. 2025

Seal (if signing under seal):

Next steps

- Submit the signed REF to the relevant NPWS Area Office, requesting determination of the REF and advice on when approval for the works may be forthcoming.

Appendix 1: Threatened species tests of significance

Refer to the EIA (Attachment 6) for tests of significance.

Scientific name	Common name	NSW status	EPBC status	Likelihood of occurrence	Potential impacts	Cross-ref to test of significance
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Species and communities listed under the Biodiversity Conservation Act

Species and communities listed under the Fisheries Management Act

Species and communities listed under the Environment Protection and Biodiversity Conservation Act