Hunter Valley Operations (HVO) North Open Cut Coal Continuation Project.

Application Number: **02884** Commencement Date: **14/04/2025** Status: **Locked**

1. About the project

1.1 Project details

1.1.1 Project title *

Hunter Valley Operations (HVO) North Open Cut Coal Continuation Project.

1.1.2 Project industry type *

Mining

1.1.3 Project industry sub-type

Coal

1.1.4 Estimated start date *

01/01/2027

1.1.4 Estimated end date *

31/12/2045

1.2 Proposed Action details

1.2.1 Provide an overview of the proposed action, including all proposed activities. *

Hunter Valley Operations (HVO) is an existing multi-pit open cut mining complex, comprising two mine sites separated by the Hunter River, HVO North and HVO South (see Figure 1 –Regional Context). While the two mine sites are approved under separate development consents granted under the NSW *Environmental Planning and Assessment Act 1979* (EP&A Act), they are currently operated as one complex with fully integrated environmental management systems. Existing approved operations at HVO North are shown in Figure 2 – Existing Approved Operations.

Significant coal resources remain across the HVO Complex beyond what is currently approved for extraction under the existing development consents. HVO has undertaken extensive investigations into a long-term plan for the complex beyond the approved mine life to increase recovery of the remaining coal resources using existing infrastructure, while balancing social, environmental and economic outcomes. Based on the outcomes of these investigations, HVO is seeking the relevant approvals, at both a State and Federal level, for the HVO Continuation Project.

Broadly, the HVO Continuation Project for which development consent is being sought under the EP&A Act comprises the continuation of the life of HVO North and HVO South, from the current approved mining completion dates of 2026 (subject to approval of HVO North MOD 8) and 2030 respectively, to the end of 2045 at HVO North and 2042 at HVO South. The continuation of mining across the HVO Complex will increase resource recovery from the existing operation, predominantly by mining through previously mined areas and to the extent of existing mining tenements. The conceptual layout of the HVO Continuation Project as it relates to HVO North is identified in Figure 3 – HVO North Conceptual Layout.

This referral relates to the carrying out of mining operations at HVO North from 1 January 2027 only, i.e. the HVO North Continuation Project (the HVO North Project). A separate referral will be submitted for activities proposed at HVO South. This is broadly consistent with the approvals being sought under the NSW EP&A Act for the HVO Continuation Project. HVO will maintain separate development consents for HVO North and South, as is currently the case, and has submitted two development applications (DAs) and an accompanying Environmental Impact Statement (EIS) to the NSW Department of Planning, Housing and Infrastructure (DPHI) to enable the continuation of both HVO North and HVO South. The two development applications are currently under assessment by NSW DPHI.

The areas and activities included in the Action the subject of this referral are defined within the attached HVO North Proposed Action Details, which provides a summary of the key components of the HVO North Continuation Project and that are the subject of the proposed Action from 1 January 2027. The proposed Action area is shown in Figure 5 – HVO North Action Area. While this referral relates to the whole of the HVO North site, there are a number of domains within the Action area in which no further disturbance is proposed. These domains are shown in Figure 4 – HVO North EPBC Domains. The attached HVO North Proposed Action Details provides a summary of key components of the proposed Action which may impact Matters of National Environmental Significance (MNES).

As noted in the attached HVO North Proposed Action Details (EMM, 2025), the proposed Action area is approximately 7,678 ha, the total disturbance area is equal to 2,331 ha and the avoidance area is 1,405 ha (Section 1.3 page 7).

1.2.2 Is the project action part of a staged development or related to other actions or proposals in the region?

Yes

1.2.3 Is the proposed action the first stage of a staged development (or a larger project)?

No

1.2.4 Related referral(s)

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1.2.5 Provide information about the staged development (or relevant larger project).

The proposed Action forms part of the larger HVO Continuation Project, which includes mining operations at HVO North and HVO South from 1 January 2027. As such this Referral interacts with the HVO South Open Cut Coal Continuation Project.

While the two mine sites are approved under separate development consents, they operate as one complex with fully integrated environmental management systems. The HVO Continuation Project seeks to maintain separate development consents for HVO North and South, as is currently the case.

It is noted that two previous referrals were lodged for the HVO Continuation Project, being 2023/09651 for HVO North and 2023/09652 for HVO South. The two previous referrals have been withdrawn and superseded by this referral and a new referral relating to HVO South, in consultation with the Department of Climate Change, Energy, Environment and Water (DCCEEW).

1.2.6 What Commonwealth or state legislation, planning frameworks or policy documents are relevant to the proposed action, and how are they relevant? *

Relevant Commonwealth legislation includes:

- *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) - The proposed Action is likely to require approval under Part 3, Division 1 of the EPBC Act regarding potential impacts to listed threatened species and ecological communities, should the proposed Action be deemed a controlled action.
- *Native Title Act* 1993 - there are no native claims currently over the Action area.
- *National Greenhouse and Energy Reporting Act 2007* – An analysis of the anticipated greenhouse gas (GHG) emissions for the Project has been prepared to determine the quantities of GHG predicted to be emitted by the Project (refer attachment HVO Continuation Project – Preliminary Analysis of Greenhouse Gas Impacts (HVO North and HVO South) (HVO, 2025)). The Safeguard Mechanism also applies to the Project, and it will be subject to declining baselines as set under the Safeguard Mechanism. The GHG emissions of the proposed will not be a substantial cause of any indirect consequences on any MNES, for the reasons outlined in Section 7 (page 12) of the attached Observations on GHG Emissions and Climate Change Impacts (HVO, 2025).

Relevant NSW legislation and planning frameworks include:

- Application pathway:
    - State Environmental Planning Policy (Planning Systems) 2021 – the Project is declared to be State significant development (SSD) under section 2.6 of the Planning Systems SEPP.
    - *Environmental Planning and Assessment Act 1979* (EP&A Act) – the Project is SSD and is therefore subject to the provisions of Part 4, Division 4.7 of the EP&A Act, requiring development consent under this Act. Under section 4.5(a) of the EP&A Act, the consent authority for SSD is either the NSW Independent Planning Commission (IPC) or the NSW Minister for Planning. A total of 72 objections were received on the Project during the public exhibition period of the EIS. Of the 72 objecting submissions, 67 were unique submissions for the purposes of section 2.7 of Planning Systems SEPP. As at least 50 unique submissions (other than from a council) were made by way of objection to the development, the IPC is the consent authority for the Project under section 4.5(a) of the EP&A Act.
- Permissibility:
    - Except for a small section in the northern part of the HVO North Action area (which is zoned SP2 Infrastructure) and a small section along the realigned Lemington Road corridor, the Project area is on land zoned RU1 Primary Production in both the *Singleton Local Environmental Plan 2013* (Singleton LEP) and the *Muswellbrook Local Environmental Plan 2009* (Muswellbrook LEP). Under the Singleton and Muswellbrook LEPs, development for the purpose of open cut mining is permissible with development consent within this land use zone.
- The north-western corner of the HVO North Action area (adjacent to Lake Liddell) is zoned SP2 Infrastructure under the Muswellbrook LEP. Minor works related to the relocation of transmission lines are proposed within this SP2 zone as part of the Project. Development for the purposes of mining is prohibited in this zone. However, section 4.38 (3) of the NSW EP&A Act states that development consent for SSD may be granted despite the development being partially prohibited by an environmental planning instrument.
- A small portion of the realigned Lemington Road corridor is in an area currently zoned C2 – Environmental conservation under the Singleton LEP. Roads are permitted with consent in the C2 zone. This area is currently subject to subdivision between HVO and Warkworth Mine in accordance with the Warkworth Mine consent SSD 5464 (as modified). This will result in the C2 zone land having been rezoned to RU1 zone land by the time of determination of the Project, resulting in no C2 land in the Project area. Roads are also permitted in the RU1 Zone.
- Notwithstanding the above, permissibility of mining is also governed by the *State Environmental Planning Policy (Resources and Energy) 2021* (the Resources and Energy SEPP). Mining is permissible at HVO North and HVO South with consent under section 2.9 of the Resources and Energy SEPP.

- *Mining Act 1992* – HVO currently holds a number of mining leases (MLs) and exploration licenses (ELs) across HVO North. A small area that is within the proposed mining area (between the Mitchell Pit and the Carrington area) is within a surface EL and therefore a new ML to the required depth will be required to cover this area. In addition, the Project seeks to extend the existing product coal stockpile at the HVLP at HVO North beyond the currently approved extent. The area in which the extension is proposed is not covered by a surface ML, which will be required for the Project. Over the life of the Project other adjustments to mining authorisations will be made as required in accordance with the *Mining Act 1992*.
- *Coal Mine Subsidence Compensation Act 2017* – The Project is within the Patrick Plains mine subsidence district. The Project will seek approval for new and upgraded infrastructure under section 22 of this Act.
- *Protection of the Environment Operations Act 1997* – the HVO Complex currently operates under one Environment Protection Licence (EPL 640). EPL 640 will be varied as required if the Project is approved.
- *Roads Act 1993* – the Project requires an approval under section 138 to work on or above a road or to connect a road to a classified road. Approval from Singleton Council as the appropriate road authority will therefore be sought for the Lemington Road realignment and works on Liddell Station Road.
- *Water Management Act 2000* – HVO holds a number of water access licenses (WALs) for the HVO Complex under the Water Sharing Plan (WSP) for the Hunter Regulated River Water Source 2016, the WSP for the Hunter Unregulated and Alluvial Water Sources 2009 and the WSP for the North Coast Fractured and Porous Rock Groundwater Sources 2016.
- *Crown Land Management Act 2016* –a number of Crown land parcels and roads are within the Project footprint. An appropriate authorisation will be obtained to enable the occupation and use of the identified Crown land and roads.

1.2.7 Describe any public consultation that has been, is being or will be undertaken regarding the project area, including with Indigenous stakeholders. Attach any completed consultation documentations, if relevant. *

Extensive consultation has been, and continues to be, undertaken with relevant stakeholders for the Project, including neighbouring property owners, members of the local community, Federal, State and local government agencies, service providers, local community groups, Aboriginal groups and the HVO Community Consultative Committee (CCC) members as detailed in the attached HVO Continuation Project – Consultation Summary (EMM, 2025).

1.3.1 Identity: Referring party

Privacy Notice:

Personal information means information or an opinion about an identified individual, or an individual who is reasonably identifiable.

By completing and submitting this form, you consent to the collection of all personal information contained in this form. If you are providing the personal information of other individuals in this form, please ensure you have their consent before doing so.

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1.3.1.1 Is Referring party an organisation or business? *

Yes

Referring party organisation details

ABN/ACN	28141736558
Organisation name	EMM CONSULTING PTY LIMITED
Organisation address	The Forum, Level 10, 201 Pacific Highway, St Leonards NSW 2065

Referring party details

Name	James Wearne
Job title	Associate
Phone	0407207530
Email	jwearne@emmconsulting.com.au
Address	Level 3, 175 Scott Street, Newcastle NSW 2300

1.3.2 Identity: Person proposing to take the action

1.3.2.1 Are the Person proposing to take the action details the same as the Referring party details? *

No

1.3.2.2 Is Person proposing to take the action an organisation or business? *

Yes

Person proposing to take the action organisation details

ABN/ACN	76606478399
Organisation name	HV OPERATIONS PTY LTD
Organisation address	PO BOX 315, Singleton, 2330, NSW, Australia

Person proposing to take the action details

Name	Peter Walsh
Job title	Project Manager
Phone	02 6570 0063
Email	peter.walsh@glencore.com.au
Address	PO BOX 315, Singleton, 2330, NSW, Australia

1.3.2.14 Are you proposing the action as part of a Joint Venture? *

No

1.3.2.15 Are you proposing the action as part of a Trust? *

No

1.3.2.17 Describe the Person proposing the action's history of responsible environmental management including details of any proceedings under a Commonwealth, State or Territory law for the protection of the environment or the conservation and sustainable use of natural resources against the Person proposing to take the action. *

The person proposing the Action has a satisfactory record of responsible environmental management. HVO is committed to maintaining responsible environmental management practices that meet or exceed industry best practice. Environmental management is an integral part of every stage of the mining process to ensure that environmental impacts are minimised.

HVO has an Environmental Management System (EMS) in place for its existing mining operation. The EMS provides a risk based platform on which relevant environment and community controls, procedures and management plans have been established and are regularly reviewed. The EMS covers the design, development, production, maintenance and rehabilitation of the operation and its infrastructure. The EMS is structured to ensure that the company adopts a continuous improvement approach to environmental management issues at the site and implement best practice environmental management. The EMS also ensures that all activities at the operation are controlled, so that HVO either prevents or minimises any environmental impacts associated with the operation.

Under its EMS, HVO has developed a number of environmental management and monitoring plans which provide guidance for minimising the impacts of its operations. Where relevant, these existing plans will be updated and applied to the new activities that form the proposed Action.

HVO has not been involved in any legal proceedings or convicted of any offences under any relevant environmental or conservation legislation. HVO has not had any approvals revoked or suspended under any relevant environmental or conservation legislation. On 16 December 2024, HVO was issued with a Penalty Notice for 'Contravene condition of licence - first offence – Corporation' by the NSW Environment Protection Authority in relation to EPL 640. A fine was issued as part of this Penalty Notice and the fine was paid by HV Operations in full.

1.3.2.18 If the person proposing to take the action is a corporation, provide details of the corporation's environmental policy and planning framework

HVO is committed to maintaining responsible environmental management practices that meet or exceed industry best practice. Environmental management is an integral part of every stage of the mining process to ensure that environmental impacts are minimised.

HVO has an EMS, see attached HVO Environmental Management Strategy (HVO, 2019), in place for its existing mining operation. The EMS provides a risk based platform on which relevant environment and community controls, procedures and management plans have been established and are regularly reviewed. The EMS covers the design, development, production, maintenance and rehabilitation of the operation and its infrastructure. The EMS is structured to ensure that the company adopts a continuous improvement approach to environmental management issues at the site and implement best practice environmental management. The EMS also ensures that all activities at the operation are controlled, so that HVO either prevents or minimises any environmental impacts associated with the operation.

Under its EMS, HVO has developed a number of environmental management and monitoring plans which provide guidance for minimising the impacts of its operations. Where relevant, these existing plans will be updated and applied to the new activities that form the proposed Action.

1.3.3 Identity: Proposed designated proponent

1.3.3.1 Are the Proposed designated proponent details the same as the Person proposing to take the action? *

Yes

Proposed designated proponent organisation details

ABN/ACN	76606478399
Organisation name	HV OPERATIONS PTY LTD
Organisation address	PO BOX 315, Singleton, 2330, NSW, Australia

Proposed designated proponent details

Name	Peter Walsh
Job title	Project Manager
Phone	02 6570 0063
Email	peter.walsh@glencore.com.au
Address	PO BOX 315, Singleton, 2330, NSW, Australia

1.3.4 Identity: Summary of allocation

Confirmed Referring party's identity

The Referring party is the person preparing the information in this referral.

ABN/ACN	28141736558
Organisation name	EMM CONSULTING PTY LIMITED
Organisation address	The Forum, Level 10, 201 Pacific Highway, St Leonards NSW 2065
Representative's name	James Wearne
Representative's job title	Associate
Phone	0407207530
Email	jwearne@emmconsulting.com.au
Address	Level 3, 175 Scott Street, Newcastle NSW 2300

Confirmed Person proposing to take the action's identity

The Person proposing to take the action is the individual, business, government agency or trustee that will be responsible for the proposed action.

ABN/ACN	76606478399
Organisation name	HV OPERATIONS PTY LTD
Organisation address	PO BOX 315, Singleton, 2330, NSW, Australia
Representative's name	Peter Walsh
Representative's job title	Project Manager
Phone	02 6570 0063
Email	peter.walsh@glencore.com.au
Address	PO BOX 315, Singleton, 2330, NSW, Australia

Confirmed Proposed designated proponent's identity

The Person proposing to take the action is the individual or organisation proposed to be responsible for meeting the requirements of the EPBC Act during the assessment process, if the Minister decides that this project is a controlled action.

Same as Person proposing to take the action information.

1.4 Payment details: Payment exemption and fee waiver

1.4.1 Do you qualify for an exemption from fees under EPBC Regulation 5.23 (1) (a)? *

No

1.4.3 Have you applied for or been granted a waiver for full or partial fees under Regulation 5.21A? *

No

1.4.5 Are you going to apply for a waiver of full or partial fees under EPBC Regulation 5.21A?

No

1.4.7 Has the department issued you with a credit note? *

No

1.4.9 Would you like to add a purchase order number to your invoice? *

No

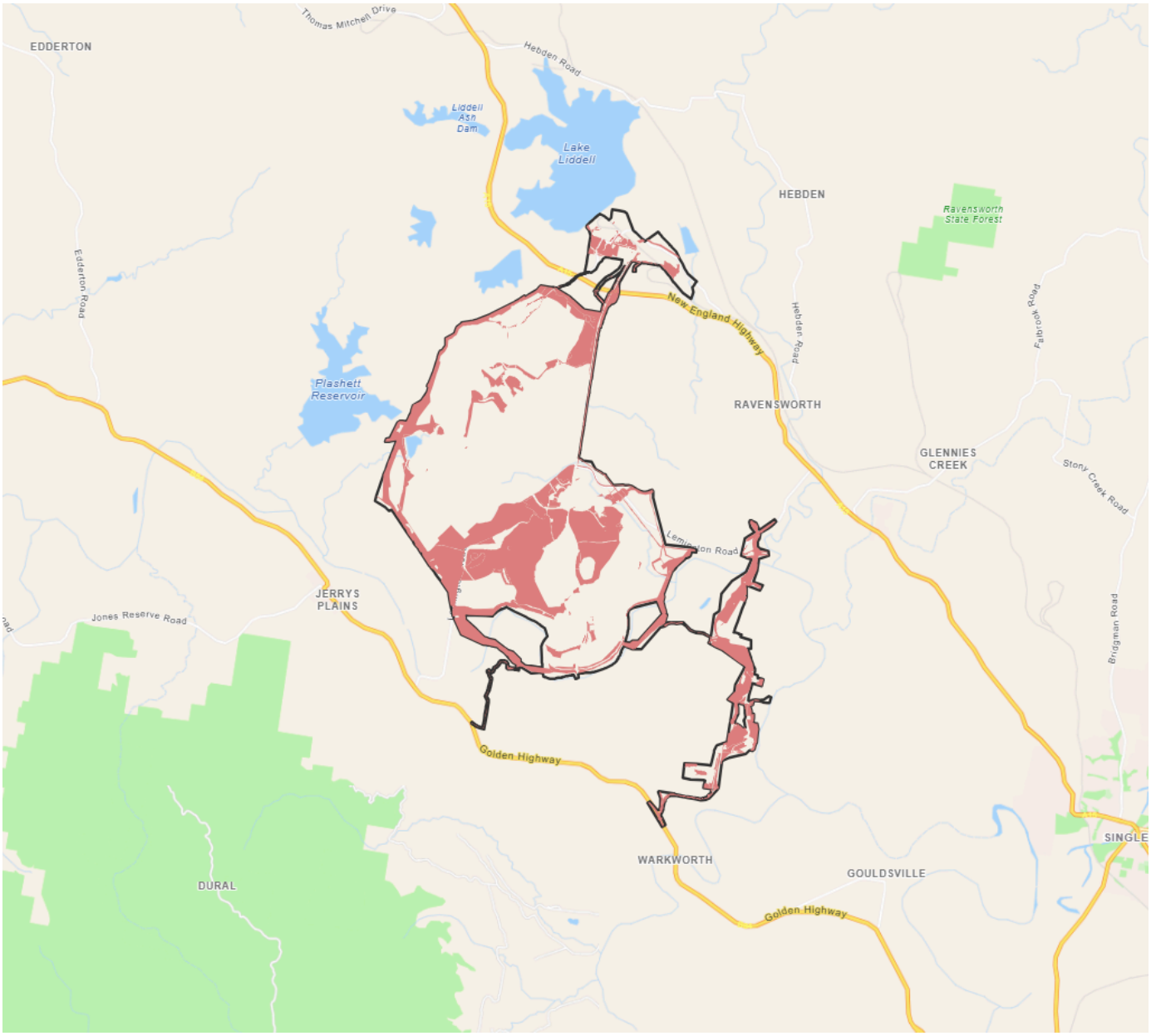
1.4 Payment details: Payment allocation

1.4.11 Who would you like to allocate as the entity responsible for payment? *

Proposed designated proponent

2. Location

2.1 Project footprint



Project Area: 7681.90 Ha **Disturbance Footprint:** 2331.85 Ha

2.2 Footprint details

2.2.1 What is the address of the proposed action? *

Lemington Road, Liddell NSW 2333

2.2.2 Where is the primary jurisdiction of the proposed action? *

New South Wales

2.2.3 Is there a secondary jurisdiction for this proposed action? *

No

2.2.5 What is the tenure of the action area relevant to the project area? *

The majority of land within the Action area is freehold land, which is largely owned by HVO, associated entities or other mining operations, with the exception of land owned by AGL Macquarie, Ausgrid, Transport for NSW, and various road reserves including the New England Highway, Golden Highway/Jerrys Plains Road, Lemington Road, Old Lemington Road, Pikes Gully Road, Liddell Station Road, Old New England Highway and Comleroi Road. Singleton Council is the relevant roads authority for all roads except the New England Highway, which is a State road, and Liddell Station Road which traverses the Muswellbrook LGA in sections. There are also some parcels of Crown land in the Action area. The Action area also contains sections of the bed and banks of the Hunter River.

HVO holds tenements under the *Mining Act 1992* across all areas where mining operations are undertaken or proposed.

Land ownership within the Action area is also shown in Figure 6 – HVO North Land Ownership.

3. Existing environment

3.1 Physical description

3.1.1 Describe the current condition of the project area’s environment.

Location

The Action area is located approximately 24 kilometres (km) north-west of Singleton in the Hunter Valley of New South Wales (NSW), being the closest township. The regional locality in relation to the Action area is displayed in attachment Figure 1 – Regional Context.

Current condition of the environment

The Action area has been largely cleared of intact native vegetation as a result of a long history of use for both agriculture and mining operations. The Action area is generally highly disturbed, primarily comprising mining operations and mining related infrastructure, which includes existing open cut pits, coal handling infrastructure, water management infrastructure and tailings storage facilities, as well as rehabilitated mining areas. The Action area has not recently been adversely affected by bushfire, flood or other major events.

The HVO North Biodiversity MNES Assessment (Umwelt, 2025, Section 1.7, page 12), outlines the existing condition of the additional disturbance area's environment.

Action area zoning

With the exception of a small section in the northern part of the Action area (which is zoned SP2 Infrastructure) and a small section along the realigned Lemington Road corridor, the Action area is on land zoned RU1 Primary Production in both the Singleton Local Environmental Plan 2013 (Singleton LEP) and the Muswellbrook Local Environmental Plan 2009 (Muswellbrook LEP). Under the Singleton and Muswellbrook LEPs, development for the purpose of open cut mining is permissible with development consent within this land use zone.

The north-western corner of the Action area (adjacent to Lake Liddell) is zoned SP2 Infrastructure under the Muswellbrook LEP. Minor works related to the relocation of transmission lines are proposed within this SP2 zone as part of the Project. Development for the purposes of mining is prohibited in this zone. However, section 4.38 (3) of the EP&A Act states that development consent for SSD may be granted despite the development being partially prohibited by an environmental planning instrument.

Land zoning for the Action area and adjoining land is shown in Figure 7 – Land Zoning.

Existing road infrastructure

The principal road network that provides access to HVO includes the New England Highway, Golden Highway, Lemington Road, Comleroi Road, Pikes Gully Road and Liddell Station Road). Additionally, the Newdell LP and the HVLP at the northern tip of HVO North loads coal onto the heavy freight rail network for transportation to the Port of Newcastle. Other mines surrounding HVO, including Ravensworth Operations and Liddell Coal Operations, also have rail loading infrastructure used for the same purposes.

The construction program for the Project will occur across an approximate five-year period. All intersections impacted by the proposed Action are expected to operate at acceptable levels of service with minimal mitigation treatments required, except for the Lemington Road/New England Highway intersection (AM peak only) and the Old New England Highway/New England Highway intersection, where the intersections were found to operate at capacity. To minimise this impact, outbound heavy vehicle activities accessing Lemington Road will be minimised where practical during the peak hour (6.00 am–7.00 am). The Old New England Highway will also not be used as a primary construction haul road and will be formalised through appropriate management plans to ensure traffic demand using this road is low.

During continued operations, the impact of the Project on the local road network is anticipated to be minor. Beyond around 2035 (around Year 9 of the Project), some intersections are predicted to perform at level of service (LoS) F; however, this will be mainly due to background traffic growth on the road network, not contribution of traffic from HVO. This was found at intersections along the New England Highway (Lemington Road, Old New England Highway and Liddell Station Road access) and is generally caused by the forecasted background traffic growth in New England Highway given that the intersections would operate at similar LoS without the continuation of HVO.

3.1.2 Describe any existing or proposed uses for the project area.

Existing

The Action area primarily contains existing open cut pits, mine-related infrastructure, rehabilitated former mining areas and mine buffer land largely utilised to support agricultural activities including grazing and cropping.

Proposed

The Action involves mining operations at HVO North from 1 January 2027. In large parts of the Action area, the Action involves a continuation of the current land use.

In relation to the final landform for the Action, contemporary natural landform design principles will be applied. Areas disturbed by mining activities as a result of the Project will reflect a landform that is sympathetic to the surrounding landscape and incorporates micro-relief features. The proposed land use post mining comprises a combination of agriculture (grazing) areas with native vegetated corridors.

3.1.3 Describe any outstanding natural features and/or any other important or unique values that applies to the project area.

Key natural features within the locality include the Hunter River and Wollombi Brook, as shown on Figure 3 – HVO North Conceptual Layout. Notably, HVO has been operating for a long time in proximity to both the Hunter River and Wollombi Brook, and these mining activities have been the subject of numerous detailed technical studies, which has enabled HVO to develop a thorough understanding of the environment in which it operates and effective measures to manage the impacts of its operation.

The Project is expected to result in minimal to no changes to the annual flow and average duration of dry periods for Hunter River and most of its tributaries. The duration of dry days in Wollombi Brook is anticipated to be less for the Project than currently occurs as a result of the approved operations. The water quality of the Hunter River is also expected to remain within the existing range observed in the Hunter River with no significant adverse impacts due to the Project.

The potential impacts on the Hunter River and Wollombi Brook will be further assessed within the environmental assessment of the Project, and appropriate mitigation measures identified.

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

The landform in the Action area is a combination of modified and natural landscapes. The topography of the Action area is characterised by an undulating and hilly landscape extending to lower areas associated with previous mine rehabilitation works and minor tributaries draining to the Hunter River.

The natural topography across the majority of the Action area is generally flat to gently undulating with 0 to 5 degree slopes.

3.2 Flora and fauna

3.2.1 Describe the flora and fauna within the affected area and attach any investigations of surveys if applicable.

Flora Species

Flora species within the HVO North Biodiversity Impact Assessment Area (BIAA) have been recorded from two major vascular plant classes, being ferns and flowering plants and includes trees, shrubs, forbs, grasses, sedges, rushes, reeds, ferns, lithophytes, epiphytes, mistletoes, vines and twiners. The HVO North BIAA is made up of areas of native or exotic grasslands and woodlands previously cleared and disturbed for agricultural and mining purposes, as well as rehabilitated mining areas in which vegetation is reestablishing.

The extant woodland is regrowth vegetation dominated by box-ironbark and/or bulloak (*Allocasuarina luehmannii*) associations. Riparian zones are generally dominated by either river red gum (*Eucalyptus camuldulensis*), yellow box (*Eucalyptus melliodora*) or river oak (*Casuarina cunninghamiana*).

Commonly recorded native grass and forb species include common couch (*Cynodon dactylon*), weeping grass (*Microlaena stipoides var.stipoides*) *Enteropogon acicularis*, red grass (*Bothriochloa decipiens*), climbing saltbush (*Einadia nutans*), common everlasting (*Chrysocephalum apiculatum*), common woodruff (*Asperula conferta*) and purple wiregrass (*Aristida ramosa*). The mid and shrub layers are usually sparse and commonly contain native species such as ruby saltbush (*Enchylaena tomentosa*), coffee bush (*Breynia oblongifolia*), native olive (*Notelaea microcarpa var. microcarpa*) or blackthorn (*Bursaria spinosa*). Common overstorey species include narrow-leaved ironbark (*Eucalyptus cre*bra), bulloak (*Allocasuarina luehmannii*), swamp oak (Casuarina glauca) and rough-barked apple (*Angophora floribunda*).

Commonly recorded introduced species recorded include typical pasture weeds such as purpletop (*Verbena bonariensis*) lambs tongues (*Plantago lanceolata*), paspalum (*Paspalum dilatatum*), Rhodes grass (*Chloris gayana*), cobblers pegs (*Bidens pilosa*), Paddys lucerne (*Sida rhombifolia*) and fireweed (*Senecio madagascariensis*). High threat weeds, published in the BAM-calculator, include Coolatai grass (*Hyparrhenia hirta*), saffron thistle (*Carthamus lanatus*), bridal creeper (*Asparagus asparagoides*), lantana (*Lantana camara*), galenia (*Galenia pubescens*), African olive (*Olea europaea subsp. Cuspidata*) and African boxthorn *(Lycium ferocissimum*).

Fauna Species

A wide range of fauna species have been recorded within and surrounding the HVO North BIAA as part of ecological surveys for development applications and approvals.

The HVO North BIAA contains fauna habitats generally restricted to grasslands and remnant wooded vegetation or rehabilitated areas. Areas of open grassland provide a foraging resource for macropods and a hunting resource for owls and micro-bats. Small mammals such as Antechinus sp. are provided foraging habitat as well as refuge habitat within the grass layers. Occasional isolated paddock trees and fragmented woodlands function as corridors for mobile species, particularly those willing to cross expanses of cleared land, such as the spotted-tailed quoll (*Dasyurus maculatus maculatus*). Commonly recorded native species include eastern grey kangaroo (*Macropus giganteus*), red-necked wallaby (*Macropus rufogriseus*) Australian magpie (*Gymnorhina tibicen*), sulphur-crested cockatoo (*Cacatua galerita*), noisy miner (*Manorina melanocephala*), common brush-tailed possum (*Trichosurus vulpecula*), eastern long-necked turtle (*Chelodina longicollis*), common eastern froglet (*Crinia signifera*), broad-palmed frog (*Litoria latopalmata*) and spotted grass frog (*Limnodynastes tasmaniensis*). In addition to the native species, a number of pest species are commonly recorded and include rabbit (*Oryctolagus cuniculus*), fox (*Vulpes vulpes*) and feral pig (*Sus scrofa*).

3.2.2 Describe the vegetation (including the status of native vegetation and soil) within the project area.

Soil Characteristics

The landscape within the Action area, consistent with surrounding areas, has been significantly shaped by historical clearing for agricultural, mining and rural development.

HVO is located within the Soil and Land Resources of the Hunter Region 1:100,000 Sheet. Seven mapped soil landscapes occur across the Action area, comprising the Donalds Gully, Ravensworth, Singleton, Branxton, Foy Brook, Dochra, Granbalang soil landscapes. The majority of these soil landscapes which comprise the Action area are characterised by duplex soils which consist of an upper soil A-horizon and underlying B-horizon. These duplex soils tend to be shallow with the A-horizon generally less than 20 cm. It is noted that the Project largely proposes to disturb previously mined areas. Soil resources in these areas will be recovered as part of re-disturbance for use in future rehabilitation works.

Vegetation Characteristics

The majority of the HVO North BIAA is covered by areas of native or exotic grasslands and woodlands previously cleared and disturbed for agricultural purposes or within rehabilitated mining areas. The extant woodland in the HVO North BIAA is regrowth vegetation occurring in patches within the previously cleared grassland areas. This vegetation mainly consists of narrow-leaved ironbark (*Eucalyptus crebra*) and/or bulloak (*Allocasuarina luehmannii*) dominated communities surrounded by native and exotic grasslands and pasture.

Riparian vegetation associated with the Hunter River represent the oldest most mature vegetation in the HVO North BIAA. These riparian zones are generally dominated by either river red gum (*Eucalyptus camuldulensis*), yellow box (*Eucalyptus melliodora*) or river oak (*Casuarina cunninghamiana*) vegetation communities that have been disturbed by previous and ongoing grazing uses.

Surveys of the vegetation within the HVO North BIAA identified nine vegetation communities across a range of condition zones. The vegetation communities include the following:

- PCT4089 - Namoi-Upper Hunter River Red Gum Forest
- PCT4081 - Northwest River Oak-River Red Gum Forest
- PCT3485 - Hunter Valley Footslopes Slaty Gum Forest
- PCT3431 - Central Hunter Ironbark Grassy Woodland
- PCT4015 - Central Hunter Riparian Forest

The HVO North Biodiversity MNES Assessment (Umwelt, 2025), Section 3.2.1 (page 50), describes the condition of the PCTs.

3.3 Heritage

3.3.1 Describe any Commonwealth Heritage Places Overseas or other places recognised as having heritage values that apply to the project area.

Statutory registers reviewed to determine historic heritage values within the Action area included:

- World Heritage List (WHL) – managed under the EPBC Act
- National Heritage List (NHL) – managed under the EPBC Act
- Commonwealth Heritage List (CHL) – managed under the EPBC Act
- State Heritage Register (SHR) – managed under Part 3A of the *Heritage Act 1977* (Heritage Act)
- s170 Heritage and Conservation Register - managed under section 170 of the Heritage Act
- Schedule 5 of the Singleton LEP and Muswellbrook LEP
- State Heritage Inventory (SHI), which was cross-checked with Schedule 5 of the Singleton LEP and the s170 register. The SHI is not a single statutory register, but a central collection of locally listed statutory heritage items maintained by Heritage NSW.

No listed items of historic heritage will be directly impacted by the Project. One unlisted item of local significance, the remnant stockyards, will be directly impacted. Impacts to the remnant stockyards are proposed to facilitate the construction of the proposed haul road to Ravensworth Operations. Mitigation measures comprising archival recording are proposed for this item. It is noted that mining activities will occur no closer to identified heritage items to that previously occurred or as currently approved.

The c1840s former Chain of Ponds Inn (the Inn), which is listed on the State Heritage Register and the Singleton LEP (item I34), is within the Action area. The Inn is on the northern side of the New England Highway along the Old New England Highway, Liddell, and was gazetted to the State Heritage Register as an item of State significance in 1999 as Inn & Outbuildings (former). The Inn comprises three core buildings including the stone inn building, convict lock-up and stables. Ancillary features include a capped well, water tank, and remnants of a stone path to the rear of the stable building.

The Inn is currently owned by the HVO JV; however, it is managed by the neighbouring Liddell Coal Operations, and in accordance with the protections afforded by the Liddell Coal Operations development consent (DA 305-11-01, as modified).

While the Inn is within the Action area, no impacts are predicted to occur as a result of the proposed Action. The Inn is approximately 4.5 km from the proposed mining footprint at HVO North, and works within the vicinity of the Inn would be limited to the extension of the Hunter Valley Load Point stockpile and the removal and replacement of powerlines. The immediate setting of the Inn is presently defined by mining operations (in particular the neighbouring Liddell Coal Operations), and therefore the continued use of the HVO Complex is not expected to cause additional impact.

3.3.2 Describe any Indigenous heritage values that apply to the project area.

Statutory registers reviewed to determine Aboriginal cultural heritage values within the Action area include:

- Commonwealth Heritage List (CHL) and National Heritage List – managed under the EPBC Act
- Native Title Claims Search – managed under the *Native Title Act 1993*
- Aboriginal Heritage Information Management System (AHIMS) database
- Singleton LEP
- Muswellbrook LEP.

No places listed on either the National or Commonwealth heritage lists are within the Action area. Similarly, no Aboriginal places or archaeological sites noted in the Singleton LEP occur within the Action area. A large number of Aboriginal sites were identified surrounding HVO via a search of the NSW AHIMS database, with a total of 1,793 previously recorded Aboriginal sites within a ~183 km2 search area centred on the HVO Complex.

A known item of heritage significance within the Action area is a site referred to as CM-CD1 (Carrington Mine Colluvial Deposit – 1, AHIMS #37-2-1877); a north-south linear landform feature immediately west of the Carrington Pit, north of the Hunter River, and south of the current Lemington Road alignment (refer to Figure 3 – HVO North Conceptual Layout). CM-CD1 is afforded protection by the existing HVO North development consent by Condition 40, which provides that mining operations and other associated activities in the Carrington West Wing area are not permitted to be carried out within 20 m of the site. Condition 40 also clarifies that this condition does not however prohibit surveys and studies to be undertaken.

CM-CD1 will continue to be protected from direct impacts of mining operations by the proposed action, with the proposed mining footprint designed to continue to avoid CM-CD1.

Aboriginal sites and places have been documented within the Project disturbance area. Sites are typically part of a broader background scatter of cultural material, reflective of >50,000 years of Aboriginal occupation, and prevalent across the Hunter Valley. Even when these sites are combined, they are extremely common across NSW and typically of low significance. A detailed Aboriginal Cultural Heritage Assessment has been prepared as part of the environmental assessment of the Project, with mitigation measures identified to appropriately mitigate impacts.

There are currently no native title claims over the Action Area.

3.4 Hydrology

3.4.1 Describe the hydrology characteristics that apply to the project area and attach any hydrological investigations or surveys if applicable. *

The current mining operations at HVO intercept groundwater directly via the Permian coal seams and indirectly, via seepage from the alluvium to the underlying Permian coal seams. Surface water is taken directly from the Hunter River for water use on-site. The current operations hold sufficient water licensing entitlement to account for all water taken for current site operations.

Surface water

HVO is within the Hunter River Basin catchment and is drained by the Hunter River, Wollombi Brook and minor tributary drainage channels. The Hunter River is a regulated river, regulated by releases from Glenbawn Dam upstream of HVO and Glennies Creek Dam further downstream. The Hunter River flows in an easterly direction between the HVO North and HVO South operational areas, then flowing in a southerly direction.

Other minor watercourses in the vicinity of the proposed Action include Farrells Creek, Parnells Creek, Pikes Creek and Bayswater Creek (see Figure 5 – HVO North Action Area). These drainage lines are ephemeral, flowing after rainfall events.

The HVO Complex holds approval to release water via licensed discharge points into the Hunter River under EPL 640 and the Hunter River Salinity Trading Scheme (HRSTS). HVO North discharge points are at Parnells Dam and Dam 11N.

Where possible, surface water is diverted away from disturbed areas at the HVO Complex via clean water diversions to minimise impact to the receiving environment. Water runoff is managed in accordance with the approved water management plan (WMP) using the following classification:

- clean water from undisturbed or rehabilitated areas
- sediment-laden water from disturbed areas (excluding mine water)
- mine water from areas exposed to coal or water used in coal processing or from coal stockpile areas.

The surface water monitoring program, under the WMP, includes monitoring surface water quality at a number of locations both upstream and downstream of the HVO Complex. The WMP monitors compliance with approval conditions and contains mechanisms for ensuring impacts to surface water resources are minimised.

Groundwater

A significant number of groundwater studies and site investigations have been conducted for the HVO Complex and the wider Hunter area. Approved mining activities at HVO operate below the watertable and therefore intercept and extract groundwater to allow safe mining conditions.

The main groundwater bearing unit in the area is the Quaternary alluvium, with less productive groundwater occurring within coal seams of the Permian Coal Measures. A paleochannel aquifer is also present at HVO North, representing a historical watercourse. Mining through the paleochannel is approved, with mining of the “eastern arm” of the paleochannel occurring in 2009/2010. Groundwater stored in the paleochannel is older and of poor quality (higher salinity) than the Hunter River alluvium, which receives recharge from leakage from the regulated Hunter River and direct rainfall recharge. The paleochannel alluvium comprises gravels emplaced contiguously with silts and clays, resulting in a silt bound alluvial matrix. Hill slope runoff and sheet wash from surrounding hard rock areas also contributed to colluvial deposits as fans and braids. Rainfall recharge to the paleochannel alluvium is very low due to the widespread occurrence of a thick clay layer.

Discharge from these alluvial aquifers is generally via downward leakage to the Permian strata. There are mapped areas of minor alluvium associated with Parnells Creek, Davis Creek and Bayswater Creek.

Drawdown of the watertable and decline of the piezometric head has been occurring at the HVO Complex and wider area as a result the mining since the 1950s.

The coal measures form unconfined groundwater systems at outcrop, becoming semi-confined as they dip towards the south-east. The direction of groundwater flow for the Permian Coal Measures is influenced by the local geomorphology and structural geology, as well as the long history of mining within the region. The beneficial use of groundwater sourced from the Permian Coal is limited due to the high salinity, and preferential access to water associated with regulated Hunter River and the more productive alluvial aquifer. Groundwater flow direction in the alluvial groundwater source is consistent with the Hunter River flow direction.

Groundwater monitoring (levels and quality, as well as pit inflows) has been occurring at the HVO Complex since 2000, with monitoring focused on the alluvium groundwater sources and coal measures above the Bayswater seam.

4. Impacts and mitigation

4.1 Impact details

Potential Matters of National Environmental Significance (MNES) relevant to your proposed action area.

EPBC Act section	Controlling provision	Impacted	Reviewed
S12	World Heritage	No	Yes
S15B	National Heritage	No	Yes
S16	Ramsar Wetland	No	Yes
S18	Threatened Species and Ecological Communities	Yes	Yes
S20	Migratory Species	Yes	Yes
S21	Nuclear	No	Yes
S23	Commonwealth Marine Area	No	Yes
S24B	Great Barrier Reef	No	Yes
S24D	Water resource in relation to large coal mining development or coal seam gas	Yes	Yes
S26	Commonwealth Land	No	Yes
S27B	Commonwealth Heritage Places Overseas	No	Yes
S28	Commonwealth or Commonwealth Agency	No	Yes

4.1.1 World Heritage

You have identified your proposed action will likely directly and/or indirectly impact the following protected matters.

A direct impact is a direct consequence of an action taken – for example, clearing of habitat for a threatened species or permanent shading on an ecological community as the result of installing solar panels.

An indirect impact is an 'indirect consequence' such as a downstream impact or a facilitated third-party action.

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4.1.1.1 Is the proposed action likely to have any direct and/or indirect impact on any of these protected matters? *

No

4.1.1.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact. *

There are no World Heritage properties within the Action area. The nearest World Heritage property is the Greater Blue Mountains Area Heritage Property, which at its nearest point is 6 km to the southernmost point of the HVO South BIAA. Disturbances in the BIAAs will not have any impact on this World Heritage Area.

The proposed Action will also not be a substantial cause of any indirect consequences that will have an impact on World Heritage properties, as outlined in Section 7 (page 12) of the attached Observations on GHG Emissions and Climate Change Impacts (HVO, 2025).

4.1.2 National Heritage

You have identified your proposed action will likely directly and/or indirectly impact the following protected matters.

A direct impact is a direct consequence of an action taken – for example, clearing of habitat for a threatened species or permanent shading on an ecological community as the result of installing solar panels.

An indirect impact is an 'indirect consequence' such as a downstream impact or a facilitated third-party action.

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4.1.2.1 Is the proposed action likely to have any direct and/or indirect impact on any of these protected matters? *

No

4.1.2.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact. *

There are no National Heritage properties within or near to the Action area.

The proposed Action will also not be a substantial cause of any indirect consequences that will have an impact on National Heritage properties, as outlined in Section 7 (page 12) of the attached Observations on GHG Emissions and Climate Change Impacts (HVO, 2025).

4.1.3 Ramsar Wetland

You have identified your proposed action will likely directly and/or indirectly impact the following protected matters.

A direct impact is a direct consequence of an action taken – for example, clearing of habitat for a threatened species or permanent shading on an ecological community as the result of installing solar panels.

An indirect impact is an 'indirect consequence' such as a downstream impact or a facilitated third-party action.

Direct impact	Indirect impact	Ramsar wetland
No	No	Hunter Estuary Wetlands

4.1.3.1 Is the proposed action likely to have any direct and/or indirect impact on any of these protected matters? *

No

4.1.3.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact. *

The nearest Ramsar wetlands are the Hunter Estuary Wetlands, which are 70 km downstream of the Action area. Disturbances in the BIAA and along the Hunter River are not expected to have any direct or indirect impact on the Hunter Estuary Wetlands Ramsar Site.

The proposed Action will also not be a substantial cause of any indirect consequences that will have an impact on Ramsar wetlands, as outlined in Section 7 (page 12) of the attached Observations on GHG Emissions and Climate Change Impacts (HVO, 2025).

4.1.4 Threatened Species and Ecological Communities

You have identified your proposed action will likely directly and/or indirectly impact the following protected matters.

A direct impact is a direct consequence of an action taken – for example, clearing of habitat for a threatened species or permanent shading on an ecological community as the result of installing solar panels.

An indirect impact is an 'indirect consequence' such as a downstream impact or a facilitated third-party action.

Threatened species

Direct impact	Indirect impact	Species	Common name
Yes	Yes	Anthochaera phrygia	Regent Honeyeater
No	No	Aphelocephala leucopsis	Southern Whiteface
No	No	Aprasia parapulchella	Pink-tailed Worm-lizard, Pink-tailed Legless Lizard
No	No	Asperula asthenes	Trailing Woodruff
No	No	Botaurus poiciloptilus	Australasian Bittern
No	No	Calidris acuminata	Sharp-tailed Sandpiper
No	No	Calidris ferruginea	Curlew Sandpiper
No	No	Callocephalon fimbriatum	Gang-gang Cockatoo
No	No	Calyptorhynchus lathami lathami	South-eastern Glossy Black-Cockatoo
Yes	Yes	Chalinolobus dwyeri	Large-eared Pied Bat, Large Pied Bat
Yes	Yes	Climacteris picumnus victoriae	Brown Treecreeper (south-eastern)
No	No	Cynanchum elegans	White-flowered Wax Plant
Yes	Yes	Dasyurus maculatus maculatus (SE mainland population)	Spot-tailed Quoll, Spotted-tail Quoll, Tiger Quoll (southeastern mainland population)
Yes	Yes	Delma vescolineata	Hunter Valley Delma
No	No	Erythrotriorchis radiatus	Red Goshawk
No	No	Eucalyptus glaucina	Slaty Red Gum
No	No	Euphrasia arguta	
No	No	Falco hypoleucos	Grey Falcon
Yes	Yes	Gallinago hardwickii	Latham's Snipe, Japanese Snipe
No	No	Grantiella picta	Painted Honeyeater
Yes	Yes	Hirundapus caudacutus	White-throated Needletail

Direct impact	Indirect impact	Species	Common name
Yes	Yes	Lathamus discolor	Swift Parrot
No	No	Litoria aurea	Green and Golden Bell Frog
No	No	Litoria booroolongensis	Booroolong Frog
No	No	Melanodryas cucullata cucullata	South-eastern Hooded Robin, Hooded Robin (south-eastern)
No	No	Neophema chrysostoma	Blue-winged Parrot
No	No	Nyctophilus corbeni	Corben's Long-eared Bat, South-eastern Long-eared Bat
No	No	Ozothamnus tesselatus	
No	No	Petaurus australis australis	Yellow-bellied Glider (south-eastern)
No	No	Petrogale penicillata	Brush-tailed Rock-wallaby
No	No	Phascolarctos cinereus (combined populations of Qld, NSW and the ACT)	Koala (combined populations of Queensland, New South Wales and the Australian Capital Territory)
No	No	Picris evae	Hawkweed
No	No	Pomaderris brunnea	Rufous Pomaderris, Brown Pomaderris
No	No	Prasophyllum sp. Wybong (C.Phelps ORG 5269)	a leek-orchid
No	No	Prostanthera cineolifera	
No	No	Pseudomys novaehollandiae	New Holland Mouse, Pookila
Yes	Yes	Pteropus poliocephalus	Grey-headed Flying-fox
No	No	Pterostylis gibbosa	Illawarra Greenhood, Rufa Greenhood, Pouched Greenhood
No	No	Rhizanthella slateri	Eastern Underground Orchid
No	No	Rostratula australis	Australian Painted Snipe
No	No	Stagonopleura guttata	Diamond Firetail
No	No	Thesium australe	Austral Toadflax, Toadflax
No	No	Tringa nebularia	Common Greenshank, Greenshank

Ecological communities

Direct impact	Indirect impact	Ecological community
Yes	Yes	Central Hunter Valley eucalypt forest and woodland
No	No	Coastal Swamp Sclerophyll Forest of New South Wales and South East Queensland
No	No	Hunter Valley Weeping Myall (Acacia pendula) Woodland
No	No	River-flat eucalypt forest on coastal floodplains of southern New South Wales and eastern Victoria
No	Yes	Warkworth Sands Woodland of the Hunter Valley
Yes	Yes	White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland

4.1.4.1 Is the proposed action likely to have any direct and/or indirect impact on any of these protected matters? *

Yes

4.1.4.2 Briefly describe why your action has a direct and/or indirect impact on these protected matters. *

Direct

The Project will result in direct impacts as a result of vegetation clearing for mining purposes and associated infrastructure construction.

Indirect

The Project is not expected to result in any substantial indirect impacts and edge effects on the biodiversity values of surrounding lands, however it is acknowledged that some minor indirect impacts and edge effects associated with fugitive light emissions, dust, noise, weeds and feral animals may occur during the construction and operational phases.

Refer Section 5 page 74 of the HVO North Biodiversity MNES Assessment (Umwelt, 2025).

The proposed Action will not be a substantial cause of any other indirect consequences that will have an impact on threatened species and ecological communities, as outlined in Section 7 (page 12) of the attached Observations on GHG Emissions and Climate Change Impacts (HVO, 2025).

4.1.4.4 Do you consider this likely direct and/or indirect impact to be a Significant Impact? *

Yes

4.1.4.5 Describe why you consider this to be a Significant Impact. *

Proposed significant residual impact due to vegetation clearing to:

- Central Hunter Valley Eucalypt Forest and Woodland (CEEC)
- Hunter Valley Delma (*Delma vescolineata*).

It is considered that the Project is likely to result in a significant impact on Central Hunter Valley Eucalypt Forest and Woodland CEEC due to the removal of up to 152.71 ha of this community and potential indirect impacts, including fragmentation and edge effects. The Central Hunter Valley Eucalypt Forest and Woodland CEEC is highly fragmented and with a very restricted distribution, as indicated by an estimated median patch size of 1.7 ha. Almost all (86%) of the remnants are less than 10 ha in size and only 2% of patches are larger than 100 ha in size. The Project will lead to further fragmentation of the CEEC with up to 152.71 ha being removed, 144.39 ha of which constitutes moderate quality condition woodland/forest. The overall fragmentation to the community as a whole is expected to be around 0.4% of the community's extent. Due the direct impact of clearing up to 152.71 ha of the Central Hunter Valley Eucalypt Forest and Woodland CEEC, the Project will likely interfere with the recovery of the CEEC within the HVO North Biodiversity Impact Assessment Area and in the wider locality.

Refer to Appendix B section B2 (page B-3) of the HVO North Biodiversity MNES Assessment for further information.

The Project is likely to result in a significant impact to the Hunter Valley Delma due to the removal of 284.60 ha of confirmed habitat for the species. This loss of habitat constitutes 5.73% of the total area of occupancy for the species.

Refer to Appendix B section B3 (page B-32) of the HVO North Biodiversity MNES Assessment for further information.

As outlined within the attached HVO North Biodiversity MNES Assessment (refer Appendix B Page B2) the below listed ecological communities and species are unlikely to be significantly impacted by the Project:

- White Box – Yellow Box – Blakely's Red Gum Grassy Woodland Derived Native Grassland CEEC
- Swift parrot (Lathamus discolor)
- Regent honeyeater Anthochaera phrygia)
- Spotted-tailed quoll (Dasyurus maculatus maculatus)
- Large-eared pied bat (Chalinolobus dwyeri)
- Grey-headed flying-fox (Pteropus poliocephalus)
- White-throated needletail (Hirundapus caudacutus)
- Brown treecreeper (Climacteris picumnus victoriae)
- Latham's snipe (Gallinago hardwickii)

4.1.4.7 Do you think your proposed action is a controlled action? *

Yes

4.1.4.8 Please elaborate why you think your proposed action is a controlled action. *

Yes, in respect of Central Hunter Valley Eucalypt Forest and Woodland CEEC and Hunter Valley Delma (*Delma vescolineata*) only. The Action is considered to have a significant impact on Central Hunter Valley Eucalypt Forest and Woodland CEEC due to the removal of up to 152.71 ha of this community and potential indirect impacts, including fragmentation and edge effects. Additionally, the direct impact of clearing up to 152.71 ha of the Central Hunter Valley Eucalypt Forest and Woodland CEEC, the Action will likely interfere with the recovery of the CEEC within the HVO North Biodiversity Impact Assessment Area and in the wider locality. The Project is further considered to have a significant impact to the Hunter Valley Delma due to the removal of 284.60 ha of confirmed habitat for the species. Due to the significant impact to the EPBC Act listed Central Hunter Valley Eucalypt Forest and Woodland CEEC and Hunter Valley Delma, the Action is considered to be a Controlled Action.

Further information on direct and indirect impacts to EPBC Act species is provided in Section 5 (page 74) of the HVO North Biodiversity MNES Assessment (Umwelt, 2025).

4.1.4.10 Please describe any avoidance or mitigation measures proposed for this action and attach any supporting documentation for these avoidance and mitigation measures. *

Avoidance and mitigation measures proposed are identified in the HVO North Biodiversity MNES Assessment (Umwelt, 2025), Section 4 (page 57).

Targeted avoidance and minimisation measures were implemented to reduce the Project's impact on areas of higher value vegetation and habitat, including (but not limited to):

- Locating impacts predominantly in previously mined and/or disturbed areas, and areas approved to be disturbed.
- Refinement and location selection of the Lemington Road realignment to remove all direct impacts to *Warkworth Sands Woodland of the Hunter Valley CEEC*.
- Careful consideration of proposed transmission line easement alignments to avoid areas of higher quality vegetation and habitats, and to provide for maximum vegetation and habitat retention in easement corridors.
- Habitat retention following decommissioning of existing transmission lines.

The following specific control measures, as detailed in the existing approved HVO Integrated Biodiversity Management Plan and Biodiversity Offset Strategy, will be implemented by the Project:

- salvage of biodiversity features, including habitat resources (e.g. hollow logs, tree hollows, fallen timber and rocks/boulders) and material for mine rehabilitation (e.g. seed collection and topsoil collection)
- a pre-clearing procedure to minimise the potential for impacts on native fauna species (focusing on threatened species) as a result of the clearing of hollow bearing trees
- weed management
- pest animal control
- pathogen management
- fencing and access control
- bushfire management
- erosion and sedimentation control
- providing appropriate environmental management measures as part of the mining operations to minimise the potential for indirect impacts.

4.1.4.11 Please describe any proposed offsets and attach any supporting documentation relevant to these measures. *

As noted in the attached HVO North Biodiversity MNES Assessment (Umwelt, 2025) – Section 7, page 88, a comprehensive Biodiversity Offset Strategy (BOS) will be developed for the Project in accordance with relevant NSW State legislation and/or policies, currently being assessed under the BAM in accordance with the *Biodiversity Conservation Act 2016* (NSW). Accordingly, the offset strategy for the Project will be developed in consultation with the DPHI and DCCEEW.

To meet offsets required for Commonwealth listed entities for controlled actions under the NSW BOS, proponents retain the ability to:

- retire biodiversity credits based on the like-for-like provisions in the Biodiversity Conservation Regulation 2017 (NSW)
- fund biodiversity conservation actions that are listed in the Ancillary rules: Biodiversity conservation actions and directly benefit the threatened entity impacted
- commit to deliver mine site ecological rehabilitation that creates the same ecological community or threatened species habitat
- pay into the Biodiversity Conservation Fund, noting it is the proponent's responsibility to notify the Biodiversity Conservation Trust that their payment is for a controlled action.

4.1.5 Migratory Species

You have identified your proposed action will likely directly and/or indirectly impact the following protected matters.

A direct impact is a direct consequence of an action taken – for example, clearing of habitat for a threatened species or permanent shading on an ecological community as the result of installing solar panels.

An indirect impact is an 'indirect consequence' such as a downstream impact or a facilitated third-party action.

Direct impact	Indirect impact	Species	Common name
No	No	Actitis hypoleucos	Common Sandpiper
No	No	Apus pacificus	Fork-tailed Swift
No	No	Calidris acuminata	Sharp-tailed Sandpiper
No	No	Calidris ferruginea	Curlew Sandpiper
No	No	Calidris melanotos	Pectoral Sandpiper
Yes	Yes	Gallinago hardwickii	Latham's Snipe, Japanese Snipe
Yes	Yes	Hirundapus caudacutus	White-throated Needletail
No	No	Motacilla flava	Yellow Wagtail
No	No	Pandion haliaetus	Osprey
Yes	Yes	Rhipidura rufifrons	Rufous Fantail
No	No	Tringa nebularia	Common Greenshank, Greenshank

4.1.5.1 Is the proposed action likely to have any direct and/or indirect impact on any of these protected matters? *

Yes

4.1.5.2 Briefly describe why your action has a direct and/or indirect impact on these protected matters. *

The Action will have direct or indirect impact to Rufous fantail, White-throated needletail and Latham’s snipe due to the loss of native vegetation and fauna habitats as a result of clearance works and subsequent mining activity (Section 5.1, page 74 of HVO North Biodiversity MNES Assessment, Umwelt, 2025).

4.1.5.4 Do you consider this likely direct and/or indirect impact to be a Significant Impact? *

No

4.1.5.6 Describe why you do not consider this to be a Significant Impact. *

The HVO North BIAA contain small areas of potential dam habitat and sections of the Hunter River which may be utilised by Latham's snipe. The white-throated needletail is almost exclusively aerial species often recorded above wooded areas, some of which occur in the HVO North BIAA. While the rufous fantail is known to occur in moist, dense habitats including rainforest and mangroves, woodland habitat within the HVO North BIAA may provide movement corridors for this species. However, while marginal habitat for the three migratory species is available, habitats within the HVO North BIAA for migratory species listed under international conventions is not considered to meet the criteria listed above, and important habitat is not likely to occur.

Further, while each of the three species has been recorded in the wider locality surrounding the BIAAs, the BIAAs and adjacent areas have not been recorded to support an ecologically significant proportion of any of the three migratory species.

Overall, the HVO North BIAA is not considered to comprise important habitat for any of the identified migratory species listed above, and therefore the Project is not likely to substantially modify or destroy important migratory species habitat (refer Appendix B Page B2 of the HVO North Biodiversity MNES Assessment).

Similarly, the Project will not seriously disrupt the lifecycle of an ecologically significant proportion of the population of a migratory species; or result in an invasive species that is harmful to migratory species becoming established within the HVO North BIAA.

The Project is unlikely to result in a significant impact on any migratory species listed under the EPBC Act or international conventions (Appendix B Page B2 to the HVO North Biodiversity MNES Assessment, Umwelt, 2025).

The proposed Action will not be a substantial cause of any indirect consequences that will have an impact on migratory species, as outlined in Section 7 (page 12) of the attached Observations on GHG Emissions and Climate Change Impacts (HVO, 2025).

4.1.5.7 Do you think your proposed action is a controlled action? *

No

4.1.5.9 Please elaborate why you do not think your proposed action is a controlled action. *

The Project is unlikely to result in a significant impact on any migratory species listed under the EPBC Act or international conventions (Appendix B Page B2 of the HVO North Biodiversity MNES Assessment, Umwelt, 2025).

The HVO North Biodiversity Impact Assessment Area does not provide important habitat, nor does it support and ecologically significant proportion of the population, of any of the migratory species predicted to occur by the protected matters database.

The Project is unlikely to result in a significant impact on the white-throated needletail due to the lack of records of the species utilising the habitats of the HVO North Biodiversity Impact Assessment Area and the extent of habitat in the wider region. Refer section B4 Page B39 of the HVO North Biodiversity MNES Assessment, (Umwelt, 2025) for further information.

The Project is unlikely to result in a significant impact on the Latham's snipe due to lack of species records. Refer section B4 Page B45 of the HVO North Biodiversity MNES Assessment, (Umwelt, 2025) for further information.

The Project is unlikely to result in a significant impact on the Rufous fantail as this species has not been recorded within the HVO South Biodiversity Impact Assessment Area despite targeted floristic surveys and unlikely to occur based on known distribution.

4.1.5.10 Please describe any avoidance or mitigation measures proposed for this action and attach any supporting documentation for these avoidance and mitigation measures. *

Avoidance and mitigation measures proposed are identified in the HVO North Biodiversity MNES Assessment (Umwelt, 2025), Section 4 (page 57).

Targeted avoidance and minimisation measures were implemented to reduce the Project's impact on areas of higher value vegetation and habitat, including (but not limited to):

- Locating impacts predominantly in previously mined and/or disturbed areas, and areas approved to be disturbed.
- Refinement and location selection of the Lemington Road realignment to remove all direct impacts to *Warkworth Sands Woodland of the Hunter Valley CEEC*.
- Careful consideration of proposed transmission line easement alignments to avoid areas of higher quality vegetation and habitats, and to provide for maximum vegetation and habitat retention in easement corridors.
- Habitat retention following decommissioning of existing transmission lines.

The following specific control measures, as detailed in the existing approved HVO Integrated Biodiversity Management Plan and Biodiversity Offset Strategy, will be implemented by the Project:

- salvage of biodiversity features, including habitat resources (e.g. hollow logs, tree hollows, fallen timber and rocks/boulders) and material for mine rehabilitation (e.g. seed collection and topsoil collection)
- a pre-clearing procedure to minimise the potential for impacts on native fauna species (focusing on threatened species) as a result of the clearing of hollow bearing trees
- weed management
- pest animal control
- pathogen management
- fencing and access control
- bushfire management
- erosion and sedimentation control
- providing appropriate environmental management measures as part of the mining operations to minimise the potential for indirect impacts.

4.1.5.11 Please describe any proposed offsets and attach any supporting documentation relevant to these measures. *

No offsets are warranted or proposed for potential impacts to migratory species.

4.1.6 Nuclear

4.1.6.1 Is the proposed action likely to have any direct and/or indirect impact on this protected matter? *

No

4.1.6.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact. *

The proposed Action is not a nuclear action.

4.1.7 Commonwealth Marine Area

You have identified your proposed action will likely directly and/or indirectly impact the following protected matters.

A direct impact is a direct consequence of an action taken – for example, clearing of habitat for a threatened species or permanent shading on an ecological community as the result of installing solar panels.

An indirect impact is an 'indirect consequence' such as a downstream impact or a facilitated third-party action.

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4.1.7.1 Is the proposed action likely to have any direct and/or indirect impact on any of these protected matters? *

No

4.1.7.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact. *

There are no Commonwealth Marine Areas in or near to the Action area.

The proposed Action will also not be a substantial cause of any indirect consequences that will have an impact on Commonwealth Marine Areas, as outlined in Section 7 (page 12) of the attached Observations on GHG Emissions and Climate Change Impacts (HVO, 2025).

4.1.8 Great Barrier Reef

4.1.8.1 Is the proposed action likely to have any direct and/or indirect impact on this protected matter? *

No

4.1.8.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact. *

The Action area is not in the vicinity of the Great Barrier Reef.

The proposed Action will also not be a substantial cause of any indirect consequences that will have an impact on the Great Barrier Reef, as outlined in Section 7 (page 12) of the attached Observations on GHG Emissions and Climate Change Impacts (HVO, 2025).

4.1.9 Water resource in relation to large coal mining development or coal seam gas

4.1.9.1 Is the proposed action likely to have any direct and/or indirect impact on this protected matter? *

Yes

4.1.9.2 Briefly describe why your action has a direct and/or indirect impact on this protected matter. *

Surface water resources in the vicinity of the proposed Action include the Hunter River, and other minor watercourses such as Farrells Creek and Parnells Creek. The Hunter River, and highly connected alluvial groundwater within 40 m of the river bank, is managed under the NSW Water Sharing Plan (WSP) for the *Hunter Regulated River Water Source 2016*. The tributaries to the Hunter River are managed under the WSP for the Hunter Unregulated and Alluvial Water Sources 2022.

The WSP for the *North Coast Fractured and Porous Rock Groundwater Sources 2016* applies to the Permian groundwater resources within the Action area.

The main groundwater resources that could be impacted by the proposed Action includes:

- Alluvial aquifers, occurring mainly along the Hunter River.
- Permian groundwater systems:
    - thin and variably permeable regolith, with limited saturated thickness
    - interburden aquitards
    - low to moderately permeable coal seams.

The proposed Action will depressurise the geological strata directly intersected by mining, creating a zone of drawdown in the Permian strata around the mining activity.

4.1.9.4 Do you consider this likely direct and/or indirect impact to be a Significant Impact? *

No

4.1.9.6 Describe why you do not consider this to be a Significant Impact. *

TThe proposed Action will intercept groundwater and result in changes to the existing groundwater and surface water environment. However, as HVO North, as approved under DA 450-10-2003, already comprises active and approved open cut mines, the potential for the proposed Action to result in a significant incremental impact on water resources has been assessed to be low.

The HVO groundwater model has been updated to predict changes to groundwater levels and fluxes due to the proposed Action. The model was calibrated using historical records from the extensive surface water and groundwater monitoring network managed in accordance with the existing HVO Water Management Plan and from surrounding monitoring sites.

Due to the proximity to the Hunter River alluvium, mining is expected to cause drawdown in the alluvial aquifer. However, as mining is already approved in this area (DA 450-10-2003 (as modified), the incremental drawdown will not be significant or extensive. To mitigate impacts to the alluvium in the Carrington West Wing area, a low permeability groundwater barrier will be constructed prior to mining within 100 m of the remnant western arm of the paleochannel in connection with the Hunter River, as currently approved (conditions 23 and 24 of development consent DA 450-10-2003).

This measure would prevent impacts to the Hunter Regulated Alluvial Water Source, limiting incremental drawdown to the paleochannel adjacent to the pit.

Final void modelling of the proposed Action undertaken to date indicates the pit lake will equilibrate below the Hunter River and alluvial aquifer. As the final void will act as a groundwater sink, there is minimal risk of seepage of saline pit lake water to the alluvial aquifer and associated ecological receptors. The proposed Action will not have a significant impact on groundwater or surface water quality.

The proposed Action is not predicted to have a significant impact on groundwater dependent ecosystems as:

- The flooding and flow regimes in the Hunter River will not change, and as such will not adversely affect the River Red Gums that rely on flooding for germination.
- Alluvial drawdown is predicted to be localised to areas adjacent to the pit and will be of short duration.
- The Hunter River flows will remain unchanged as it is a regulated system and the Action will not significantly affect streamflow.
- The alluvium remains saturated, which acts as a habitat for stygofauna.
- Stygofauna in the area of the proposed Action are known to occur throughout the Hunter Valley.

Land uses within and immediately surrounding HVO primarily include other mining operations, agriculture, and rural residential land holdings. These mining operations have modified catchments through the capture of runoff from mining areas within the water management systems (WMS) and diversion of upslope runoff around mining operations.

The HVO water management system (WMS) consists of a network of infrastructure (dams, pipelines, contour banks) to control the movement of water around the HVO Complex. Water is shared between HVO South and HVO North via pipelines across the Hunter River bridge. HVO uses sufficient water storage capacity to provide a buffer against drought and flood interruptions, and prevents unlicensed discharge of mine affected water offsite.

4.1.9.7 Do you think your proposed action is a controlled action? *

No

4.1.9.9 Please elaborate why you do not think your proposed action is a controlled action. *

As described above, HVO North, as approved under DA 450-10-2003, already comprises active and approved open cut mines, the potential for the proposed Action to result in a significant incremental impact on water resources has been assessed to be low, with no significant impact on water resources predicted.

4.1.9.10 Please describe any avoidance or mitigation measures proposed for this action and attach any supporting documentation for these avoidance and mitigation measures. *

Groundwater drawdown impacts in the Hunter Regulated Alluvial Water Source will be effectively mitigated by the construction of a low permeability barrier wall prior to mining in the Carrington West Wing area.

Surface water impacts are managed by:

- minimising water abstraction from the Hunter River to meet water supply deficits (through existing entitlement)
- preferential use of mine water for coal preparation and dust suppression
- recycling on-site water
- controlled discharge of water to the environment in accordance with statutes and regulations.

Excess mine water can be released via licensed discharge points to the Hunter River during high and flood flow periods, as determined by the NSW Government. Discharges are regulated by conditions in the site EPL and by the Hunter River Salinity Trading Scheme Regulation 2000.

HVO holds sufficient water licensing entitlement to account for the predicted water take associated with the proposed Action and approved mining.

4.1.9.11 Please describe any proposed offsets and attach any supporting documentation relevant to these measures. *

No offsets are warranted or proposed for potential water impacts. Residual impacts will be managed under existing water entitlements with residual water make to be managed under held water licences in perpetuity.

4.1.10 Commonwealth Land

You have identified your proposed action will likely directly and/or indirectly impact the following protected matters.

A direct impact is a direct consequence of an action taken – for example, clearing of habitat for a threatened species or permanent shading on an ecological community as the result of installing solar panels.

An indirect impact is an 'indirect consequence' such as a downstream impact or a facilitated third-party action.

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4.1.10.1 Is the proposed action likely to have any direct and/or indirect impact on any of these protected matters? *

No

4.1.10.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact. *

There is no Commonwealth Land within or in the vicinity of the referral area.

4.1.11 Commonwealth Heritage Places Overseas

You have identified your proposed action will likely directly and/or indirectly impact the following protected matters.

A direct impact is a direct consequence of an action taken – for example, clearing of habitat for a threatened species or permanent shading on an ecological community as the result of installing solar panels.

An indirect impact is an 'indirect consequence' such as a downstream impact or a facilitated third-party action.

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4.1.11.1 Is the proposed action likely to have any direct and/or indirect impact on any of these protected matters? *

No

4.1.11.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact. *

The Project is located within Australia with no impact to Commonwealth place overseas.

4.1.12 Commonwealth or Commonwealth Agency

4.1.12.1 Is the proposed action to be taken by the Commonwealth or a Commonwealth Agency? *

No

4.2 Impact summary

Conclusion on the likelihood of significant impacts

You have indicated that the proposed action will likely have a significant impact on the following Matters of National Environmental Significance:

- Threatened Species and Ecological Communities (S18)

Conclusion on the likelihood of unlikely significant impacts

You have indicated that the proposed action will unlikely have a significant impact on the following Matters of National Environmental Significance:

- World Heritage (S12)
- National Heritage (S15B)
- Ramsar Wetland (S16)
- Migratory Species (S20)
- Nuclear (S21)
- Commonwealth Marine Area (S23)
- Great Barrier Reef (S24B)
- Water resource in relation to large coal mining development or coal seam gas (S24D)
- Commonwealth Land (S26)
- Commonwealth Heritage Places Overseas (S27B)
- Commonwealth or Commonwealth Agency (S28)

4.3 Alternatives

4.3.1 Do you have any possible alternatives for your proposed action to be considered as part of your referral? *

Yes

4.3.2 Do you have an alternative timeline you are proposing for your proposed action? *

No

4.3.3 Briefly describe why an alternate timeline for your proposed action was not possible. *

An alternative timeline is not possible due to the Action being the continuation of an existing mining operation. Continuity of mining will ensure ongoing employment of an approximate 1,500 full time equivalent (FTE) workforce and will ensure operational efficiencies are achieved.

4.3.4 Do you have an alternative location you are proposing for your proposed action? *

No

4.3.5 Briefly describe why an alternative location for your proposed action was not possible. *

An alternative location is not possible due to the Action being the continuation of an existing mining operation. An Infrastructure and Mine Option Report (HVO 2022) was prepared in support of the EIS and presents key mine design options considered in development of the Project and discusses the assessment outcomes for each that have been used to inform the proposed mine plan. The various mine plan options were assessed with a view of achieving a balance between optimal resource recovery and financial return and reducing environmental and social impacts through the implementation of appropriate mitigation measures.

Subsequent to the EIS submission, amendments were made to the Project and detailed in an Amendment Report submitted to DPHI to minimise impacts of the Project to biodiversity and cultural heritage values. Further amendments to the Project are currently proposed to further avoid and minimise impacts of the Project to GHG emissions, biodiversity and cultural heritage values.

This referral considers the current and proposed amendments to the Action made since the submission of the EIS.

4.3.6 Do you have alternative activities you are proposing for your proposed action? *

No

4.3.7 Briefly describe why an alternative activity for your proposed action was not possible. *

Significant coal resources remain across the HVO Complex beyond what is currently approved for extraction. Extensive investigations have been undertaken into a long-term plan for the HVO Complex beyond the approved mine life to achieve increased recovery of the remaining coal resources while balancing social, environmental, and economic outcomes. As such, the proposed Action represents the most appropriate means of optimising the extraction of a high quality coal resource within a largely disturbed and approved mining area using predominantly existing infrastructure.

The Action as proposed in this referral is an alternative to an Action previously proposed for the continuation of HVO and represents avoidance and minimisation of impacts including to biodiversity values.

A further alternate activity is not proposed due to the Action being the continuation of an existing mining operation. Continuity of existing operations also ensures operational efficiencies are achieved whilst maintaining benefits to the local and regional community, via employment and services supported by taxes and royalties paid to both the State and Commonwealth.

4.3.4 Alternatives: Impact and mitigation

4.3.4.1 Do these alternatives have a different impact, avoidance, or mitigation measure compared to what you have already provided? *

No

4.3.5 Alternatives: Considered alternatives

4.3.5.1 Do you have any other alternative actions, including not taking the action, that you have considered but are not proposing as part of this referral? *

Yes

4.3.5.2 Describe the details of this possible alternative that you have considered but are not proposing. *

The Infrastructure and Mine Option Reports (HVO 2022) presents key mine design options considered in development of the Project and discusses the assessment outcomes for each that have been used to inform the proposed mine plan. The various mine plan options were assessed with a view of achieving a balance between optimal resource recovery and financial return and reducing environmental and social impacts through the implementation of appropriate mitigation measures. The options assessed includes an option where this proposed Action does not proceed.

Subsequent to the EIS submission amendments were made to the Project and detailed in an Amendment Report submitted to DPHI to minimise impacts of the Project to biodiversity and cultural heritage values. Further amendments to the Project are currently proposed to further avoid and minimise impacts of the Project to GHG emissions, biodiversity and cultural heritage values.

This referral considers the current and proposed amendments to the Action made since the submission of the EIS.

5. Lodgement

5.1 Attachments

1.2.1 Overview of the proposed action

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Figure 1 - Regional Context.pdf.pdf Regional context	11/04/2025	No	High
#2.	Document	Figure 2 - Existing Approved Operations.pdf.pdf Existing approved operations	11/04/2025	No	High
#3.	Document	Figure 3 - HVO North Conceptual Layout.pdf.pdf HVO North conceptual layout	11/04/2025	No	High
#4.	Document	Figure 4 - HVO North EPBC Domains.pdf.pdf HVO North EPBC domains	11/04/2025	No	High
#5.	Document	Figure 5 - HVO North Action Area.pdf.pdf Action area HVO North	11/04/2025	No	High
#6.	Document	HVON_Proposed Action Details.pdf HVO North Continuation Project – proposed Action details	30/03/2025	No	High

1.2.6 Commonwealth or state legislation, planning frameworks or policy documents that are relevant to the proposed action

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	HVO Continuation Project – Observations on GHG Emissions and Climate Change Impacts.pdf HVO Continuation Project – Observations on GHG Emissions and Climate Change Impacts	14/04/2025	No	High
#2.	Document	HVOCP – Preliminary Analysis of Greenhouse Gas Impacts (HVO North and HVO South).pdf HVOCP – Preliminary Analysis of Greenhouse Gas Impacts (HVO North and HVO South)	14/04/2025	No	High

1.2.7 Public consultation regarding the project area

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	HVO Continuation Project_Consultation summary.pdf HVO Continuation Project – Consultation summary	30/03/2025	No	High

1.3.2.18 (Person proposing to take the action) If the person proposing to take the action is a corporation, provide details of the corporation’s environmental policy and planning framework

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	HVO Environmental Management Strategy.pdf HVO Environmental Management Strategy	07/01/2019	No	High

2.2.5 Tenure of the action area relevant to the project area

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Figure 6 – HVO North Land Ownership.pdf.pdf Land ownership	11/04/2025	No	High

3.1.1 Current condition of the project area's environment

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Figure 1 - Regional Context.pdf.pdf Regional context	11/04/2025	No	High
#2.	Document	Figure 7 – Land Zoning.pdf.pdf Land zoning	11/04/2025	No	High
#3.	Document	HVO North Biodiversity MNES Assessment.pdf HVO North Biodiversity MNES Assessment	01/04/2025	Yes	High
#4.	Document	HVO North Biodiversity MNES Assessment_Redacted.pdf HVO North Biodiversity MNES Assessment_Redacted	01/04/2025	No	High

3.1.4 Gradient relevant to the project area

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Figure 3 - HVO North Conceptual Layout.pdf.pdf HVO North conceptual layout	11/04/2025	No	High

3.2.2 Vegetation within the project area

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	HVO North Biodiversity MNES Assessment.pdf HVO North Biodiversity MNES Assessment	01/04/2025	Yes	High
#2.	Document	HVO North Biodiversity MNES Assessment_Redacted.pdf	01/04/2025	No	High

HVO North Biodiversity MNES Assessment_Redacted

3.4.1 Hydrology characteristics that apply to the project area

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Figure 5 - HVO North Action Area.pdf.pdf Action area HVO North	11/04/2025	No	High

4.1.1.3 (World Heritage) Why your action is unlikely to have a direct and/or indirect impact

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	HVO Continuation Project – Observations on GHG Emissions and Climate Change Impacts.pdf HVO Continuation Project – Observations on GHG Emissions and Climate Change Impacts	14/04/2025	No	High

4.1.2.3 (National Heritage) Why your action is unlikely to have a direct and/or indirect impact

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	HVO Continuation Project – Observations on GHG Emissions and Climate Change Impacts.pdf HVO Continuation Project – Observations on GHG Emissions and Climate Change Impacts	14/04/2025	No	High

4.1.3.3 (Ramsar Wetland) Why your action is unlikely to have a direct and/or indirect impact

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	HVO Continuation Project – Observations on GHG Emissions and Climate Change Impacts.pdf HVO Continuation Project – Observations on GHG Emissions and Climate Change Impacts	14/04/2025	No	High

4.1.4.2 (Threatened Species and Ecological Communities) Why your action has a direct and/or indirect impact on the identified protected matters

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	HVO Continuation Project – Observations on GHG Emissions and Climate Change Impacts.pdf HVO Continuation Project –	14/04/2025	No	High

Observations on GHG Emissions and Climate Change Impacts					
#2.	Document	HVO North Biodiversity MNES Assessment.pdf HVO North Biodiversity MNES Assessment	01/04/2025	Yes	High
#3.	Document	HVO North Biodiversity MNES Assessment_Redacted.pdf HVO North Biodiversity MNES Assessment_Redacted	01/04/2025	No	High

4.1.4.5 (Threatened Species and Ecological Communities) Why you consider the direct and/or indirect impact to be a Significant Impact

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	HVO North Biodiversity MNES Assessment.pdf HVO North Biodiversity MNES Assessment	01/04/2025	Yes	High
#2.	Document	HVO North Biodiversity MNES Assessment_Redacted.pdf HVO North Biodiversity MNES Assessment_Redacted	01/04/2025	No	High

4.1.4.8 (Threatened Species and Ecological Communities) Why you think your proposed action is a controlled action

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	HVO North Biodiversity MNES Assessment.pdf HVO North Biodiversity MNES Assessment	01/04/2025	Yes	High
#2.	Document	HVO North Biodiversity MNES Assessment_Redacted.pdf HVO North Biodiversity MNES Assessment_Redacted	01/04/2025	No	High

4.1.4.10 (Threatened Species and Ecological Communities) Avoidance or mitigation measures proposed for this action

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	HVO North Biodiversity MNES Assessment.pdf HVO North Biodiversity MNES Assessment	01/04/2025	Yes	High
#2.	Document	HVO North Biodiversity MNES Assessment_Redacted.pdf HVO North Biodiversity MNES Assessment_Redacted	01/04/2025	No	High

4.1.4.11 (Threatened Species and Ecological Communities) Proposed offsets relevant to avoidance or mitigation measures

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	HVO North Biodiversity MNES Assessment.pdf HVO North Biodiversity MNES Assessment	01/04/2025	Yes	High
#2.	Document	HVO North Biodiversity MNES Assessment_Redacted.pdf HVO North Biodiversity MNES Assessment_Redacted	01/04/2025	No	High

4.1.5.2 (Migratory Species) Why your action has a direct and/or indirect impact on the identified protected matters

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	HVO North Biodiversity MNES Assessment.pdf HVO North Biodiversity MNES Assessment	01/04/2025	Yes	High
#2.	Document	HVO North Biodiversity MNES Assessment_Redacted.pdf HVO North Biodiversity MNES Assessment_Redacted	01/04/2025	No	High

4.1.5.6 (Migratory Species) Why you do not consider the direct and/or indirect impact to be a Significant Impact

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	HVO Continuation Project – Observations on GHG Emissions and Climate Change Impacts.pdf HVO Continuation Project – Observations on GHG Emissions and Climate Change Impacts	14/04/2025	No	High
#2.	Document	HVO North Biodiversity MNES Assessment.pdf HVO North Biodiversity MNES Assessment	01/04/2025	Yes	High
#3.	Document	HVO North Biodiversity MNES Assessment_Redacted.pdf HVO North Biodiversity MNES Assessment_Redacted	01/04/2025	No	High

4.1.5.9 (Migratory Species) Why you do not think your proposed action is a controlled action

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	HVO North Biodiversity MNES Assessment.pdf	01/04/2025	Yes	High

HVO North Biodiversity MNES Assessment					
#2.	Document	HVO North Biodiversity MNES Assessment_Redacted.pdf HVO North Biodiversity MNES Assessment_Redacted	01/04/2025	No	High

4.1.5.10 (Migratory Species) Avoidance or mitigation measures proposed for this action

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	HVO North Biodiversity MNES Assessment.pdf HVO North Biodiversity MNES Assessment	01/04/2025	Yes	High
#2.	Document	HVO North Biodiversity MNES Assessment_Redacted.pdf HVO North Biodiversity MNES Assessment_Redacted	01/04/2025	No	High

4.1.7.3 (Commonwealth Marine Area) Why your action is unlikely to have a direct and/or indirect impact

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	HVO Continuation Project – Observations on GHG Emissions and Climate Change Impacts.pdf HVO Continuation Project – Observations on GHG Emissions and Climate Change Impacts	14/04/2025	No	High

4.1.8.3 (Great Barrier Reef) Why your action is unlikely to have a direct and/or indirect impact

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	HVO Continuation Project – Observations on GHG Emissions and Climate Change Impacts.pdf HVO Continuation Project – Observations on GHG Emissions and Climate Change Impacts	14/04/2025	No	High

4.3.5 Why an alternative location for your proposed action was not possible

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	HVO Infrastructure Options and Avoidance Report.pdf HVO Continuation Project Infrastructure Options and Avoidance Report	02/11/2022	No	High
#2.	Document				

HVO Mine Plan Options Report.pdf Hunter Valley Operations Continuation Project Mine Plan Options Report	22/11/2022	No	High	

4.3.5.2 (Considered alternatives) Details of possible alternatives that you have considered but are not proposing

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	HVO Infrastructure Options and Avoidance Report.pdf HVO Continuation Project Infrastructure Options and Avoidance Report	02/11/2022	No	High
#2.	Document	HVO Mine Plan Options Report.pdf Hunter Valley Operations Continuation Project Mine Plan Options Report	22/11/2022	No	High

5.2 Declarations

Completed Referring party's declaration

The Referring party is the person preparing the information in this referral.

ABN/ACN	28141736558
Organisation name	EMM CONSULTING PTY LIMITED
Organisation address	The Forum, Level 10, 201 Pacific Highway, St Leonards NSW 2065
Representative's name	James Wearne
Representative's job title	Associate
Phone	0407207530
Email	jwearne@emmconsulting.com.au
Address	Level 3, 175 Scott Street, Newcastle NSW 2300

☑ Check this box to indicate you have read the referral form. *

☑ I would like to receive notifications and track the referral progress through the EPBC portal. *

☑ By checking this box, I, **James Wearne of EMM CONSULTING PTY LIMITED**, declare that to the best of my knowledge the information I have given on, or attached to this EPBC Act Referral is complete, current and correct. I understand that giving false or misleading information is a serious offence. *

☑ I would like to receive notifications and track the referral progress through the EPBC portal. *

Completed Person proposing to take the action's declaration

The Person proposing to take the action is the individual, business, government agency or trustee that will be responsible for the proposed action.

ABN/ACN	76606478399
Organisation name	HV OPERATIONS PTY LTD
Organisation address	PO BOX 315, Singleton, 2330, NSW, Australia
Representative's name	Peter Walsh

Representative's job title	Project Manager
Phone	02 6570 0063
Email	peter.walsh@glencore.com.au
Address	PO BOX 315, Singleton, 2330, NSW, Australia

☑ Check this box to indicate you have read the referral form. *

☑ I would like to receive notifications and track the referral progress through the EPBC portal. *

☑ I, **Peter Walsh of HV OPERATIONS PTY LTD**, declare that to the best of my knowledge the information I have given on, or attached to the EPBC Act Referral is complete, current and correct. I understand that giving false or misleading information is a serious offence. I declare that I am not taking the action on behalf or for the benefit of any other person or entity. *

☑ I would like to receive notifications and track the referral progress through the EPBC portal. *

✔ Completed Proposed designated proponent's declaration

The Proposed designated proponent is the individual or organisation proposed to be responsible for meeting the requirements of the EPBC Act during the assessment process, if the Minister decides that this project is a controlled action.

Same as Person proposing to take the action information.

☑ Check this box to indicate you have read the referral form. *

☑ I would like to receive notifications and track the referral progress through the EPBC portal. *

☑ I, **Peter Walsh of HV OPERATIONS PTY LTD**, the Proposed designated proponent, consent to the designation of myself as the Proposed designated proponent for the purposes of the action described in this EPBC Act Referral. *

☐ I would like to receive notifications and track the referral progress through the EPBC portal. *