Title of Proposal - Winchester South Project Mine Site and Access Road, 30 km south-east of Moranbah, QLD

Section 1 - Summary of your proposed action

Provide a summary of your proposed action, including any consultations undertaken.

1.1 Project Industry Type

Mining

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

Whitehaven WS Pty Ltd (Winchester South), a subsidiary of Whitehaven Coal Limited (Whitehaven), proposes to develop the Winchester South Project (herein referred to as the Action), located approximately 200 kilometres (km) south west of Mackay and 30 km south east of Moranbah, within the Isaac Regional Council Local Government Area (LGA) of the Bowen Basin, in central Queensland (Figure 1). The Action would involve the development of an open cut coal mine and associated on-site and off-site infrastructure (e.g. electricity transmission line, water supply pipeline, access road etc.).
This Referral is for the works to be undertaken within the proposed mine site and the private sections of the access road (herein referred to as the Action Area) (Figure 2). The proposed water supply pipeline and electricity transmission line (ETL) are subject to separate referrals (Winchester South Project – Electricity Transmission Line Referral and Winchester South Project – Water Supply Pipeline Referral).
While the mine design is not yet finalised, it is anticipated that the main activities associated with the development of the Action would include:
• development and operation of an open cut coal mine within Mineral Development Licence (MDL) 183;
• use of conventional open cut mining equipment to extract run-of-mine (ROM) coal;
• placement of waste rock (i.e. overburden and interburden) in out-of-pit waste rock emplacements and within the footprint of the open cut voids;
• on-site excavation of and production of waste rock and gravel construction fill materials for use in the Action rail loop, mine infrastructure area and road construction;
• drilling and blasting of competent overburden/waste rock material;
• progressive construction and use of soil stockpile areas;
• progressive development of sediment dams and storage dams, pumps, pipelines and other water management equipment and structures (including levees);
• construction and operation of mine infrastructure areas, including workshops, offices, an on-site temporary accommodation camp and an on-site coal handling and preparation plant (CHPP) to process ROM coal from the Action;
• mechanical dewatering and co-disposal of coal rejects on-site within the footprint of the open cut void and/or out-of-pit emplacement areas;
• construction and operation of ancillary infrastructure in support of mining including mine infrastructure areas, ROM pads, haul roads, electricity supply, consumable storage areas, light vehicle roads and access tracks;
• construction of an access road, for example from the Peak Downs Mine Road via Winchester

Road;
• installation of a raw water supply pipeline, for example from the existing Eungella pipeline network (subject to a separate Referral);
• installation of an ETL from the existing power network (subject to a separate Referral);
• construction of a new rail loop and train load-out facility including product coal stockpiles for loading of product coal to trains for transport to coastal ports;
• an on-site landfill for the disposal of certain waste streams generated on-site; and
• other associated minor infrastructure, plant and activities.
Further background information is available in the Initial Advice Statement (IAS) (attached) that was submitted to the Coordinator-General for determination of the Action as a Coordinated Project.
Some minor components of the Project would not have a significant impact on Matters of National Environmental Significance are not part of the Action. These include, for example, access tracks, exploration activities, internal water and power supply infrastructure, construction of buildings, lay down areas, car parks, minor ground preparation works, survey and demarcation activities, works relating to the management or salvage of Aboriginal heritage items, installation of monitoring equipment (e.g. monitoring bores), etc.

1.3 What is the extent and location of your proposed action? Use the polygon tool on the map below to mark the location of your proposed action.

Area	Point	Latitude	Longitude
Mine Site and Access Road Action Area	1	-22.23662311492	148.20415345093
Mine Site and Access Road Action Area	2	-22.236464220101	148.20415345093
Mine Site and Access Road Action Area	3	-22.189582387439	148.23402253052
Mine Site and Access Road Action Area	4	-22.118196617	148.23290673157
Mine Site and Access Road Action Area	5	-22.115731651197	148.26869812866
Mine Site and Access Road Action Area	6	-22.197052745239	148.35461464783
Mine Site and Access Road Action Area	7	-22.253782694712	148.35435715576
Mine Site and Access Road Action Area	8	-22.240754316964	148.21719971558
Mine Site and Access Road Action Area	9	-22.23662311492	148.20415345093

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

The Action Area is located approximately 200 km south-west of Mackay and 30 km south-east of Moranbah, within the Isaac Regional Council LGA of the Bowen Basin, in central Queensland (Figure 1).

The landscape in the Action Area has average elevations of approximately 210 metres (m) Australian Height Datum (AHD) (ranging from approximately 185 m AHD in the north-east to approximately 235 m AHD in the south-west) and is generally flat to slightly undulating (Geoscience Australia, 2018).

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

The Action Area is approximately 14,797 hectares (ha), including approximately 8,566 ha of disturbance within MDL 183 (Figure 2)

1.7 Is the proposed action a street address or lot?

Lot

1.7.2 Describe the lot number and title.5CNS90.

1.8 Primary Jurisdiction.

Queensland

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

No

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

Yes

1.10.1 Is there a local government area and council contact for the proposal?

Yes

1.10.1.0 Council contact officer details

1.10.1.1 Name of relevant council contact officer.

Gary Stevenson

1.10.1.2 E-mail

gary.stevenson@isaac.qld.gov.au

1.10.1.3 Telephone Number

07 4846 3525

1.11 Provide an estimated start and estimated end date for the proposed action.

Start date 01/2021

End date 12/2051

1.12 Provide details of the context, planning framework and State and/or Local government requirements.

State Development and Public Works Organisation Act, 1971 (SDPWO Act)

An IAS has been prepared for the Action and lodged with the Office of the Coordinator-General. The IAS forms part of the application for declaration of the Action as a Coordinated Project. The Coordinator-General has assessed the application and determined the Action meets the requirements for declaration as a Coordinated Project.

Environmental Protection Act, 1994 (EP Act)

An Environmental Authority (EA) is required to conduct Environmentally Relevant Activities (ERAs). ERAs are listed in the EP Regulation.

Mineral Resources Act, 1989

Mining and associated activities to be conducted as part of the Action within MDL 183 will require a Mining Lease. Mining Lease Application (MLA) areas are not yet known, however will be wholly within MDL 183.

Water Act, 2000

A water licence may be required to take or interfere with water or the flow of water. An associated water licence may be required for incidental groundwater taken as part of the open cut mining activities. A Riverine Protection Permit may be required for excavation or placing of fill within a watercourse, where the works are conducted outside a Mining Lease.

Nature Conservation Act, 1992 (NC Act)

There is the potential for habitat and species specified under the NC Act to occur within the Action Area. Winchester South would apply for relevant licences and permits required under the NC Act.

Sustainable Planning Act, 2009

Components of the Action that are located outside of a mining lease (i.e. the access road) will require assessment through the Integrated Development Application System, under the relevant Local Government Planning Scheme and the *Sustainable Planning Regulation, 2009*.

Native Title Act, 1993* and *Aboriginal Cultural Heritage Act, 2003 (ACH Act)

The Barada Barna People are the Native Title holders for the Action Area, as well as the wider region, and are considered the 'Aboriginal Party' for the purposes of the ACH Act.

The Barada Barna People lodged the Native Title Application over the Action Area (Federal Court Reference QUD380/2008) in 2008, and by Federal Court consent determination in 2016 were determined as the holders of non-exclusive native title rights and interests over the Action Area.

In accordance with the ACH Act, a Cultural Heritage Management Plan (CHMP) specific to the Action was executed in consultation with the Barada Barna People on 12 March 2019.

Local Environmental Plans

The Action Area is located within the Isaac Regional Council LGA of the Bowen Basin, in central Queensland, within the lands covered by the *Broadsound Shire Planning Scheme 2005*.

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

Consultation and engagement with relevant stakeholders to date has focused on an overview of Whitehaven, obtaining land access for baseline studies and an initial introduction to the Action and its infrastructure requirements. Stakeholder engagement has been carried out with the following stakeholders:

- Arrow Energy;

- Barada Barna Aboriginal Corporation;

- Queensland Department of Natural Resources, Mines and Energy;

- infrastructure and service providers;

- Isaac Regional Council;

- local landholders;

- neighbouring coal mines; and

- the Office of the Coordinator-General.

Consultation regarding the Action is planned to increase as the design and assessment develops. As components become more refined, Winchester South will be able to have more

detailed technical discussions regarding the Action, its potential impacts, and its proposed mitigation and management strategies.

Key input points include, although are not limited to:

- development and finalisation of the Terms of Reference (ToR);

- consultation during preparation and lodgement of the Environmental Impact Statement (EIS); and

- consultation post EIS lodgement, exhibition and supplementary EIS development, lodgement and exhibition prior to determination.

Consultation mechanisms used for other Whitehaven projects and expected to be used for the Action include:

- community information sessions;

- community surveys;

- publication of Whitehaven contact details;

- recording of opportunistic interactions;

- local, State and Commonwealth government briefings;

- newsletters;

- media releases;

- posting of information on the Whitehaven website; and

- publication of application and assessment materials on the Office of Coordinator-General's Coordinated Project website.

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

Following declaration of the Action as a Coordinated Project on 17 April 2019, an EIS will be prepared under section 26(1)(a) of the SDPWO Act.

The EIS will assess the potential impacts on land, ecology, water resources and flooding, air and noise, cultural heritage, socio-economic, transport, hazards and safety and waste management in accordance with the ToR issued for the Action.

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

Yes

1.15.1 Provide information about the larger action and details of any interdependency between the stages/components and the larger action.

In addition to the access road, two infrastructure corridors are likely to be required to connect the Action to the existing regional infrastructure network, including a water supply pipeline and an ETL (connecting to the Broadlea Substation or the Eagle Downs Substation).

The proposed mine site (including an access road and rail spur), water pipeline, electricity transmission line and rail spur have been referred separately to the Department of the Environment and Energy (DEE). Whitehaven WS Pty Ltd (Winchester South) is currently the proponent for all three referrals.

Should Winchester South, in the future, decide to transfer the responsibility of the proposed water pipeline, rail spur and/or ETL to another company (e.g. SunWater, Aurizon, Powerlink or Ergon) all relevant approvals would also need to be transferred. Given the *Environment Protection and Biodiversity Conservation Act, 1999* (EPBC Act) does not allow individual elements of a single referred Action (e.g. water supply pipelines and ETLs) to be transferred between proponents, Winchester South has decided to lodge three separate referrals covering separate aspects of the Action. This facilitates the transfer of approvals between proponents for the individual elements of the Action if any of the aspects are determined to be a controlled action.

In addition, referring these elements separately allows the construction of the supporting infrastructure to commence prior to approval of the mining area, should the relevant EPBC Act approvals for these elements be in place prior to the approvals for the mining area.

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

Yes

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

The Action includes construction of a water supply pipeline and ETL. As detailed in Section 1.15, these aspects will be subject to separate referrals.

Section 2 - Matters of National Environmental Significance

Describe the affected area and the likely impacts of the proposal, emphasising the relevant matters protected by the EPBC Act. Refer to relevant maps as appropriate. The interactive map tool can help determine whether matters of national environmental significance or other matters protected by the EPBC Act are likely to occur in your area of interest. Consideration of likely impacts should include both direct and indirect impacts.

Your assessment of likely impacts should consider whether a bioregional plan is relevant to your proposal. The following resources can assist you in your assessment of likely impacts:

• Profiles of relevant species/communities (where available), that will assist in the identification of whether there is likely to be a significant impact on them if the proposal proceeds;

• Significant Impact Guidelines 1.1 – Matters of National Environmental Significance;

• Significant Impact Guideline 1.2 – Actions on, or impacting upon, Commonwealth land and Actions by Commonwealth Agencies.

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

No

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

No

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

No

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

Yes

2.4.1 Impact table

Species	Impact
Brigalow (Acacia harpophylla dominant and co dominant)	Based on the publicly available regional ecosystem mapping (Department of Environment and Science [DES], 2019a),

Species	Impact
	potential Brigalow Endangered Ecological Community (EEC) has been mapped within the Action Area. The mapped areas of potential Brigalow EEC would be investigated and refined during detailed surveys to be undertaken for the EIS. Although the current mine design is only preliminary, Winchester South considers that the works to be undertaken within the Action Area are not likely to significantly impact on the Brigalow EEC given; (1) potential Brigalow EEC has only been mapped within a small proportion of the Action Area; (2) the Brigalow EEC within and surrounding the Action Area is fragmented; (3) the Brigalow EEC in the Action Area is not likely to be critical to the survival of the community. Winchester South would investigate opportunities to avoid, minimise and mitigate impacts on the Brigalow EEC during the detailed mine planning and EIS process. Winchester South anticipates that the Action would not have a significant impact on the Brigalow EEC.
Natural Grasslands of the Queensland Central Highlands and Northern Fitzroy Basin	Based on the publicly available regional ecosystem mapping (DES, 2019a), no Natural Grasslands of the Queensland Central Highlands and Northern Fitzroy Basin has been mapped within the Action Area. Detailed surveys to be undertaken for the EIS process would identify this Threatened Ecological Community (TEC) if it occurs within the Action Area. Although the current mine design is only preliminary, Winchester South considers that the works to be undertaken within the Action Area are not likely to significantly impact on the Natural Grasslands of the Queensland Central Highlands and Northern Fitzroy Basin given; (1) there are no known occurrences of the Natural Grasslands of the Queensland Central Highlands and Northern Fitzroy Basin within the Action Area. Winchester South would investigate opportunities to avoid, minimise and mitigate impacts on the Natural Grasslands of the Queensland Central Highlands and Northern Fitzroy Basin during the detailed mine planning and EIS process. Winchester South anticipates that the Action would not have a significant impact on the Natural Grasslands of

Species	Impact
	the Queensland Central Highlands and Northern Fitzroy Basin.
Red Goshawk (Erythrotriorchis radiatus)	According to the EPBC Act Protected Matters Search, this species, or species habitat, is likely to occur within the Action Area. The nearest previous record is located approximately 45 km to the east of the Action Area (Atlas of Living Australia [ALA], 2019). The Red Goshawk is very sparsely distributed across coastal and sub coastal Australia, from western Kimberley Division to north-eastern New South Wales (NSW). This species prefers forest and woodland with a mosaic of vegetation types, large prey populations (birds) and permanent water. Observations also suggest that this species may use dense forests as a drought refuge (DEE, 2019a). The Red Goshawk nests in large trees (frequently the tallest and most massive in a tall stand) within 1 km of permanent water (river, swamp, pool etc.), usually in fairly open, biologically rich forest or woodland. The average distance of the nest tree to water is 164 m. Nest trees are often significantly taller than the surrounding vegetation, with larger crown diameters, and the height of the lowest live branch was higher than the tallest trees found in the immediate vicinity of random locations along rivers (DEE, 2019a). Winchester South considers that the works to be undertaken within the Action Area are not likely to significantly impact on the Red Goshawk given; (1) there are no records of the Red Goshawk within the Action Area; (2) the species would be unlikely to utilise the habitat within the Action Area as permanent water sources are limited to farm dams; (3) the Action Area has been largely cleared through past agricultural practices; (4) Winchester South would investigate opportunities to avoid, minimise and mitigate impacts on the Red Goshawk during the detailed mine planning and EIS process. Given the above, it is unlikely that the Action would involve the removal of any habitat likely to be used by the Red Goshawk, and as such, is not likely to result in a significant impact to this species in accordance with the Significant Impact Guidelines 1.1 – Matters of National Environmental Significance,

Species	Impact
	Environment Protection and Biodiversity Act 1999 (Department of the Environment, Water, Heritage and the Arts [DEWHA], 2013).
Squatter Pigeon (southern) (Geophaps scripta scripta)	According to the EPBC Act Protected Matters Search this species or species habitat is known to occur within the Action Area. The nearest previous record is located approximately 2 km to the north west of the Action Area (ALA, 2019). The Squatter Pigeon (southern) is distributed across south-eastern QLD and north eastern NSW. Soil landscapes are good indicators of where natural foraging and breeding habitats for the Squatter Pigeon (southern) occur. Well-draining, gravelly, sandy or loamy soils support the open-forest to woodland communities with patchy, tussock-grassy understories that support the subspecies' foraging and breeding requirements. Given that the subspecies nests in shallow depressions in the ground, it requires well-draining soils. The subspecies also prefers to forage and dust-bathe on bare ground under an open canopy of trees (DEE, 2019a). Natural foraging habitat for the Squatter Pigeon (southern) is any remnant or regrowth open-forest to sparse, open-woodland or scrub dominated by Eucalyptus, Corymbia, Acacia or Callitris species, on sandy or gravelly soils, within 3 km of a suitable, permanent or seasonal waterbody. Breeding habitat occurs on stony rises occurring on sandy or gravelly soils, within 1 km of a suitable, permanent waterbody (DEE, 2019a). Winchester South considers that the works to be undertaken within the Action Area are not likely to significantly impact on the Squatter Pigeon (southern) given; (1) there are no records of the species within the Action Area; (2) there is likely to be an abundance of suitable habitat for this species in the broader surrounds based on the occurrence of numerous records; (3) the south-eastern portion of the Action Area is unlikely to be suitable habitat for this species as there are gilgai present (i.e. the soils are poorly draining); (4) Winchester South would investigate opportunities to avoid, minimise and mitigate impacts on the Squatter Pigeon (southern) during the detailed mine planning and EIS

Species	Impact
	process. Given the above, it is unlikely that the Action would involve the removal of any habitat likely to be used by the Squatter Pigeon (southern), and as such, is not likely to result in a significant impact to this species in accordance with the Significant Impact Guidelines 1.1 – Matters of National Environmental Significance, Environment Protection and Biodiversity Act 1999 (DEWHA, 2013).
Star Finch (eastern) (Neochmia ruficauda ruficauda)	According to the EPBC Act Protected Matters Search this species or species habitat is likely to occur within the Action Area. The nearest identified record is located more than 2 km from the Action Area. The Star Finch (eastern) occurs mainly in grasslands and grassy woodlands that are located close to bodies of fresh water. These habitats are dominated by trees that are typically associated with permanent water or areas that are regularly inundated; the most common species are Eucalyptus coolabah, E. tereticornis, E. tessellaris, Melaleuca leucadendra, E. camaldulensis and Casuarina cunninghamii (DEE, 2019a). Winchester South considers that the works to be undertaken within the Action Area are not likely to significantly impact on the Star Finch (eastern) given; (1) there are no records of the species within the Action Area; (2) the species would be unlikely to utilise the habitat within the Action Area as permanent water sources are limited to farm dams; (3) the Action Area has been largely cleared through past agricultural practices; (4) Winchester South would investigate opportunities to avoid, minimise and mitigate impacts on the Star Finch (eastern) during the detailed mine planning and EIS process. Given the above, it is unlikely that the Action would involve the removal of any habitat likely to be used by the Star Finch (eastern), and as such, is not likely to result in a significant impact to this species in accordance with the Significant Impact Guidelines 1.1 – Matters of National Environmental Significance, Environment Protection and Biodiversity Act 1999 (DEWHA, 2013).
Australian Painted Snipe (Rostratula australis)	This species has been recorded at a farm dam

Species	Impact
	within the Action Area (Figure 4). The Australian Painted Snipe generally inhabits shallow terrestrial freshwater (occasionally brackish) wetlands, including temporary and permanent lakes, swamps and claypans. They also use inundated or waterlogged grassland or saltmarsh, dams, rice crops, sewage farms and bore drains (DEE, 2019a). Australian Painted Snipe breeding habitat requirements may be quite specific: shallow wetlands with areas of bare wet mud and both upper and canopy cover nearby. Nest records are all, or nearly all, from or near small islands in freshwater wetlands, provided that these islands are a combination of very shallow water, exposed mud, dense low cover and sometimes some tall dense cover (DEE, 2019a). This species requires suitable wetland areas even in drought conditions. The species can move to suitable habitat if necessary (DEE, 2019a). Winchester South considers that the works to be undertaken within the Action Area are not likely to significantly impact on the Australian Painted Snipe given; (1) there is only one isolated record of the Australian Painted Snipe at a farm dam within the Action Area; (2) the species would be unlikely to utilise the habitat within the Action Area as favoured breeding habitat is limited to shallow wetlands with areas of bare wet mud and both upper and canopy cover nearby, and no wetlands have been identified in the Action Area and higher quality habitat is present in the surrounding landscape; (3) the species can move to suitable habitat if necessary during drought conditions; (4) Winchester South would investigate opportunities to avoid, minimise and mitigate impacts on the Australian Painted Snipe during the detailed mine planning and EIS process. Given the above, although the Action may remove potential habitat for this species in the form of man-made farm dams and ephemeral drainage features, it is not likely to result in a significant impact to this species in accordance with the Significant Impact Guidelines 1.1 – Matters of National Environmental Significance, Environment Protection and Biodiversity Act 1999 (DEWHA, 2013).

Species	Impact
Northern Quoll (Dasyurus hallucatus)	According to the EPBC Act Protected Matters Search this species or species habitat is likely to occur within the Action Area. The nearest identified record is located more than 2 km from the Action Area. The Northern Quoll occurs in five regional populations across Queensland, the Northern Territory and Western Australia, both on the mainland and on offshore islands (DEE, 2019a). The Northern Quoll occupies a diversity of habitats across its range which includes rocky areas, eucalypt forest and woodlands, rainforests, sandy lowlands and beaches, shrubland, grasslands and desert. Northern Quoll habitat generally encompasses some form of rocky area for denning purposes with surrounding vegetated habitats used for foraging and dispersal. Dens are made in rock crevices, tree holes or occasionally termite mounds (DEE, 2019a). Winchester South considers that the works to be undertaken within the Action Area are not likely to significantly impact on the Northern Quoll given; (1) there are no records of the Northern Quoll within the Action Area; (2) the species would be unlikely to utilise the habitat within the Action Area as favoured habitat includes rocky areas, and as the Action Area has historically been used for agricultural purposes it is unlikely to contain suitable habitat; (3) Winchester South would investigate opportunities to avoid, minimise and mitigate impacts on the Northern Quoll during the detailed mine planning and EIS process. Given the above, it is unlikely that the Action would involve the removal of any habitat likely to be used by the Northern Quoll, and as such, is not likely to result in a significant impact to this species in accordance with the Significant Impact Guidelines 1.1 – Matters of National Environmental Significance, Environment Protection and Biodiversity Act 1999 (DEWHA, 2013).
Ghost Bat (Macroderma gigas)	According to the EPBC Act Protected Matters Search this species or species habitat is likely to occur within the Action Area. The nearest record is more than 70 km away from the Action Area and was recorded in 1978. Ghost Bats occur in a wide range of habitats from rainforest, monsoon and vine scrub, to open

Species	Impact
	woodlands in arid areas. These habitats are used for foraging, while roost habitat is more specific. Favoured roosting sites of the Ghost Bat are undisturbed caves or mineshafts which have several openings (DES, 2019c). Ghost Bats occur in tropical regions in Queensland, Northern Territory and Western Australia, but are extinct in central Australia. In Queensland, ghost bats occur along the central and northern coast, from Rockhampton north to Cape York (DES, 2019c). Winchester South considers that the works to be undertaken within the Action Area are not likely to significantly impact on the Ghost Bat given; (1) there are no records of the Ghost Bat within the Action Area; (2) the species would be unlikely to utilise the habitat within the Action Area as favoured roosting sites are limited to undisturbed caves or mineshafts (the Action Area has been largely cleared through past agricultural practices and is considered unlikely to contain these features); (3) Winchester South would investigate opportunities to avoid, minimise and mitigate impacts on the Ghost Bat during the detailed mine planning and EIS process. Given the above, it is unlikely that the Action would involve the removal of any habitat likely to be used by the Ghost Bat, and as such, is not likely to result in a significant impact to this species in accordance with the Significant Impact Guidelines 1.1 – Matters of National Environmental Significance, Environment Protection and Biodiversity Act 1999 (DEWHA, 2013).
Koala (Phascolarctos cinereus)	Winchester South is aware that Pembroke Resources South Pty Ltd (Pembroke) (the proponent of the Olive Downs Coking Coal Project located directly to the east of the Action Area) has undertaken flora and fauna surveys of the Olive Downs Coking Coal Project site and surrounding areas. The results of these surveys are available in the publicly exhibited EIS for that project. During these surveys, the Koala was recorded in the vicinity of the Isaac River and the proposed access road (Pembroke, 2018). These records were not available from ALA (2019) when the database search was undertaken in March 2019. Koala

Species	Impact
	habitat can be broadly defined as any forest or woodland containing species that are known koala food trees, or shrubland with emergent food trees. The distribution of this habitat is largely influenced by land elevation, annual temperature and rainfall patterns, soil types and the resultant soil moisture availability and fertility. Preferred food and shelter trees are naturally abundant on fertile clay soils (DEE, 2019a). Winchester South considers that the works to be undertaken within the Action Area are not likely to significantly impact on the Kola given; (1) nearby records of the Koala are concentrated along the Isaac River and associated riparian/riverine vegetation; (2) the Action would be unlikely to result in significant impacts to the vegetation along the Isaac River as clearing in these areas would be limited to that associated with supporting infrastructure; (3) Winchester South would investigate opportunities to avoid, minimise and mitigate impacts on the Koala during the detailed mine planning and EIS process. Given the above, it is unlikely that the Action would involve the removal of any habitat likely to be used by the Koala, and as such, is not likely to result in a significant impact to this species in accordance with the Significant Impact Guidelines 1.1 – Matters of National Environmental Significance, Environment Protection and Biodiversity Act 1999 (DEWHA, 2013).
Greater Glider (Petauroides volans)	This species was not identified by the EPBC Act Protected Matters Search. Winchester South is aware that Pembroke (the proponent of the Olive Downs Coking Coal Project located directly to the east of the Action Area) has undertaken flora and fauna surveys of the Olive Downs Coking Coal Project site and surrounding areas. The results of these surveys are available in the publicly exhibited EIS for that project. During these surveys, the Greater Glider was recorded in the vicinity of the Isaac River and the proposed access road (Pembroke, 2018). These records were not available from ALA (2019) when the database search was undertaken in March 2019. Greater Glider habitat can be broadly defined as tall open woodland, eucalypt forests and low

Species	Impact
	woodlands. They tend to prefer habitats that are in older forests with a large number of hollows. Winchester South considers that the works to be undertaken within the Action Area are not likely to significantly impact on the Greater Glider given; (1) nearby records of the Greater Glider are concentrated along the Isaac River and associated riparian/riverine vegetation; (2) the Action would be unlikely to result in significant impacts to the vegetation along the Isaac River as clearing in these areas would be limited to that associated with supporting infrastructure; (3) the species would be unlikely to utilise the habitat within the Action Area as favoured habitat includes trees with hollows (the Action Area has historically been used for agricultural purposes); (4) Winchester South would investigate opportunities to avoid, minimise and mitigate impacts on the Greater Glider during the detailed mine planning and EIS process. Given the above, it is unlikely that the Action would involve the removal of any habitat likely to be used by the Greater Glider, and as such, is not likely to result in a significant impact to this species in accordance with the Significant Impact Guidelines 1.1 – Matters of National Environmental Significance, Environment Protection and Biodiversity Act 1999 (DEWHA, 2013).
Ornamental Snake (Denisonia maculata)	This species has been recorded twice in the north-western corner of the Action Area (Figure 4). The Ornamental Snake's preferred habitat is woodland and open forest associated with moist areas, particularly gilgai (melon-hole) mounds and depressions, but also lake margins and wetlands. Gilgai formations are found where deep-cracking alluvial soils with high clay contents occur (DEE, 2019a). The south-western portion of the Action Area is known to contain potential habitat for the Ornamental Snake in the form of gilgai. However, the Action Area has historically been used for agricultural purposes and this area has been cleared and ploughed on multiple occasions. Winchester South considers that the works to be undertaken within the Action Area are not likely to significantly impact on the Ornamental Snake given; (1) no records of the Ornamental Snake

Species	Impact
	occur in the identified gilgai habitat within the Action Area; (2) the existing records are within remnant vegetation which is contiguous with a larger body of remnant vegetation along the Isaac River; (3) the Action would be unlikely to result in significant impacts to the vegetation along the Isaac River as clearing in these areas would be limited to that associated with supporting infrastructure; (4) Winchester South would investigate opportunities to avoid, minimise and mitigate impacts on the Ornamental Snake during the detailed mine planning and EIS process. Given the above, it is unlikely that the Action would involve the removal of any habitat likely to be used by the Ornamental Snake, and as such, is not likely to result in a significant impact to this species in accordance with the Significant Impact Guidelines 1.1 – Matters of National Environmental Significance, Environment Protection and Biodiversity Act 1999 (DEWHA, 2013).
Southern Snapping Turtle (Elseya albagula)	According to the EPBC Act Protected Matters Search this species or species habitat is likely to occur within the Action Area. The nearest identified record is located more than 2 km from the Action Area. The Southern Snapping Turtle is only found in the Burnett, Fitzroy, Raglan and Mary River drainages of south-east Queensland. It prefers permanent flowing water habitats where there are suitable shelters and refuges (e.g. fallen trees) (DES, 2019c). Winchester South considers that the works to be undertaken within the Action Area are not likely to significantly impact on the Southern Snapping Turtle given; (1) there are no records of the Southern Snapping Turtle within the Action Area; (2) the species would be unlikely to utilise the habitat within the Action Area or broader surrounds, as there are no permanent flowing water habitats; (3) Winchester South would investigate opportunities to avoid, minimise and mitigate impacts on the Southern Snapping Turtle during the detailed mine planning and EIS process. Given the above, it is unlikely that the Action would involve the removal of any habitat likely to be used by the Southern Snapping Turtle, and as such, is not

Species	Impact
	likely to result in a significant impact to this species in accordance with the Significant Impact Guidelines 1.1 – Matters of National Environmental Significance, Environment Protection and Biodiversity Act 1999 (DEWHA, 2013).
Other species	There is the potential for other threatened species listed under the EPBC Act to be recorded within the Action Area. Winchester South will undertake detailed flora and fauna surveys as a component of the EIS process and would investigate opportunities to avoid, minimise and mitigate impacts on other species during detailed mine planning.

2.4.2 Do you consider this impact to be significant?

No

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

Yes

2.5.1 Impact table

Species	Impact
Fork-tailed Swift (Apus pacificus)	The Fork-tailed Swift is a non breeding visitor to all states and territories of Australia. The Fork tailed Swift breeds in Siberia and migrates south after the breeding season (DEE, 2019a). In addition, as outlined on the species' Species Profile and Threat (SPRAT) profile, in Australia, the Fork-tailed Swift is almost exclusively aerial (DEE, 2019a). The works to be undertaken within the Action Area are not likely to have a significant impact on the Fork-tailed Swift, given they would not; (1) substantially modify, destroy or isolate an area of important habitat for the Fork-tailed Swift, (2) result in an invasive species that is harmful to the migratory species becoming established in an area of important habitat for the Fork-tailed Swift, or (3) seriously disrupt the lifecycle of an ecologically significant proportion of the population of the Fork-tailed

Species	Impact
	Swift.
Black-faced Monarch (Monarcha melanopsis)	The Black-faced Monarch is widespread in eastern Australia. In Queensland, it is widespread from the islands of the Torres Strait and on Cape York Peninsula, south along the coasts and the eastern slopes of the Great Divide, to the New South Wales border. The Black-faced Monarch breeds in rainforest habitat in Australia and migrates to Papua New Guinea during winter (DEE, 2019a). The Action may remove potential habitat for this species, however the Action is not likely to significantly adversely impact this species given the highly mobile nature of this species and the greater extent of habitat in the locality known to be used by the species. The works to be undertaken within the Action Area are not likely to have a significant impact on the Black-faced Monarch, given they would not; (1) substantially modify, destroy or isolate an area of important habitat for the Black-faced Monarch, (2) result in an invasive species that is harmful to the migratory species becoming established in an area of important habitat for the Black-faced Monarch, or (3) seriously disrupt the lifecycle of an ecologically significant proportion of the population of the Black-faced Monarch.
Eastern Osprey (Pandion haliaetus)	The breeding range of the Eastern Osprey extends around the northern coast of Australia (including many offshore islands) from Albany in Western Australia to Lake Macquarie in NSW; with a second isolated breeding population on the coast of South Australia (DEE, 2019a). The Action may remove potential habitat for this species, however the Action is not likely to significantly adversely impact this species given the highly mobile nature of this species and the greater extent of habitat in the locality known to be used by the species. The works to be undertaken within the Action Area are not likely to have a significant impact on the Osprey, given they would not; (1) substantially modify, destroy or isolate an area of important habitat for the Osprey, (2) result in an invasive species that is harmful to the migratory species becoming established in an area of important habitat for the Osprey, or (3) seriously disrupt the lifecycle of an ecologically significant

Species	Impact
	proportion of the population of the Osprey.

2.5.2 Do you consider this impact to be significant?

No

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

No

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

No

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

No

2.9 Is the proposed action likely to have ANY direct or indirect impact on a water resource related to coal/gas/mining?

Yes

2.9.1 Impact table

Water Resource	Impact
Surface Water	The Action has the potential to impact surface water resources through direct disturbance associated with open cut mining, diversion of drainage features, creation of new temporary and permanent landforms that affect flood waters and (if required) through release of water to the surrounding environment. Potential impacts to surface water resources may include: (a) changes to catchment areas and flow characteristics due to the construction of (for example) water storage dams, mine infrastructure areas, waste rock emplacements, flood levees, open cut pits, upstream diversions and final voids; (b) increased potential for erosion and sedimentation due to the increased area of land disturbance; (c) impacts to other water users in the region; and (d) potential extraction and/or discharge of water as part of

Water Resource	Impact
	the on-site water management system. The Action is located within the Fitzroy River Catchment and is subject to the Water Resource (Fitzroy Basin) Plan 2011 and the Isaac Connors Groundwater Management Area (GMA) (Figure 6). The Water Resource (Fitzroy Basin) Plan 2011 regulates taking overland flow water from within the Fitzroy Water Plan Area, and states that: "The volume of overland flow water necessary to satisfy the requirements of an EA may be taken without a water licence." Taking associated water (e.g. to dewater the pit) would be authorised once the mining lease and EA are granted. If associated water is taken under the general authorisation under section 334ZP of the Mineral Resources Act, 1989, Winchester South is required to measure and report on the volume of associated water taken (including by evaporation if relevant). Under the Strahler classification system (Queensland Government, 2019), the Isaac River in the vicinity of the Action is a 6th order stream. Tributaries of the Isaac River in the vicinity of the Action (but beyond the MDL 183 extent) include (Figure 2): (a) Ripstone Creek; (b) New Chum Creek; and (c) Cherwell Creek. None of the above tributaries, nor the Isaac River, are located within MDL 183, however, unnamed 1st and 2nd order streams drain to the Isaac River from the Action Area (Queensland Government, 2019). The works to be undertaken within the Action Area are unlikely to have a significant impact to the aquatic flora and fauna of the Isaac River and its tributaries, given the limited direct interaction. The Action water management strategy would involve: (a) separation of undisturbed area runoff from disturbed area runoff; (b) collection and reuse of surface runoff from disturbed areas; (c) capture of pit inflows and reuse for mine operations; (d) storage of water onsite; and (e) licensed water extraction to supplement water supply. Operational water requirements would be sourced primarily from the Eungella Pipeline with additional water being sourced from water storages containing runoff from disturbed mine areas or mine affected water. Additional makeup water would

Water Resource	Impact
	be sourced from water storages containing runoff from undisturbed/rehabilitated areas, from licensed groundwater bores and/or surface water licensed extraction from the Isaac River. A site water balance model would be developed for the Action as part of the EIS.
Groundwater	The Action has the potential to impact groundwater resources through direct disturbance associated with open cut mining, diversion of drainage features, access to groundwater during operation (excluding monitoring bores), creation of new temporary and permanent landforms that affect flood waters and (if required) through release of water to the surrounding environment. It is expected that the coal resource is within a confined and semi confined porous rock groundwater system within the Isaac Connors GMA under the Water Resource (Fitzroy Basin) Plan 2011 made under the Queensland Water Act, 2000. It is also expected that the Quaternary alluvial and unconsolidated Tertiary sediments associated with the Isaac River and its tributaries contain unconfined groundwater. It is also understood that the intervening Triassic units (i.e. Rewan Formation) consist of very tight shales and fine sandstones and are expected to act as an aquitard and therefore effectively isolate the Quaternary alluvial and unconsolidated Tertiary sediments from the underlying coal resource, where present. It is expected the magnitude of the predicted groundwater take (e.g. leakage) in the Isaac Connors Alluvium Groundwater Sub-area, as result of extraction of groundwater in the Isaac Connors GMA by the Action, is such that it would not cause a measurable drawdown effect in the Quaternary alluvial and Tertiary sediments surrounding the Action Area. Further, Sinclair Knight Merz (SKM) (2009) states that in the Isaac-Connors catchment the water table elevation varies spatially and temporally, however is typically 5 to 20 m below ground surface. JBT Consulting (2010) outlines that the ephemeral nature of the Isaac River indicates that groundwater baseflow is not significant, and this is supported by SKM (2009), who also indicate that creeks and rivers

Water Resource	Impact
	are typically losing (i.e. loss of surface water to underlying strata). Potential impacts to groundwater resources may include: (a) potential drawdown of groundwater aquifers, alteration of groundwater flow directions and decrease in baseflow to surface water systems; (b) localised effects on groundwater quality; and (c) long-term changes to groundwater levels, flow direction and quality in the vicinity of final voids. The Water Resource (Fitzroy Basin) Plan 2011 regulates interfering with groundwater from within the Fitzroy Water Plan Area, and states that: "A person may only take or interfere with groundwater in a GMA (such as Isaac Connors) under a water permit, water licence or water allocation etc." Interfering with associated water (e.g. to dewater the pit) will be authorised once the mining lease and EA are granted. If associated water is taken under the general authorisation under section 334ZP of the Mineral Resources Act, 1989, Winchester South is required to measure and report on the volume of associated water taken (including through evaporation if relevant). Groundwater Dependent Ecosystems (GDEs) and stygofauna habitats associated with these Quaternary alluvial and Tertiary sediments are therefore not expected to be impacted by changes to groundwater levels associated with the Action. There are a number of groundwater bores within and immediately adjacent to MDL 183. Bores classified as “existing” include (Queensland Government, 2019): • RN 162826. • RN 162439. • RN 141683. • RN 162464. • RN 162460. • RN 141382. • RN 165640. • RN 141383. • RN 162681. A groundwater bore census was recently conducted on adjacent properties by HydroSimulations (2018) as part of the Olive Downs Coking Coal Project Groundwater Assessment. This bore census confirmed that groundwater use in the locality is limited, largely due to the limited extent of saturated alluvium (HydroSimulations, 2018). The assessment also confirmed that water within the alluvium adjacent to MDL 183 generally exceeds guideline levels for drinking water and freshwater aquatic systems (HydroSimulations,

Water Resource	Impact
	2018). Potential impacts to bores would be considered in the EIS to be prepared for the Action. Raymond and McNeil (2011) indicate that the mapped groundwater zone in this region contains moderate to high salinities, dominated by Sodium and Chloride ions. The Action open cut would act as a groundwater sink during operations and post closure. This would cause a localised change in groundwater flow direction. There would also be a change in hydraulic properties over the mine footprint where mine waste rock is used to infill the open cut. It is expected that the incremental difference in impacts to groundwater (including leakage from Quaternary alluvial and Tertiary sediments to the porous rock groundwater system) and baseflow in the Isaac River, would not be significant.

2.9.2 Do you consider this impact to be significant?

No

2.10 Is the proposed action a nuclear action?

No

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

No

2.12 Is the proposed action to be undertaken in a Commonwealth Heritage Place Overseas?

No

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

No

Section 3 - Description of the project area

Provide a description of the project area and the affected area, including information about the following features (where relevant to the project area and/or affected area, and to the extent not otherwise addressed in Section 2).

3.1 Describe the flora and fauna relevant to the project area.

Database searches of the following were undertaken to identify any Matters of National and/or State Environmental Significance with the potential to occur in the Action Area and surrounds:

- Wildlife Online Database Search (DES, 2019b);

- EPBC Act Protected Matters Search (DEE, 2019b);

- ALA Database Search (ALA, 2019); and

- Birdlife Australia Database Search (Birdlife, 2019).

The database searches identified three conservation significant flora species under either the EPBC Act or NC Act relevant to the Action Area or surrounds. Threatened species and communities potentially impacted by the works to be undertaken within the Action Area are summarised in Section 2.4.

Grazing land dominates the Action Area with remnant and regrowth woodland vegetation present in some small patches. Regional ecosystems (REs) within the Action Area have been identified by the DES (2019b) regional mapping (Figure 3). Of the REs identified within the Action Area or surrounds, the following are classified as TECs:

- 11.3.1 – *Acacia harpophylla* and/or *Casuarina cristata* open forest on alluvial plains.

- 11.4.8 – *Eucalyptus cambageana* open forest with *Acacia harpophylla* or *A. argyrodendron* on Cainozoic clay plains.

- 11.4.9 – *Acacia harpophylla* shrubby woodland with *Terminalia oblongata* on Cainozoic clay plains.

- 11.9.5 – *Acacia harpophylla* and/or *Casuarina cristata* open forest on Cainozoic fine-grained sedimentary rocks.

REs that contain, or potentially contain, these TECs are mapped on Figure 4.

The EPBC Act Protected Matters Search (DEE, 2019b) identified the following TECs listed under the EPBC Act with the potential to occur in the Action Area and surrounds:

- Brigalow (*Acacia harpophylla* dominant and codominant).

- Natural Grasslands of the Queensland Central Highlands and northern Fitzroy Basin.

Detailed vegetation mapping would be undertaken as part of the EIS to validate and ground truth the RE and TEC mapping.

The database searches identified fauna species listed as conservation significant or migratory under either the EPBC Act or NC Act, relevant to the Action Area and surrounds. Threatened species and communities potentially impacted by the works to be undertaken within the Action Area are summarised in Section 2.4.

Fourteen introduced species (including nine fauna and five flora species) with the potential to occur within the Action Area and surrounds were also identified by the EPBC Act Protected Matters Search (DEE, 2019b):

- House Sparrow (*Passer domesticus*);

- Cane Toad (*Rhinella marina*);

- Domestic Dog (*Canis lupus familiaris*);

- Cat (*Felis catus*);

- Feral Deer (*Cervus sp.*);

- House Mouse (*Mus musculus*);

- European Wild Rabbit (*Oryctolagus cuniculus*);

- Feral Pig (*Sus scrofa*);

- European Red Fox (*Vulpes vulpes*);

- Prickly Acacia (*Acacia nilotica subsp. Indica*);

- Cotton-leaved Physic Nut (*Jatropha gossypiifolia*);

- Lantana (*Lantana camara*);

- Parkinsonia (*Parkinsonia aculeata*); and

- Parthenium Weed (*Parthenium hysterophorus*).

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

The Action lies within the Isaac River sub-catchment in the north of the Fitzroy River catchment (Queensland Government, 2019). Under the Strahler classification system (Queensland Government, 2019), the Isaac River in the vicinity of the Action is a 6th order stream.

Tributaries of the Isaac River in the vicinity of the Action Area (but beyond the MDL 183 extent) include (Figure 2):

- Ripstone Creek;

- New Chum Creek; and

- Cherwell Creek.

None of the above tributaries, nor the Isaac River, are however located within MDL 183. Unnamed 1st and 2nd order streams drain to the Isaac River from the Action Area (Queensland Government, 2019).

Flow duration data from the Queensland Government operated monitoring station on the Isaac River near the Deverill Homestead (Figure 2) indicates that the Isaac River is dry for most months of the year (between April and November), and subject to short period high flows in summer.

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

Dominant soil types within the Action Area include Vertosols and Sodosols (Queensland Government, 2019).

The Action Area has been largely cleared through past agricultural practices, however some tracts of remnant (or regrowth) vegetation exist, particularly along the Isaac River (outside the Action Area). There is no Strategic Cropping Land mapped within MDL 183 or along the likely infrastructure corridors. Currently, the main land use within MDL 183 is cattle grazing.

Grazing land dominates the Action Area with remnant and regrowth woodland vegetation present in some small patches. REs within the Action Area have been identified by the DES (2019b) regional mapping (Figure 3). Of the REs identified within the Action Area or surrounds, the following are classified as TECs:

- 11.3.1 – *Acacia harpophylla* and/or *Casuarina cristata* open forest on alluvial plains.

- 11.4.8 – *Eucalyptus cambageana* open forest with *Acacia harpophylla* or *A. argyrodendron* on Cainozoic clay plains.

- 11.4.9 – *Acacia harpophylla* shrubby woodland with *Terminalia oblongata* on Cainozoic clay plains.

- 11.9.5 – *Acacia harpophylla* and/or *Casuarina cristata* open forest on Cainozoic fine-grained sedimentary rocks.

REs that contain, or potentially contain, these TECs are mapped on Figure 4. Detailed vegetation mapping would be undertaken as part of the EIS to validate and ground truth the RE mapping.

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

There are no outstanding natural features in the Action Area.

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

REs identified by the DES (2019b) regional mapping are shown on Figure 3. REs that contain, or potentially contain, TECs are mapped on Figure 4.

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

The landscape in the Action Area has average elevations of approximately 210 m AHD (ranging from approximately 185 m AHD in the north-east to approximately 235 m AHD in the south-west) and is generally flat to slightly undulating (Geoscience Australia, 2018).

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

The Action Area has been largely cleared through past agricultural practices, however some tracts of remnant (or regrowth) vegetation exist, particularly along the Isaac River (outside the Action Area). There is no Strategic Cropping Land mapped within MDL 183 or along the likely infrastructure corridors. Currently, the main land use within MDL 183 is cattle grazing.

Fourteen introduced species (including nine fauna and five flora species) with the potential to occur within the Action Area and surrounds, were also identified by the EPBC Act Protected Matters Search (DEE, 2019b).

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

The Action Area does not contain any Commonwealth Heritage Places.

The Queensland Heritage Register (November 2018) includes no culturally significant sites in the general vicinity of the Action (Queensland Government, 2018). The closest significant site was located in Nebo, 65 km to the north east of the Action Area.

3.9 Describe any Indigenous heritage values relevant to the project area.

Winchester South executed a CHMP with the Barada Barna People on 12 March 2019. The CHMP describes the assessment of the cultural heritage values within the proposed area of disturbance, and the development of appropriate management strategies.

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

The Action Area is located within MDL 183, held by Winchester South (Figure 5). Winchester South will lodge MLAs with the Queensland Mining Registrar prior to submission of the EIS.

Despite the mapping (Figure 5) showing an overlap with Exploration Permit for Coal (EPC) 1949 and 1950, the land within the EPC is excluded where it appears to overlap with MDL 183.

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

As the project is located in the centre of the Bowen Basin, mining and petroleum exploration activities have been conducted within the Action Area and surrounds for several decades.

A number of existing and approved/proposed coal mines surround the Action Area, including Moorvale, Daunia, Poitrel, Millennium, Eagle Downs, Caval Ridge, Moranbah South, Peak Downs, Olive Downs and Saraji (Figure 1).

Currently, the main land use within MDL 183 is cattle grazing. The Action Area has been largely cleared through past agricultural practices, however some tracts of remnant (or regrowth) vegetation exist, particularly along the Isaac River. It is proposed to return the Action Area to its predominant pre-mining land use of cattle grazing.

Section 4 - Measures to avoid or reduce impacts

Provide a description of measures that will be implemented to avoid, reduce, manage or offset any relevant impacts of the action. Include, if appropriate, any relevant reports or technical advice relating to the feasibility and effectiveness of the proposed measures.

Examples of relevant measures to avoid or reduce impacts may include the timing of works, avoidance of important habitat, specific design measures, or adoption of specific work practices.

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

Since the mine design for the Action is preliminary, the potential impacts on threatened species are uncertain. Winchester South would investigate opportunities to avoid, minimise and mitigate significant impacts during the detailed mine planning process.

A range of environmental management and mitigation measures would be developed to minimise the potential impacts of the Action on the natural environment, including:

- Development of soil resource management practices (including the stripping and stockpiling of soil for use in rehabilitation).

- Surface disturbance protocols (including pre-clearance surveys and salvage of habitat features).

- Progressive rehabilitation of Action disturbance areas to achieve safe, stable, non-polluting landforms able to support the post-mining land uses.

- Consideration of agricultural land and native ecosystems in the final land use design.

- Dust suppression (watering) of haul roads, ROM and product coal stockpiles and transfer points.

- Blast management measures including the alteration of blast designs to meet applicable criteria.

- Management of water resources in accordance with the Environmental Authority issued for the Project under the EP Act.

- Preparation of water management plans and monitoring programs under the EA issued for the Action under the EP Act.

- Investigations into beneficial use of site water.

- Licensed extraction of water resources in accordance with the Queensland *Water Act 2000*.

- Assessment of requirement for State and Commonwealth biodiversity offsets, in accordance with the Queensland *Environmental Offsets Policy* and the Commonwealth *EPBC Act Environmental Offsets Policy*.

Following detailed assessment of the Action, environmental management and mitigation measures would be developed, refined following consultation and described in detail in the EIS.

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

The following environmental outcomes, relevant to Matters of National Environmental Significance, would be achieved as a result of the works to be undertaken within the Action Area:

- No impacts to the World Heritage values of a declared World Heritage property.

- No impacts to the National Heritage values of a National Heritage Place.

- No impacts to the ecological character of a declared Ramsar wetland.

- No significant impacts to listed threatened species.

- No significant impacts to listed migratory species.

- No impacts to the environment in a Commonwealth marine area.

- No impacts to the environment on Commonwealth land.

- No impacts to the Great Barrier Reef Marine Park.

- No significant impacts to a water resource, in relation to a large coal mining development.

Section 5 – Conclusion on the likelihood of significant impacts

A checkbox tick identifies each of the matters of National Environmental Significance you identified in section 2 of this application as likely to be a significant impact.

Review the matters you have identified below. If a matter ticked below has been incorrectly identified you will need to return to Section 2 to edit.

5.1.1 World Heritage Properties

No

5.1.2 National Heritage Places

No

5.1.3 Wetlands of International Importance (declared Ramsar Wetlands)

No

5.1.4 Listed threatened species or any threatened ecological community

No

5.1.5 Listed migratory species

No

5.1.6 Commonwealth marine environment

No

5.1.7 Protection of the environment from actions involving Commonwealth land

No

5.1.8 Great Barrier Reef Marine Park

No

5.1.9 A water resource, in relation to coal/gas/mining

No

5.1.10 Protection of the environment from nuclear actions

No

5.1.11 Protection of the environment from Commonwealth actions

No

5.1.12 Commonwealth Heritage places overseas

No

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

On the basis of the reasons provided in Section 2, the Action is not considered to be a controlled action as it is not likely to have a significant impact on:

- the World Heritage values of a declared World Heritage property;

- the National Heritage values of a National Heritage Place;

- the ecological character of a wetlands of international importance;

- a listed threatened species, community, or their habitat;

- a listed migratory species;

- the environment in a Commonwealth marine area;

- the environment on Commonwealth land;

- the environment from nuclear action;

- the Great Barrier Reef Marine Park; or

- a water resource, in relation to coal seam gas development and large coal mining development.

Section 6 – Environmental record of the person proposing to take the action

Provide details of any proceedings under Commonwealth, State or Territory law against the person proposing to take the action that pertain to the protection of the environment or the conservation and sustainable use of natural resources.

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

The Proponent of the Action is Whitehaven WS Pty Ltd (Winchester South), a subsidiary of Whitehaven Coal Limited (Whitehaven). Whitehaven (and its other subsidiaries) owns and operates multiple mines in NSW.

After years of mining in NSW, Whitehaven and its subsidiaries (including Winchester South) have established and are committed to continue open and constructive dialogue with the local community and stakeholders.

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

N/A

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

Yes

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

Whitehaven has a documented Health, Safety, Environment and Community policy that applies to Winchester South, which states:

Whitehaven Coal intends to conduct business in a way that maintains a safe and healthy workplace for its workers, visitors and the surrounding community, and protects the environmental, community and cultural heritage values of the area throughout all stages of exploration, development, operation, closure and associated activities.

Whitehaven Coal aims to:

- Achieve zero workplace injuries and illnesses.

- Achieve zero environmental incidents.

- Maintain mutually beneficial relationships with the communities which host our operations.

Whitehaven Coal will strive to achieve these goals by:

- Considering health, safety, environment and community (HSEC) matters when planning and undertaking work activities.

- Consulting and communicating HSEC matters in a fair and effective manner.

- Having processes in place for identifying and eliminating or minimising HSEC risks and impacts and sharing and applying learnings' in a timely manner.

- Working to continuously improve HSEC performance.

- Providing an effective injury management and return to work program for workers.

- Complying with applicable HSEC legal and other requirements.

- Providing workers with necessary HSEC information instruction, training and supervision to enable effective performance of the work.

- Utilising HSEC resources and processes to implement and maintain the requirements of this Policy and associated management systems.

Responsibilities of Workers:

- Workers have a responsibility to comply with applicable legislation, this policy and associated management systems.

- No work is to be undertaken without a clear understanding of a safe method that minimises the risk of injury or illness, plant or equipment damage, environmental, community or cultural harm.

- Workers must present for work in a fit and healthy state, take reasonable care for their own health and safety and have an obligation to take reasonable care for the health and safety of others.

- Workers must report any workplace incidents or injuries to their supervisors in a timely manner.

- Workers must also comply with any reasonable instruction given by Whitehaven Coal.

This policy applies to all workers and visitors at sites managed by Whitehaven Coal and its subsidiaries. Disciplinary action may be taken for a breach of this policy or associated management systems.

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

Yes

6.4.1 EPBC Act No and/or Name of Proposal.

Whitehaven has been responsible for multiple actions under the EPBC Act, including (but not limited to):

- 2019/8427 – Narrabri Coal Operations Pty Ltd, Narrabri Underground Mine Stage 3 Extension Project.

- 2016/7649 – Vickery Coal Pty Ltd, Vickery Coal Mine Extension Project.

- 2012/6263 – Whitehaven Coal Limited, Vickery Coal Project.

- 2011/5923 – Tarrawonga Coal Pty Ltd, Tarrawonga Coal Project.

- 2010/5571 – Whitehaven Coal Limited, Werris Creek Life of Mine Extension Project.

- 2010/5566 – Aston Coal 2 Pty Ltd, Maules Creek Coal Project.

- 2010/5502 – Whitehaven Coal Limited, Rocglen Coal Mine Extension Project.

- 2009/5003 – Narrabri Coal Operations Pty Ltd, Conversion from Continuous Mine Operation to Longwall Miner Operation.

Section 7 – Information sources

You are required to provide the references used in preparing the referral including the reliability of the source.

7.1 List references used in preparing the referral (please provide the reference source reliability and any uncertainties of source).

Reference Source	Reliability	Uncertainties
Atlas of Living Australia (2019) Database Search of the Action Area.	Reliable source of information containing threatened species records, distribution and habitat requirements.	N/A
Birdlife Australia (2019) Database Search for the Action Area.	Reliable source of information containing records of birds, including threatened species.	N/A
Department of Environment and Science (2019a) Regional Ecosystem Mapping.	Reliable source of desktop information which contains regional mapping.	N/A
Department of Environment and Science (2019b) Wildlife Online Database Search of the Action Area.	Reliable source of information containing threatened species records.	N/A
Department of Environment and Science (2019c) Species Profiles. Website: https://environment.des.qld.gov.au/wildlife/	Reliable source of information regarding species distribution and habitat.	N/A
Department of the Environment and Energy (2019a) Species Profiles and Threats Database. Website: http://www.environment.gov.au/cgi-bin/sprat/public/sprat.pl	Reliable source of desktop information which contains information on threatened species' distribution, population, life cycle, threats and habitat requirements.	N/A
Department of the Environment and Energy (2019b) EPBC Protected Matters Search for the Action Area.	Database search suggested by the Department of the Environment and Energy to identify potential Matters of National Environmental Significance.	N/A
Geoscience Australia (2018) ELVIS (Elevation Information System).	Reliable source of desktop information for landforms.	N/A
HydroSimulations (2018) Olive Downs Coking Coal Project – Groundwater Assessment.	Relevant publication regarding the groundwater of the immediate area.	N/A
JBT Consulting (2010)	Relevant publication regarding	N/A

Reference Source	Reliability	Uncertainties
Grosvenor Coal Project Environmental Impact Study Groundwater Impact Assessment.	the groundwater of the immediate area.	
Pembroke Resources South Pty Ltd (2018) Olive Downs Coking Coal Project Environmental Impact Statement.	Contemporary EIS prepared for a project situated directly adjacent to the Action Area.	N/A
Queensland Government (2018) Heritage Register Map. Accessed November 2018.	Well known database search suggested by government agencies to identify culturally significant sites.	N/A
Queensland Government (2019) Queensland Globe. Accessed via Google Earth.	Reliable source of desktop information. Ground-truthing of regional mapping will be undertaken as part of the EIS.	N/A
Raymond and McNeil (2011) Regional Chemistry of the Fitzroy Basin Groundwater.	Relevant publication regarding the groundwater of the Fitzroy Basin.	N/A
Sinclair Knight Merz (2009) Isaac Connors Groundwater Project: Part A – Conceptual Model for Groundwater and Part B – Assessment of Groundwater Dependent Ecosystems. Technical Reports for the Fitzroy Basin Water Resource Plan Amendment.	Relevant publication regarding the groundwater of the Isaac Connors Groundwater Management Area.	N/A

Section 8 – Proposed alternatives

You are required to complete this section if you have any feasible alternatives to taking the proposed action (including not taking the action) that were considered but not proposed.

8.0 Provide a description of the feasible alternative?

The development of new coal resources is considered necessary to meet demand for high quality coal due to industrial growth in Asia. Alternative assets, including existing operations with expansion opportunities, were investigated by Whitehaven during analysis of potential resources within Australia.

The Bowen Basin contains high quality coal resources and an extensive existing mining industry serviced by well established infrastructure.

The development of new mining operations such as the Action will provide significant direct employment opportunities for construction and operational workforces, and long-term flow-on social and economic benefits to regional communities.

If the Action was not developed, the value that the coal resource would provide to State royalties and Commonwealth tax revenue would be foregone and contribution to Queensland's growing export industry would not be realised. Other benefits including employment opportunities and social and community benefits (e.g. community enhancement projects and the continuation of full-time mine workers and support staff) that would be generated through the construction and operation of the Action would also not be created.

Whitehaven considers that the Action would achieve its objective of developing a high quality, long-term, metallurgical coal asset due to the location within the Bowen Basin mining region, greenfield nature of the asset, significant size of the coal resource and proximity to existing infrastructure.

The Action would also create social and community benefits, as well as significant employment opportunities.

Whitehaven is developing a preferred mine plan, infrastructure design and production and workforce profiles in consideration of environmental and planning constraints, logistics, community and external relations, marketing, and commercial and financial matters.

8.1 Select the relevant alternatives related to your proposed action.

8.27 Do you have another alternative?

No

Section 9 – Contacts, signatures and declarations

Where applicable, you must provide the contact details of each of the following entities: Person Proposing the Action; Proposed Designated Proponent and; Person Preparing the Referral. You will also be required to provide signed declarations from each of the identified entities.

9.0 Is the person proposing to take the action an Organisation or an Individual?

Organisation

9.2 Organisation

9.2.1 Job Title

Approvals Manager – Winchester

9.2.2 First Name

Brendan

9.2.3 Last Name

Dillon

9.2.4 E-mail

BDillon@whitehavencoal.com.au

9.2.5 Postal Address

GPO Box 3224
Brisbane QLD 4000
Australia

9.2.6 ABN/ACN

ABN

87625165004 - WHITEHAVEN WS PTY LTD

9.2.7 Organisation Telephone

0436 648 938

9.2.8 Organisation E-mail

BDillon@whitehavencoal.com.au

9.2.9 I qualify for exemption from fees under section 520(4C)(e)(v) of the EPBC Act because I am:

Not applicable

Small Business Declaration

I have read the Department of the Environment and Energy's guidance in the online form concerning the definition of a small a business entity and confirm that I qualify for a small business exemption.

Signature:..... Date: .....

9.2.9.2 I would like to apply for a waiver of full or partial fees under Schedule 1, 5.21A of the EPBC Regulations

No

9.2.9.3 Under sub regulation 5.21A(5), you must include information about the applicant (if not you) the grounds on which the waiver is sought and the reasons why it should be made

Person proposing the action - Declaration

I, Brendan Dillon, 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 of or for the benefit of any other person or entity.

Signature:..... Date: 24/5/19

I, _____, the person proposing the action, consent to the designation of _____ as the proponent of the purposes of the action describe in this EPBC Act Referral.

Signature:..... Date: .....

9.3 Is the Proposed Designated Proponent an Organisation or Individual?

Organisation

9.5 Organisation

9.5.1 Job Title

Approvals Manager – Winchester South

9.5.2 First Name

Brendan

9.5.3 Last Name

Dillon

9.5.4 E-mail

BDillon@whitehavencoal.com.au

9.5.5 Postal Address

GPO Box 3224
Brisbane QLD 4000
Australia

9.5.6 ABN/ACN

ABN

87625165004 - WHITEHAVEN WS PTY LTD

9.5.7 Organisation Telephone

0436 648 938

9.5.8 Organisation E-mail

BDillon@whitehavencoal.com.au

Proposed designated proponent - Declaration

I, Brendan Dillon, the proposed designated proponent, consent to the designation of myself as the proponent for the purposes of the action described in this EPBC Act Referral.

Signature:..... Date: 24/5/19

9.6 Is the Referring Party an Organisation or Individual?

Organisation

9.8 Organisation

9.8.1 Job Title

Approvals Manager – Winchester South

9.8.2 First Name

Brendan

9.8.3 Last Name

Dillon

9.8.4 E-mail

BDillon@whitehavencoal.com.au

9.8.5 Postal Address

GPO Box 3224
Brisbane QLD 4000
Australia

9.8.6 ABN/ACN

ABN

87625165004 - WHITEHAVEN WS PTY LTD

9.8.7 Organisation Telephone

0436 648 938

9.8.8 Organisation E-mail

BDillon@whitehavencoal.com.au

Referring Party - Declaration

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

Signature:..... Date: 24/5/19

Appendix A - Attachments

The following attachments have been supplied with this EPBC Act Referral:

1. Mine Site and Access Road Action Area Shapefile.zip
2. WHC_18-61_EPBC_MSAR_Ref_Figure 1.pdf
3. WHC_18-61_EPBC_MSAR_Ref_Figure 2.pdf
4. WHC_18-61_EPBC_MSAR_Ref_Figure 3.pdf
5. WHC_18-61_EPBC_MSAR_Ref_Figure 4.pdf
6. WHC_18-61_EPBC_MSAR_Ref_Figure 5.pdf
7. WHC_18-61_EPBC_MSAR_Ref_Figure 6.pdf
8. Winchester South Project - Initial Advice Statement (low res).pdf