



## **ATTACHMENT 6**

Relevant Environmental Planning  
Instruments and Government Policies

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## A6 RELEVANT ENVIRONMENTAL PLANNING INSTRUMENTS AND GOVERNMENT POLICIES

This Attachment provides further discussion on the requirements and application of State Environmental Planning Policies (SEPPs), the *Wollongong Local Environmental Plan 2009* (Wollongong LEP), the *Wingecarribee Local Environmental Plan 2010* (Wingecarribee LEP), the *Wollondilly Local Environmental Plan 2011* (Wollondilly LEP) and strategic planning documents relevant to the Dendrobium Mine – Plan for the Future: Coal for Steelmaking (the Project).

References to Sections 1 to 9 in this Attachment are references to the Sections in the Main Report of the Environmental Impact Statement (EIS). References to Appendices A to P in this Attachment are references to the Appendices of the EIS. Internal references within this Attachment are prefixed with “A6”.

### A6.1 STATE ENVIRONMENTAL PLANNING POLICIES

#### A6.1.1 State Environmental Planning Policy (State and Regional Development) 2011

Clause 3 of the *State Environmental Planning Policy (State and Regional Development) 2011* (State and Regional Development SEPP) outlines the aims of the SEPP, including the following of relevance to the Project:

- (a) to identify development that is State significant development,

...

The Project falls within Item 5 of Schedule 1 of the State and Regional Development SEPP as it is development for the purpose of mining that is coal mining. It is therefore State Significant Development for the purposes of the New South Wales (NSW) *Environmental Planning and Assessment Act, 1979* (EP&A Act) (Section 4.3.2).

#### A6.1.2 State Environmental Planning Policy No 33 – Hazardous and Offensive Development

The *State Environmental Planning Policy No 33 – Hazardous and Offensive Development* (SEPP 33) applies to the whole of NSW.

Clause 2 outlines the aims of SEPP 33, of which the following are relevant to the Project:

- (a) to amend the definitions of hazardous and offensive industries where used in environmental planning instruments, and
- ...
- (d) to ensure that in determining whether a development is a hazardous or offensive industry, any measures proposed to be employed to reduce the impact of the development are taken into account, and
- (e) to ensure that in considering any application to carry out potentially hazardous or offensive development, the consent authority has sufficient information to assess whether the development is hazardous or offensive and to impose conditions to reduce or minimise any adverse impact, and
- ...

Clause 12 of SEPP 33 requires persons proposing to carry out development for the purposes of potentially hazardous industry to prepare a Preliminary Hazard Analysis (PHA) in accordance with the current circulars or guidelines published by the NSW Department of Planning (DoP) (now the NSW Department of Planning and Environment [DPE]) and to submit the analysis with the Development Application.

Clause 13 of SEPP 33 requires that in determining an application to carry out development for the purposes of a potentially hazardous industry, the consent authority (in this case the Independent Planning Commission [IPC] or the NSW Minister for Planning [the Minister]) must consider:

- (a) current circulars or guidelines published by the Department of Planning relating to hazardous or offensive development, and
- (b) whether any public authority should be consulted concerning any environmental and land use safety requirements with which the development should comply, and
- (c) in the case of development for the purpose of a potentially hazardous industry—a preliminary hazard analysis prepared by or on behalf of the applicant, and
- (d) any feasible alternatives to the carrying out of the development and the reasons for choosing the development the subject of the application (including any feasible alternatives for the location of the development and the reasons for choosing the location the subject of the application), and
- (e) any likely future use of the land surrounding the development.



In accordance with the Secretary's Environmental Assessment Requirements and as part of the preparation of this EIS, a PHA has been conducted in accordance with SEPP 33 (Appendix N). The PHA has been prepared in accordance with the general principles of risk evaluation and assessment outlined in *Multi-Level Risk Assessment* (Department of Planning and Infrastructure, 2011).

In addition, the PHA considers the qualitative criteria provided in *Hazardous Industry Planning Advisory Paper No. 4: Risk Criteria for Land Use Safety Planning* (DoP, 2011a) and has been documented in general accordance with *Hazardous Industry Planning Advisory Paper No. 6: Hazard Analysis* (DoP, 2011b).

Extensive consultation has been undertaken with various public authorities during the preparation of this EIS, as described in Section 5.

Project alternatives (including the Project location, scale of the mining and the mining method employed) are discussed in Section 9.2.

The Project Area includes land zoned under the Wollongong LEP as discussed in Section A6.2 as:

- Zone RU1 (Primary Production);
- Zone RU2 (Rural Landscape);
- Zone E1 (National Parks & Nature Reserves)<sup>1</sup>;
- Zone E2 (Environmental Conservation);
- Zone E3 (Environmental Management);
- Zone E4 (Environmental Living); and
- Zone SP2 (Infrastructure).

The Project Area includes land zoned under the Wingecarribee LEP and Wollondilly LEP as discussed in Sections A6.3 and A6.4 as:

- Zone E2 (Environmental Conservation); and
- Zone SP2 (Infrastructure).

In addition to the above, the Dendrobium Coal Preparation Plant (CPP) and a portion of the Kemira Valley Rail Line are located within Zone IN3 (Heavy Industrial) under the *State Environmental Planning Policy (Three Ports) 2013* (Three Ports SEPP).

The Project comprises a combination of ongoing use of existing infrastructure and new underground mining domains (with limited surface infrastructure). Given the history of coexistence of underground mining with surrounding land uses in the Southern Coalfield, it is considered that the Project would not affect surrounding land or permissible uses of surrounding land.

Accordingly, the IPC or the Minister can be satisfied as to these matters.

#### **A6.1.3 State Environmental Planning Policy No 44 – Koala Habitat Protection**

The *State Environmental Planning Policy No 44 – Koala Habitat Protection* (SEPP 44) requires the councils in certain Local Government Areas (LGAs) (including Wollongong, Wingecarribee and Wollondilly) to consider whether the land which is the subject of the Development Application comprises “potential koala habitat” or “core koala habitat”.

Clause 9 of SEPP 44 requires:

- (1) *Before a council may grant consent to a development application for consent to carry out development on land to which this Part applies that it is satisfied is a core koala habitat, there must be a plan of management prepared in accordance with Part 3 that applies to the land.*
- (2) *The council's determination of the development application must not be inconsistent with the plan of management.*

Since the Project is State Significant Development to which Division 4.7 of Part 4 of the EP&A Act applies, the IPC or the Minister is the consent authority (Section 4.3.2) rather than the Council.

An assessment of koala habitat for the purposes of SEPP 44 has been undertaken (Section 6.9 and Appendix D) and this assessment has found that portions of the Development Application area comprise both potential and core koala habitat.

<sup>1</sup> The Development Application area includes depth restrictions to avoid development in the Upper Nepean and Illawarra Escarpment State Conservation Areas (Section A6.2.3).

Niche Environment and Heritage (2019) has concluded that within the surveyed area (Area 5 and Area 6), 20% is made up of potential Koala habitat while 3% is identified as likely to be core Koala habitat under the definition of SEPP 44, considering:

- the vegetation communities within this likely core habitat contain Forest Red Gum, Grey Gum and Ribbon or Manna Gum which are listed as Koala feed tree species; and
- multiple records show evidence of a resident Koala population within this likely core habitat.

Notwithstanding that the Project is an underground mine, a Koala Plan of Management has been prepared by Niche (Appendix D) on behalf of South32 for the Project Development Application Area.

The Koala Plan of Management aims to:

1. Manage the local Koala population, for the life of the Project, in a manner such that a significant population decline does not occur.
2. Identify appropriate management strategies in order to achieve aim (1).

The Koala Plan of Management has been prepared with reference to Part 3 of SEPP 44 and *Circular B35 State Environmental Planning Policy No. 44 – Koala Habitat Protection* (DoP, 1995).

#### A6.1.4 State Environmental Planning Policy No 55 – Remediation of Land

The *State Environmental Planning Policy No 55 – Remediation of Land* (SEPP 55) applies to the whole of NSW and is concerned with the remediation of contaminated land. It sets out matters relating to contaminated land that a consent authority must consider in determining an application for Development Consent.

“Contaminated land” in SEPP 55 has the same meaning as it has in Schedule 6, Clause 1 of the EP&A Act:

*contaminated land means land in, on or under which any substance is present at a concentration above the concentration at which the substance is normally present in, on or under (respectively) land in the same locality, being a presence that presents a risk of harm to human health or any other aspect of the environment.*

Clause 7(1) of SEPP 55 provides that a consent authority must not consent to the carrying out of any development on land unless:

- (a) *it has considered whether the land is contaminated, and*
- (b) *if the land is contaminated, it is satisfied that the land is suitable in its contaminated state (or will be suitable, after remediation) for the purpose for which the development is proposed to be carried out, and*
- (c) *if the land requires remediation to be made suitable for the purpose for which the development is proposed to be carried out, it is satisfied that the land will be remediated before the land is used for that purpose.*

Clause 7 of SEPP 55 further provides:

- (2) *Before determining an application for consent to carry out development that would involve a change of use on any of the land specified in subclause (4), the consent authority must consider a report specifying the findings of a preliminary investigation of the land concerned carried out in accordance with the contaminated land planning guidelines.*
- (3) *The applicant for development consent must carry out the investigation required by subclause (2) and must provide a report on it to the consent authority. The consent authority may require the applicant to carry out, and provide a report on, a detailed investigation (as referred to in the contaminated land planning guidelines) if it considers that the findings of the preliminary investigation warrant such an investigation.*
- (4) *The land concerned is:*
  - (a) *land that is within an investigation area,*
  - (b) *land on which development for a purpose referred to in Table 1 to the contaminated land planning guidelines is being, or is known to have been, carried out,*

...

Clause 7(2) provides that before a consent authority determines an application for Development Consent, a “preliminary investigation” is required where:

- the application for consent is to carry out development that would involve a “change of use”; and
- that “change of use” is relevant to certain land specified in clause 7(4).

The certain land specified in clause 7(4) on which the “change of use” must relate is either:

- land that is an “investigation area” – defined in SEPP 55 as land declared to be an investigation area by a declaration in force under Division 2 of Part 3 of the *NSW Contaminated Land Management Act, 1997*; or
- land on which development for a purpose referred to in Table 1 to the contaminated land planning guidelines (being *Managing Land Contamination – Planning Guidelines SEPP 55 – Remediation of Land* [Department of Urban Affairs and Planning and Environment Protection Agency, 1998]) is being, or is known to have been, carried out.

The only part of the Project described in Section 3 that would involve a change of use under SEPP 55 is the development of a proposed carpark for the Dendrobium Pit Top (Figure 3-6) as well as the proposed underground mining Areas 5 and 6 (JBS&G, 2019).

JBS&G (2019) (Appendix O) completed a Land Contamination Assessment in accordance with SEPP 55. This investigation included a desktop review and site inspection. It is noted that although proposed underground mining Areas 5 and 6 constitute a change of use under SEPP 55, contamination of these lands is not a potential constraint (Appendix O). In addition, no activities listed in Table 1 to the contaminated land planning guideline are being, or are known to have been carried out in the Project underground mining areas (JBS&G, 2019).

JBS&G (2019) conducted a preliminary investigation of the proposed carpark extension area in accordance with SEPP 55. The findings of the land contamination review and preliminary investigation are provided in Appendix O and summarised in Section 6.4.

JBS&G (2019) concluded there is a low potential for the proposed carpark site to have become contaminated as a result of historical and/or current site uses, and no contamination has been identified that would preclude the development of the Project.

Work, health, safety and environmental management controls (including protocols to manage unexpected finds) would be implemented by South32 during any future ground disturbance works (Section 6.3). Land contamination management measures, including post-mining investigation and remediation measures are described in Sections 6, 7 and 8.

Accordingly, the IPC or the Minister can be satisfied as to these matters.

#### **A6.1.5 State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007**

The *State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007* (Mining SEPP) is applicable to the whole of NSW.

##### **Part 1 – Clause 2**

Clause 2 sets out the aims of the Mining SEPP, as follows:

- (a) *to provide for the proper management and development of mineral, petroleum and extractive material resources for the purpose of promoting the social and economic welfare of the State, and*
- (b) *to facilitate the orderly and economic use and development of land containing mineral, petroleum and extractive material resources, and*
- (b1) *to promote the development of significant mineral resources, and*
- (c) *to establish appropriate planning controls to encourage ecologically sustainable development through the environmental assessment, and sustainable management, of development of mineral, petroleum and extractive material resources, and*
- (d) *to establish a gateway assessment process for certain mining and petroleum (oil and gas) development:*
  - (i) *to recognise the importance of agricultural resources, and*
  - (ii) *to ensure protection of strategic agricultural land and water measures, and*
  - (iii) *to ensure a balanced use of land by potentially competing industries, and*
  - (iv) *to provide for the sustainable growth of mining, petroleum and agricultural industries.*

Parts 2 to 4AA of the Mining SEPP seek to achieve the aims outlined in clause 2. The Project is an underground coal mining development that is generally consistent with the aims of the Mining SEPP, as articulated for individual relevant clauses of Parts 2 to 4AA below.

**Part 2 – Clause 7**

Clause 7(1) of the Mining SEPP states that development for any of the following purposes may be carried out only with Development Consent:

- (a) *underground mining carried out on any land,*
- ...
- (d) *facilities for the processing or transportation of minerals or mineral bearing ores on land on which mining may be carried out (with or without development consent), but only if they were mined from that land or adjoining land,*

The Project comprises underground mining and associated processing and transportation of coal (Section 2.2.1) and requires Development Consent. Descriptions of the relevant Local Environmental Plan (LEP) land use zones and the applicability of the Mining SEPP to Project permissibility (where relevant) are provided in Sections A6.2 to A6.4.

**Part 3 – Clauses 12 to 17**

Part 3 of the Mining SEPP provides matters for consideration for Development Applications.

**Clause 12**

Clause 12 of the Mining SEPP requires that before determining an application for consent for development for the purposes of mining, petroleum production or extractive industry, the consent authority must:

- (a) *consider:*
  - (i) *the existing uses and approved uses of land in the vicinity of the development, and*
  - (ii) *whether or not the development is likely to have a significant impact on the uses that, in the opinion of the consent authority having regard to land use trends, are likely to be the preferred uses of land in the vicinity of the development, and*
  - (iii) *any ways in which the development may be incompatible with any of those existing, approved or likely preferred uses, and*
- (b) *evaluate and compare the respective public benefits of the development and the land uses referred to in paragraph (a) (i) and (ii), and*
- (c) *evaluate any measures proposed by the applicant to avoid or minimise any incompatibility, as referred to in paragraph (a) (iii).*

The existing Dendrobium Pit Top and Kemira Valley Coal Loading Facility are located proximal to the town of Mount Kembla, while the Cordeaux Pit Top is located in a remote bushland setting. The existing Dendrobium CPP is located within the Port Kembla industrial precinct.

The existing underground mine development areas and the proposed Project mining extensions encompass various other land uses in the vicinity of the Project, including infrastructure, water supply catchment and Nature Conservation Areas (Section 3).

The West Cliff Stage 3 Coal Wash Emplacement is located proximal to the Appin township, and other land uses in the vicinity include water supply catchment, National Park and State Conservation Areas.

The potential impacts of the Project on buildings and infrastructure as a result of mine subsidence (including potential impacts on heritage values – where relevant) are described in Sections 6.3 and 6.11.

The Project is not located within a Mine Subsidence District declared under section 20 of the *Coal Mine Subsidence Compensation Act, 2017*, however, there is a range of publicly owned infrastructure that may be affected by mine subsidence. Potential impacts on infrastructure and proposed mitigation and management processes are described in Appendix A and Section 6.3.

Consideration of the potential noise, air quality, biodiversity, and road transport impacts have been assessed for the Project and have concluded that there would be no significant incremental impacts on adjoining land uses in the vicinity of the Project surface installations (Appendices E, H, I and J).

The Project would not have a significant adverse impact on the quality or yield of water in the Sydney drinking water catchment Special Area storages, or on the nature conservation values of these protected areas (the Project would also incorporate suitable offset measures, where applicable) (Sections 6.5 to 6.9). The Project has adopted a number of longwall design constraints including setbacks from the Avon and Cordeaux Dam walls, a minimum 300 m longwall setback from the existing dam FSLs, setbacks from named watercourses (i.e. Cordeaux River, Avon River and Donalds Castle Creek) and is also avoiding the direct undermining of mapped 'key stream features' identified during site investigations (Section 3.5.3).

Although the Project would involve some activities beneath State Conservation Areas, the Development Application Area excludes land that form part of a State Conservation Area. The Project is therefore not considered to be incompatible with these existing land uses (Sections 6.3 to 6.12).

The development of the Project would result in significant socio-economic benefits to the regional economy and the State of NSW (Section 9.4).

Additionally, a rehabilitation strategy would be implemented by South32 (Section 7) in order to rehabilitate the Project site to a state where incompatibility of the Project with current and future land uses in the area would be minimised. South32 would, where practicable, implement a range of measures to avoid or minimise incompatibility of the Project with existing and future land uses in the Project area (Sections 6 and 8).

Accordingly, the IPC or the Minister can be satisfied as to these matters.

*Clause 12AB – Non-Discretionary Development Standards for Mining*

Section 4.15(2) of the EP&A Act prescribes:

*If an environmental planning instrument or a regulation contains non-discretionary development standards and development, not being complying development, the subject of a development application complies with those standards, the consent authority:*

- (a) *is not entitled to take those standards into further consideration in determining the development application, and*
- (b) *must not refuse the application on the ground that the development does not comply with those standards, and*
- (c) *must not impose a condition of consent that has the same, or substantially the same, effect as those standards but is more onerous than those standards,*

*and the discretion of the consent authority under this section and section 4.16 is limited accordingly.*

Clause 12AB identifies non-discretionary development standards for the purposes of section 4.15(2) of the EP&A Act in relation to the carrying out of development for the purposes of mining.

Table A6-1 provides each of the non-discretionary development standards listed in clause 12AB of the Mining SEPP and a summary of the conclusions of this EIS with respect to the Project. Where the Project complies with the non-discretionary development standards in clause 12AB of the Mining SEPP, the IPC or the Minister must act in accordance with the clause and section 4.15(2) of the EP&A Act.

*Clause 13*

Clause 13 of the Mining SEPP outlines considerations for an application for consent for development in the vicinity of an existing mine, petroleum production facility or extractive industry.

The Project underground mining areas do not overlap with any other mineral or petroleum tenements or other extractive industry. Therefore, the Project would not have a significant impact of current or reasonably foreseeable extraction or recovery of minerals, petroleum or extractive materials.

*Clause 14*

Clause 14(1) of the Mining SEPP requires that before granting consent for development for the purposes of mining, petroleum production or extractive industry, the consent authority must consider whether or not the consent should be issued subject to conditions aimed at ensuring that the development is undertaken in an environmentally responsible manner, including conditions to ensure the following:

- (a) *that impacts on significant water resources, including surface and groundwater resources, are avoided, or are minimised to the greatest extent practicable,*
- (b) *that impacts on threatened species and biodiversity, are avoided, or are minimised to the greatest extent practicable,*
- (c) *that greenhouse gas emissions are minimised to the greatest extent practicable.*

In addition, clause 14(2) requires that, without limiting subclause (1), in determining a Development Application for development for the purposes of mining, petroleum production or extractive industry, the consent authority must consider an assessment of the greenhouse gas emissions (including downstream emissions) of the development, and must do so having regard to any applicable State or national policies, programs or guidelines concerning greenhouse gas emissions.



**Table A6-1  
Clause 12AB Non-Discretionary Development Standards for Mining**

Subclause of Clause 12AB	Compliance of the Project
<p><b>(3) Cumulative noise level</b> The development does not result in a cumulative amenity noise level greater than the recommended amenity noise levels, as determined in accordance with Table 2.2 of the Noise Policy for Industry, for residences that are private dwellings.</p>	<p>The cumulative noise levels from the concurrent operation of the Project would comply with the recommended acceptable amenity criterion outlined in Table 2.2 of the Noise Policy for Industry at all relevant receivers with the exception of those proximal to the Dendrobium CPP (i.e. one receiver predicted to not comply with the recommended amenity criterion) (Section 6.13 and Appendix J).</p>
<p><b>(4) Cumulative air quality level</b> The development does not result in a cumulative annual average level greater than 25 µg/m<sup>3</sup> of PM<sub>10</sub> or 8 µg/m<sup>3</sup> of PM<sub>2.5</sub> for private dwellings.</p>	<p>The Project would not result in any additional exceedences of the cumulative annual average level greater than 25 micrograms per cubic metre (µg/m<sup>3</sup>) of PM<sub>10</sub> at any privately-owned dwellings when considered cumulatively with existing background sources (Section 6.17 and Appendix I).</p>
<p><b>(5) Airblast overpressure</b> Airblast overpressure caused by the development does not exceed: (a) 120 dB (Lin Peak) at any time, and (b) 115 dB (Lin Peak) for more than 5% of the total number of blasts over any period of 12 months, measured at any private dwelling or sensitive receiver.</p>	<p>The Project may require small blasts in the underground working to allow mining to continue through igneous dykes or other geological features. Some very small and highly controlled blasts may also be undertaken during specific surface construction activities. Airblast overpressure caused by the Project would not exceed the relevant criteria as measured at any privately-owned dwelling or sensitive receiver (Section 6.16 and Appendix J).</p>
<p><b>(6) Ground vibration</b> Ground vibration caused by the development does not exceed: (a) 10 mm/sec (peak particle velocity) at any time, and (b) 5 mm/sec (peak particle velocity) for more than 5% of the total number of blasts over any period of 12 months, measured at any private dwelling or sensitive receiver.</p>	<p>The Project may require small blasts in the underground working to allow mining to continue through igneous dykes or other geological features. Some very small and highly controlled blasts may also be undertaken during specific surface construction activities. Ground vibration caused by the Project would not exceed the relevant criteria as measured at any privately-owned dwelling or sensitive receiver (Section 6.16 and Appendix J).</p>
<p><b>(7) Aquifer interference</b> Any interference with an aquifer caused by the development does not exceed the respective water table, water pressure and water quality requirements specified for item 1 in columns 2, 3 and 4 of Table 1 of the Aquifer Interference Policy for each relevant water source listed in column 1 of that Table.</p>	<p>The Project would have “minimal impact” (as defined by the Aquifer Interference Policy) to the water table, water pressure and water quality requirements for the relevant ‘highly productive’ water source (Appendix B).</p>

The potential impacts of the Project on groundwater and surface water resources are discussed in Sections 6.5 and 6.6 and Appendices B and C, respectively. The Project has adopted a number of longwall design constraints including setbacks from the Avon and Cordeaux Dam walls, a minimum 300 m longwall setback from the existing dam FSLs, setbacks from named watercourses (i.e. Cordeaux River, Avon River and Donalds Castle Creek) and is also avoiding the direct undermining of mapped ‘key stream features’ identified during site investigations (Section 3.5.3).

The Project would not have a significant adverse impact on the quality or yield of water in the Sydney drinking water catchment Special Area storages and would incorporate suitable water quality offset measures and payment for any induced ancillary surface water take, where applicable (Sections 6.5 and 6.6).

The potential impacts of the Project on threatened species and biodiversity are described in Sections 6.7 to 6.9, and Appendices D and E. The Project would include the provision of a biodiversity offset strategy that has been developed in consideration of the requirements of the Framework for Biodiversity Assessment – NSW Biodiversity Offsets Policy for Major Projects (OEH 2014), the NSW Addendum to NSW Biodiversity Offsets Policy for Major Projects: Upland swamps impacted by longwall mining subsidence (OEH 2016a) and the NSW Biodiversity Conservation Act, 2016 (Sections 6.7 to 6.9).

The Project greenhouse gas emissions assessment is provided in Section 6.21 and Appendix I. Greenhouse gas abatement measures and relevant state or national policies, programs and guidelines are described in Sections 6.21 and 9.3.

Accordingly, the IPC or the Minister can be satisfied as to these matters.

*Clause 15*

Clause 15 of the Mining SEPP requires that:

- (1) *Before granting consent for development for the purposes of mining, petroleum production or extractive industry, the consent authority must consider the efficiency or otherwise of the development in terms of resource recovery.*
- (2) *Before granting consent for the development, the consent authority must consider whether or not the consent should be issued subject to conditions aimed at optimising the efficiency of resource recovery and the reuse or recycling of material.*
- (3) *The consent authority may refuse to grant consent to development if it is not satisfied that the development will be carried out in such a way as to optimise the efficiency of recovery of minerals, petroleum or extractive materials and to minimise the creation of waste in association with the extraction, recovery or processing of minerals, petroleum or extractive materials.*

The proposed Project underground mining operations would use established longwall mining methods. The Project longwall layout and dimensions have been designed to maximise resource recovery efficiency.

In addition, the Project would include upgrades to existing infrastructure (including the Dendrobium Pit Top, Cordeaux Pit Top and Kemira Valley Coal Loading Facility) to provide for ongoing efficient recovery and transportation of saleable coal. Coal wash would also continue to be transported for emplacement at the West Cliff Coal Wash Emplacement, supplied to customers to be recycled for engineering purposes (e.g. civil construction fill) or for other beneficial purposes (Section 3.8).

South32 has progressively presented Project description information, mine layout plans and other information to the NSW Division of Resources and Geoscience (within the DPE) during the development of this EIS (Section 5.2.1).

It is in the financial interest of South32 to maximise the efficiency and long-term value of underground mining operations and coal production, and to minimise the generation and emplacement of coal wash.

Accordingly, the IPC or the Minister can be satisfied as to these matters.

*Clause 16*

Clause 16(1) requires that before granting consent for development for the purposes of mining or extractive industry that involves the transport of materials, the consent authority must consider whether or not the consent should be issued subject to conditions that do any one or more of the following:

- (a) *require that some or all of the transport of materials in connection with the development is not to be by public road,*
- (b) *limit or preclude truck movements, in connection with the development, that occur on roads in residential areas or on roads near to schools,*
- (c) *require the preparation and implementation, in relation to the development, of a code of conduct relating to the transport of materials on public roads.*

Run-of-mine (ROM) coal is transported from the Kemira Valley Loading Facility to the Dendrobium CPP, via the Kemira Valley Rail Line. Coal wash from the Dendrobium CPP would continue to be transported to the West Cliff Coal Wash Emplacement<sup>2</sup> and to customers for beneficial use via the public road network (Section 3.8).

Road movements associated with the construction and operational workforce and deliveries would also be associated with the Project.

Potential impacts of the road movements associated with the Project are assessed and described in Section 6.12 and Appendix H. An assessment of alternative transport methods has been conducted and is summarised in Section 9.2.

The Road Transport Assessment concluded that subject to the proposed mitigation measures, no significant impacts on the performance capacity, efficiency and safety of the road network are expected to arise as a result of the Project (Appendix H).

<sup>2</sup> For the majority of the Project this would occur in backloaded trucks after they have hauled coal from the Bulli Seam Operations to the Port Kembla industrial precinct, as was assessed and approved via Project Approval 08\_0150.

In accordance with Condition 25 of Schedule 4 of the existing Dendrobium Mine Development Consent (DA 60-03-2001), South32 implements a Traffic Management Plan including a Drivers' Code of Conduct across its relevant operations. The purpose of this document is to specify requirements to minimise potential impacts of traffic on the wider community (including near Mount Kembla public school and day-care), and maintain road safety (e.g. through travel time restrictions and behaviour requirements). South32 employees as well as contractor staff would be required to continue to observe the Driver's Code of Conduct as a component of the Project, and the existing Traffic Management Plan would be revised if required, and implemented for the Project.

Clause 16(2) of the Mining SEPP provides that if the consent authority considers that the development involves the transport of materials on a public road, the consent authority must, within seven days after receiving the Development Application, provide a copy of the application to each roads authority for the road, and the NSW Roads and Maritime Service (RMS) (if it is not a roads authority for the road).

In addition, clause 16(3) of the Mining SEPP requires that the consent authority:

- (a) *must not determine the application until it has taken into consideration any submissions that it receives in response from any roads authority or the Roads and Traffic Authority within 21 days after they were provided with a copy of the application,*

...

South32 has consulted with the RMS, the Wollongong City Council and the Wollondilly Shire Council during the development of this EIS, and these authorities are aware of the proposed continuation or extension of Dendrobium Mine traffic movements on the existing road network (Section 3.10), as a component of the Project.

#### Clause 17

Clause 17 of the Mining SEPP outlines various rehabilitation requirements. Clause 17(1) requires that before granting consent for development for the purposes of mining, petroleum production or extractive industry, the consent authority must consider whether or not the consent should be issued subject to conditions aimed at ensuring the rehabilitation of land that will be affected by the development.

Clause 17(2) provides that, in particular, the consent authority must consider whether conditions of the consent should:

- (a) *require the preparation of a plan that identifies the proposed end use and landform of the land once rehabilitated, or*
- (b) *require waste generated by the development or the rehabilitation to be dealt with appropriately, or*
- (c) *require any soil contaminated as a result of the development to be remediated in accordance with relevant guidelines (including guidelines under clause 3 of Schedule 6 to the Act and the Contaminated Land Management Act 1997), or*
- (d) *require steps to be taken to ensure that the state of the land, while being rehabilitated and at the completion of the rehabilitation, does not jeopardize public safety.*

A rehabilitation program would be implemented for the Project for the decommissioning and rehabilitation of surface disturbance areas (including, but not limited to, the Dendrobium Pit Top, Cordeaux Pit Top, Kemira Valley Coal Loading Facility, Dendrobium CPP and Project ventilation shafts) including the remediation of any contaminated soil, if applicable (Section 7). One of the key objectives of the rehabilitation program would be the development of landforms which are safe and stable in the long-term, and therefore protect public health and safety.

The proposed management of coal wash is discussed in Sections 3.8 and the management of other wastes are discussed in Section 3.11.

Accordingly, the IPC or the Minister can be satisfied as to these matters.

#### Part 4AA

Under Part 4AA of the Mining SEPP, "mining or petroleum development" means:

- (a) *development specified in clause 5 (Mining) of Schedule 1 to State Environmental Planning Policy (State and Regional Development) 2011, but only if:*
  - (i) *a mining lease under the Mining Act 1992 is required to be issued to enable the development to be carried out because:*
    - (A) *the development is proposed to be carried out outside the mining area of an existing mining lease, or*

- (B) *there is no current mining lease in relation to the proposed development, or*
- (ii) *the development is for the purposes of extracting a bulk sample as part of resource appraisal or a trial mine comprising the extraction of more than 20,000 tonnes of coal or of any mineral ore, or*

...

Mining activities for the Project would be carried out within existing mining leases (CCL 768, ML 1510 and ML 1566) and no mining leases are required to be issued to enable the Project to be carried out. Therefore, the proposed development is not “mining or petroleum development” for the purpose of Part 4AA and does not require a gateway certificate or site verification certificate under that Part.

#### **A6.1.6 State Environmental Planning Policy (Infrastructure) 2007**

The *State Environmental Planning Policy (Infrastructure) 2007* (Infrastructure SEPP) applies to the whole of NSW and includes provisions for consultation with relevant public authorities about certain development during the assessment process prior to development commencing.

#### **Electricity Transmission and Distribution Networks**

Subdivision 2 of Division 5 of the Infrastructure SEPP relates to developments that are likely to affect an electricity transmission or distribution network.

Clause 42 of the Infrastructure SEPP relevantly provides:

- (1) *This clause applies to a development (other than exempt development) that:*
  - (a) *is carried out by or on behalf of an electricity supply authority or public authority, and*
  - (b) *is for the purpose of a new or existing electricity substation of any voltage (including any associated yard, control building or building for housing plant), and*

...

- (2) *Before development to which this clause applies is carried out, the electricity supply authority or public authority must:*
  - (a) *give written notice of to the intention to carry out the development to the council for the area in which the land is located (unless the authority is that council) and to the occupiers of adjoining land, an*
  - (b) *take into consideration any response to the notice that is received within 21 days after the notice is given.*

Clause 45 of the Infrastructure SEPP relevantly provides:

- (1) *This clause applies to a development application (or an application for modification of a consent) for development comprising or involving any of the following:*
  - ...
  - (b) *development carried out:*
    - (i) *within or immediately adjacent to an easement for electricity purposes (whether or not the electricity infrastructure exists), or*
    - (ii) *immediately adjacent to an electricity substation, or*
    - (iii) *within 5m of an exposed overhead electricity powerline,*
  - ...
- (2) *Before determining a development application (or an application for modification of a consent) for development to which this clause applies, the consent authority must:*
  - (a) *give written notice to the electricity supply authority for the area in which the development is to be carried out, inviting comments about potential safety risks, and*
  - (b) *take into consideration any response to the notice that is received within 21 days after the notice is given.*

The Endeavour Energy high voltage distribution network would continue to supply most of the electricity requirements of the Project.

Electricity for the Project underground mining operations would be distributed via the existing substation located adjacent to the Kemira Valley Coal Loading Facility. Electricity would be reticulated to the underground mining operations through cables running along the coal conveyor route.



As the Project progresses, additional powerlines and/or substations (e.g. down-hole electricity supply to advancing longwall operation and surface facilities) and upgrades to existing powerlines would be required, and may be subject to separate approvals through the relevant electricity supply authority.

Subsidence impacts on the existing electricity distribution infrastructure would potentially be associated with the Project. Potential impacts of mine subsidence on the existing electricity transmission infrastructure are assessed and described in Section 6.3 and Appendix A.

The Subsidence Assessment concluded that the electricity infrastructure could be maintained in a safe and serviceable condition with the implementation of suitable management and mitigation strategies for the Project (Appendix A).

Consultation has been conducted with Endeavour Energy (the relevant electricity supply authority) regarding the Project (Section 5). Further consultation with Endeavour Energy would be conducted during the detailed design phase of the Project, if required.

Accordingly, the IPC or the Minister can be satisfied as to these matters.

### **Gas Pipeline Corridors**

Subdivision 2 of Division 9, Part 3 of the Infrastructure SEPP sets out provisions for development in relation to gas pipeline corridors.

Clause 55 of the Infrastructure SEPP relevantly provides:

- (1) *Before determining an application (or any application for modification of a consent) for development adjacent to a gas pipeline corridor, the consent authority must:*
  - (a) *be satisfied that the potential safety risks or risks to the integrity of the pipeline that are associated with the development or modification to which the application relates have been identified, and*
  - (b) *take those risks into consideration.*

(2) *In this clause, **gas pipeline corridor** means any land:*

- (a) *within the licence area of a gas pipeline licensed under the Pipelines Act 1967, or*
- (b) *within 20m (measured radially) of the centreline of any of the following gas pipelines:*
  - ...
  - (ii) *Eastern Gas Pipeline,*
  - ...

The Eastern Gas Pipeline (EGP) and a portion of the Sydney Region Trunk Distribution System are located within the Project area (above proposed underground mining Area 6).

Potential impacts on the existing gas distribution infrastructure due to subsidence have been assessed and are described in Section 6.3 and Appendix A. The Subsidence Assessment concluded that the gas pipeline infrastructure could be maintained in a safe and serviceable condition with the implementation of suitable management and mitigation strategies for the Project (Appendix A).

Consultation has been conducted with Jemena Gas Networks (the relevant gas supply authority) regarding the Project (Section 5). Further consultation with Jemena Gas Networks would be conducted during the detailed design phase of the Project, if required.

Accordingly, the IPC or the Minister can be satisfied as to these matters.

### **Railways and Rail Corridors**

Subdivision 2 of Division 15, Part 3 of the Infrastructure SEPP sets out provisions for development in relation to rail corridors.

Clause 86 of the Infrastructure SEPP relevantly provides:

- (1) *This clause applies to development (other than development to which clause 88 applies) that involves the penetration of ground to a depth of at least 2m below ground level (existing) on land:*
  - (a) *within or above a rail corridor, or*
  - (b) *within 25m (measured horizontally) of a rail corridor, or*
  - (b1) *within 25m (measured horizontally) of the ground directly below a rail corridor, or*

- (c) *within 25m (measured horizontally) of the ground directly above an underground rail corridor.*
- (2) *Before determining a development application for development to which this clause applies, the consent authority must:*
  - (a) *within 7 days after the application is made, give written notice of the application to the rail authority for the rail corridor, and*
  - (b) *take into consideration:*
    - (i) *any response to the notice that is received within 21 days after the notice is given, and*
    - (ii) *any guidelines issued by the Secretary for the purposes of this clause and published in the Gazette.*
- (3) *Subject to subclause (5), the consent authority must not grant consent to development to which this clause applies without the concurrence of the rail authority for the rail corridor to which the development application relates.*
- ...
- (5) *The consent authority may grant consent to development to which this clause applies without the concurrence of the rail authority concerned if:*
  - (a) *the rail corridor is owned by or vested in ARTC or is the subject of an ARTC arrangement, or*
  - (b) *in any other case, 21 days have passed since the consent authority gave notice under subclause (2) (a) and the rail authority has not granted or refused to grant concurrence.*

The Project would include construction of a rail control room which would be developed for the Kemira Valley Rail Line during the life of the Project (Figure 3-7). However, the Kemira Valley Rail Line is privately owned, and does not fall within the definition of a 'rail corridor' under clause 78 of the Infrastructure SEPP.

The abandoned Maldon-Dombarton Rail Corridor crosses proposed underground mining Area 5. Construction of the rail corridor was suspended in 1988, however there is potential for development to recommence in the future. Owned by the ARTC (the relevant rail authority), the Maldon-Dombarton Rail Corridor is defined as a 'rail corridor' under the Infrastructure SEPP. Potential impacts to the Maldon-Dombarton Rail Corridor due to subsidence have been assessed in Appendix A. Consultation has been conducted with the ARTC regarding the Project (Section 5) and is ongoing.

#### **A6.1.7 State Environmental Planning Policy (Sydney Drinking Water Catchment) 2011**

The *State Environmental Planning Policy (Sydney Drinking Water Catchment) 2011* (Sydney Drinking Water Catchment SEPP) applies to all land within the Sydney drinking water catchment. Clause 9 of the Sydney Drinking Water Catchment SEPP relevantly provides:

- (1) *Any development or activity proposed to be carried out on land to which this Policy applies should incorporate Water NSW's current recommended practices and standards.*
- (2) *If any development or activity does not incorporate Water NSW's current recommended practices and standards, the development or activity should demonstrate to the satisfaction of the consent authority or determining authority how the practices and performance standards proposed to be adopted will achieve outcomes not less than those achieved by Water NSW's current recommended practices and standards.*

...

Clause 10 of the Sydney Drinking Water Catchment SEPP relevantly provides:

- (1) *A consent authority must not grant consent to the carrying out of development under Part 4 of the Act on land in the Sydney drinking water catchment unless it is satisfied that the carrying out of the proposed development would have a neutral or beneficial effect on water quality.*

...

Clause 11 of the Sydney Drinking Water Catchment SEPP relevantly provides:

- (1) *A consent authority must not grant consent to the carrying out of development under Part 4 of the Act on land in the Sydney drinking water catchment except with the concurrence of the Regulatory Authority.*
- (2) *For the purposes of section 3.18 (3) of the Act, the matters that are to be taken into consideration by the Regulatory Authority in deciding whether to grant concurrence are:*
  - (a) *whether the development incorporates Water NSW's current recommended practices and standards, and*
  - (b) *if the development does not incorporate those practices and standards, whether the alternative practices that relate to the protection of water quality that have been adopted in relation to the development will achieve outcomes not less than those achieved by Water NSW's current recommended practices and standards, and*
  - (c) *whether the development would have a neutral or beneficial effect on water quality.*

...

Clause 11A of the Sydney Drinking Water Catchment SEPP also relevantly provides:

...  
*the carrying out of the proposed development will have a neutral or beneficial effect on water quality if it will have the same or a lesser adverse impact on water quality when compared to the adverse impact that the continuing development would have if it were extended or expanded under similar conditions as the existing development consent.*  
 ...

The Project would incorporate a number of measures that achieve a net neutral or beneficial effect on water quality in the Sydney drinking water catchment (Section 6.6 and 9.3.6).

Consistent with WaterNSW's current recommended practices and standards, sediment control at the new ventilation shafts have been designed consistent with *Managing Urban Stormwater Soils and Construction – Volume 2E – Mines and Quarries* (DECC, 2008) and potential water quality impacts have been assessed using the *Model for Urban Stormwater Improvement Conceptualisation* (MUSIC) as recommended by WaterNSW (Appendix C). Information provided in this EIS has considered WaterNSW's (2018) *Developments in the Sydney Drinking Water Catchment – Water Quality Information Requirements*.

The Project has adopted a number of longwall design constraints including setbacks from the Avon and Cordeaux Dam walls, a minimum 300 m longwall setback from the existing dam FSLs, setbacks from named watercourses (i.e. Cordeaux River, Avon River and Donalds Castle Creek) and is also avoiding the direct undermining of mapped 'key stream features' identified during site investigations (Sections 3.5.3 and 6.5). The Project would not have a significant adverse impact on the quality or yield of water in the Sydney drinking water catchment Special Area storages and would incorporate suitable water quality offset measures and payment for any induced ancillary surface water take, where applicable (Sections 6.5 to 6.6).

Accordingly, the IPC or the Minister can be satisfied as to these matters.

#### **A6.1.8 State Environmental Planning Policy (Three Ports) 2013**

The Three Ports SEPP applies to the Dendrobium CPP and a portion of the Kemira Valley Rail Line, located within Zone IN3 (Heavy Industrial).

#### **Objectives**

Clause 3 of the Three Ports SEPP outlines the aims of the SEPP relevant to the Project:

- (a) *to provide a consistent planning regime for the development and delivery of infrastructure on land in Port Botany, Port Kembla and the Port of Newcastle,*
- (b) *to allow the efficient development, re-development and protection of land at Port Botany, Port Kembla and the Port of Newcastle for port purposes,*
- (c) *to identify certain development within the Lease Area as exempt development or complying development,*
- (d) *to specify matters to be considered in determining whether to grant consent to development adjacent to development for port purposes,*  
 ...
- (f) *to identify certain development as State significant development or State significant infrastructure,*
- (g) *to ensure that land around the Lease Area is maintained for port-related and industrial uses, including heavy industry on land around Port Kembla.*

The Project is consistent with the aims of the Three Ports SEPP as:

- the Project would maintain the industrial use of the land around Port Kembla through the continued operation of the Dendrobium CPP and the Kemira Valley Rail Line;
- the Project has been developed in a manner that considers the need to upgrade, replace or augment existing infrastructure over the life of the Project to maintain key infrastructure items; and
- the Project would continue to facilitate the use of Port Kembla and associated industrial uses, by supplying product coal to the Port Kembla Coal Terminal for export and to the BlueScope Steelworks (Section 3.2).

**Permissibility**

Part 2 of the Three Ports SEPP outlines the land use zone objectives that are relevant in determining whether the Project (or any part of the Project) is prohibited by the Three Ports SEPP, in any of the zones within the Development Application area.

The Dendrobium CPP and a portion of the Kemira Valley Rail Line are located within Zone IN3 (Heavy Industrial) under the Three Ports SEPP.

These activities are classified as “Port facilities” and “heavy industries” activities under the Three Ports SEPP and are permissible with consent within this zone.

**Zone Objectives**

The objectives of Zone IN3 (Heavy Industrial) are as follows:

- *To provide suitable areas for those industries that need to be separated from other land uses.*
- *To encourage employment opportunities.*
- *To minimise any adverse effect of heavy industry on other land uses.*
- *To provide transport infrastructure and intermodal facilities.*
- *To allow a diversity of activities that will not significantly detract from the operation of existing or proposed industries.*

The Project is consistent with the objectives of Zone IN3 (Heavy Industrial) as:

- the Project would facilitate ongoing local and regional employment, including employment related to the operation of the Dendrobium CPP, Kemira Valley Rail Line, Port Kembla and BlueScope Steelworks, as well as economic development opportunities (Appendix K);
- the Dendrobium CPP is located wholly within the Port Kembla industrial precinct and the continuation of use of this facility would not adversely impact on the use of surrounding lands;
- the Kemira Valley Rail Line has historically co-existed with the surrounding land uses, and would continue to be operated with restricted operating hours and ongoing reasonable and feasible noise improvements for the Project (Section 3.4).

Accordingly, the IPC or the Minister can be satisfied as to these matters.

**A6.2 WOLLONGONG LOCAL ENVIRONMENTAL PLAN 2009**

Portions of the Project area located within the Wollongong LGA include the Dendrobium Pit Top, Kemira Valley Coal Loading Facility portions of the Kemira Valley Rail Line.

**A6.2.1 Objectives**

Clause 1.2 of the Wollongong LEP outlines the aims of the plan, with the following aims particularly of relevance to the Project:

- (2) *The particular aims of this Plan are as follows:*
  - (a) *to provide a framework for land use management,*
  - (b) *to encourage economic and business development to increase employment opportunities,*
  - ...
  - (e) *to conserve and enhance remnant terrestrial, aquatic and riparian habitats, native vegetation and fauna species,*
  - (f) *to conserve and enhance heritage,*



- (g) *to ensure that development is consistent with the constraints of the land and can be appropriately serviced by infrastructure,*
- (h) *to ensure that significant landscapes are conserved, including the Illawarra Escarpment, Lake Illawarra, the drinking water catchment and the coastline.*

The Project has regard to the aims of the Wollongong LEP, as:

- The Project has been developed in a manner that considers the impacts, mitigation measures and management measures required for effective land use and rehabilitation activities (Section 7).
- The Project would facilitate local and regional employment and economic development opportunities (Appendix K).
- The Project includes biodiversity assessments and a proposal for offsetting unavoidable impacts on ecology in consideration of the requirements of the *Framework for Biodiversity Assessment – NSW Biodiversity Offsets Policy for Major Projects* (OEH 2014), the *NSW Addendum to NSW Biodiversity Offsets Policy for Major Projects: Upland swamps impacted by longwall mining subsidence* (OEH 2016a) and the *NSW Biodiversity Conservation Act, 2016* (Sections 6.7 to 6.9) and other compensatory measures (Sections 6 and 8 and Appendices D and E).
- Aboriginal and historic heritage assessments have been completed for any potential impacts of the Project on items of Aboriginal and historic heritage (Appendices F and G, respectively). Measures to manage and mitigate potential impacts are discussed in Sections 6.10 and 6.11.
- The Project has been developed in a manner that considers potential impacts to landscapes within the region, including to the Sydney drinking water catchment and Illawarra Escarpment (Section 6).

Accordingly, the IPC or Minister can be satisfied as to these matters.

#### **A6.2.2 Permissibility**

Part 2 of the Wollongong LEP outlines the land use zone objectives that are relevant in determining whether the Project (or any part of the Project) is prohibited by the Wollongong LEP, in any of the zones within the Project area.

The Project area includes land zoned under the Wollongong LEP as:

- Zone RU1 (Primary Production);
- Zone RU2 (Rural Landscape);
- Zone E1 (National Parks & Nature Reserves);
- Zone E2 (Environmental Conservation);
- Zone E3 (Environmental Management);
- Zone E4 (Environmental Living); and
- Zone SP2 (Infrastructure).

Under the Land Use Table in the Wollongong LEP “underground mining” is prohibited in these zones. However, the effects of clause 7(1)(a) and section 4.3 of the Mining SEPP is that notwithstanding any prohibition contained in the land use table of the Wollongong LEP, development for the purpose of underground mining may be carried out with development consent, as the provisions of the Mining SEPP prevail.

#### **A6.2.3 Zone Objectives**

##### **Zone RU1 (Primary Production)**

The objectives of Zone RU1 (Primary Production) are as follows:

- *To encourage sustainable primary industry production by maintaining and enhancing the natural resource base.*
- *To encourage diversity in primary industry enterprises and systems appropriate for the area.*
- *To minimise the fragmentation and alienation of resource lands.*
- *To minimise conflict between land uses within this zone and land uses within adjoining zones.*

The Project is consistent with the objectives of Zone RU1 (Primary Production) as:

- mining is a primary industry;
- the Project is not inconsistent with surrounding land uses in the RU1 (Primary Production) zone, as underground mining is permissible with consent under the Mining SEPP;
- the Project would not result in the fragmentation or alienation of resource lands; and

- mining operations and nearby land uses, such as state conservation areas and rural residential and suburban areas have historically co-existed and this would continue for the Project, therefore the Project would not be inconsistent with adjoining land use zones.

Accordingly, the IPC or the Minister can be satisfied as to these matters.

### **Zone RU2 (Rural Landscape)**

The objectives of Zone RU2 (Rural Landscape) are as follows:

- *To encourage sustainable primary industry production by maintaining and enhancing the natural resource base.*
- *To maintain the rural landscape character of the land.*
- *To provide for a range of compatible land uses, including extensive agriculture.*
- *To encourage the retention, management or restoration of native vegetation.*

The Project is consistent with the objectives of Zone RU2 (Rural Landscape) as:

- mining is a primary industry;
- Project surface activities outside of the current disturbance area of the Dendrobium Mine would not impact the rural landscape character of the land;
- the Project would not result in the fragmentation or alienation of resource lands, and would not inhibit agricultural production of the land within the broader region; and
- the Project would be developed in a manner that would manage and mitigate potential impacts on the environment, and would encourage the restoration of native vegetation through rehabilitation measures (Sections 6 and 7).

Accordingly, the IPC or the Minister can be satisfied as to these matters.

### **Zone E1 (National Parks & Nature Reserves)**

The objectives of Zone E1 (National Parks & Nature Reserves) are as follows:

- *To enable the management and appropriate use of land that is reserved under the National Parks and Wildlife Act 1974 or that is acquired under Part 11 of that Act.*

- *To enable uses authorised under the National Parks and Wildlife Act 1974.*
- *To identify land that is to be reserved under the National Parks and Wildlife Act 1974 and to protect the environmental significance of that land.*

Reserved land relevant to the Project includes:

- the Illawarra State Recreation Area was reserved under the provisions of sections 37B and 37Q of the *Crown Lands Consolidation Act, 1913* on 4 July 1980<sup>3</sup>. Within the Development Application Area, the reservation is restricted to a depth of 15.24 metres; and
- the Upper Nepean State Conservation Area was reserved under the provisions of sections 30A(1) and 30A(2) of the *National Parks and Wildlife Act, 1974* on 28 February 2007, restricted to a depth of 50 metres.

Although the Project would involve some activities beneath state conservation areas (e.g. continued use of the Dendrobium and Kemira Valley Tunnels), the Development Application Area excludes lands that form part of a state conservation area.

Any access to, or activities within, state conservation areas that may be conducted by South32 would be conducted in accordance with any separate licences, leases and/or approvals (e.g. a licence under sections 150 and 151A(a)(viii) of the *National Parks and Wildlife Act, 1974*).

Accordingly, the Project is consistent with the objectives of Zone E1 (National Parks & Nature Reserves) and the IPC or the Minister can be satisfied as to these matters.

### **Zone E2 (Environmental Conservation)**

The objectives of Zone E2 (Environmental Conservation) are as follows:

- *To protect, manage and restore areas of high ecological, scientific, cultural or aesthetic values.*
- *To prevent development that could destroy, damage or otherwise have an adverse effect on those values.*
- *To retain and enhance the visual and scenic qualities of the Illawarra Escarpment.*

<sup>3</sup> The *National Parks and Wildlife Amendment Act, 2001* changed the name of the Illawarra State Recreation Area to the Illawarra State Conservation Area.

- *To maintain the quality of the water supply for Sydney and the Illawarra by protecting land forming part of the Sydney drinking water catchment (within the meaning of State Environmental Planning Policy (Sydney Drinking Water Catchment) 2011) to enable the management and appropriate use of the land by Water NSW.*

The Project is consistent with the objectives of Zone E2 (Environmental Conservation) as:

- the Project would be developed in a manner that would manage and mitigate potential impacts on high value biodiversity areas, as well as areas of Aboriginal and historic heritage significance;
- the Project has been developed to consider portions of the Project that are within the Illawarra Escarpment. Additional surface disturbances associated with the Dendrobium Pit Top outside the existing disturbance area would not have an adverse affect on the Illawarra Escarpment, and rehabilitation measures would be implemented post mine closure; and
- the Project area is located within the Sydney drinking water catchment, however, the Project would not have a significant adverse impact on the quality or yield of water in the Sydney drinking water catchment Special Area storages and would incorporate suitable water quality offset measures and payment for any induced ancillary surface water take, where applicable (Sections 6.5 and 6.6).

Accordingly, the IPC or the Minister can be satisfied as to these matters.

### **Zone E3 (Environmental Management)**

The objectives of Zone E3 (Environmental Management) are as follows:

- *To protect, manage and restore areas with special ecological, scientific, cultural or aesthetic values.*
- *To provide for a limited range of development that does not have an adverse effect on those values.*

The Project is consistent with the objectives of Zone E3 (Environmental Management) as:

- the Project would be developed in a manner that would manage and mitigate potential impacts on high value biodiversity areas, as well as areas of Aboriginal and historic heritage significance; and

- Illawarra Coal has conducted mining operations in the region for over 80 years, and development would continue to be in accordance with the values of protecting, managing and restoring areas of ecological, scientific, cultural and aesthetic value.

Accordingly, the IPC or the Minister can be satisfied as to these matters.

### **Zone E4 (Environmental Living)**

The objectives of Zone E4 (Environmental Living) are as follows:

- *To provide for low-impact residential development in areas with special ecological, scientific or aesthetic values.*
- *To ensure that residential development does not have an adverse effect on those values.*

The Project is consistent with the objectives of Zone E4 (Environmental Living) as the development of the Project would not impact on the potential for the Wollongong City Council to provide low impact residential development in the region.

Accordingly, the IPC or the Minister can be satisfied as to these matters.

### **Zone SP2 (Infrastructure)**

The objectives of Zone SP2 (Infrastructure) are as follows:

- *To provide for infrastructure and related uses.*
- *To prevent development that is not compatible with or that may detract from the provision of infrastructure.*
- *To provide for key transport corridors.*

The Project is consistent with the objectives of Zone SP2 (Infrastructure) as:

- the Project would facilitate the continued use and upgrade of key infrastructure sources, including the Kemira Valley Rail Line;
- the Project would be compatible with the provision of infrastructure in the region; and
- the Project would enhance the potential for infrastructure development in the region.

Accordingly, the IPC or the Minister can be satisfied as to these matters.

#### A6.2.4 Special Provisions

Part 5 to Part 8 of the Wollongong LEP provide a number of provisions of potential relevance to the Project, including the relevant clauses described below.

Clause 5.10 relates to the assessment and management of impacts to historic heritage or Aboriginal heritage and includes the following subclauses potentially relevant to the Project:

##### 5.10 Heritage conservation

**Note.** Heritage items (if any) are listed and described in Schedule 5. Heritage conservation areas (if any) are shown on the Heritage Map as well as being described in Schedule 5.

##### (1) Objectives

The objectives of this clause are as follows:

- (a) to conserve the environmental heritage of Wollongong,
- (b) to conserve the heritage significance of heritage items and heritage conservation areas, including associated fabric, settings and views,
- (c) to conserve archaeological sites,
- (d) to conserve Aboriginal objects and Aboriginal places of heritage significance.

##### (2) Requirement for consent

Development consent is required for any of the following:

- (a) demolishing or moving any of the following or altering the exterior of any of the following (including, in the case of a building, making changes to its detail, fabric, finish or appearance):
  - (i) a heritage item,
  - (ii) an Aboriginal object,
  - (iii) a building, work, relic or tree within a heritage conservation area,
- (b) altering a heritage item that is a building by making structural changes to its interior or by making changes to anything inside the item that is specified in Schedule 5 in relation to the item,
- (c) disturbing or excavating an archaeological site while knowing, or having reasonable cause to suspect, that the disturbance or excavation will or is likely to result in a relic being discovered, exposed, moved, damaged or destroyed,

- (d) disturbing or excavating an Aboriginal place of heritage significance,
- (e) erecting a building on land:
  - (i) on which a heritage item is located or that is within a heritage conservation area, or
  - (ii) on which an Aboriginal object is located or that is within an Aboriginal place of heritage significance,
- (f) subdividing land:
  - (i) on which a heritage item is located or that is within a heritage conservation area, or
  - (ii) on which an Aboriginal object is located or that is within an Aboriginal place of heritage significance.

...

##### (4) Effect of proposed development on heritage significance

The consent authority must, before granting consent under this clause in respect of a heritage item or heritage conservation area, consider the effect of the proposed development on the heritage significance of the item or area concerned. This subclause applies regardless of whether a heritage management document is prepared under subclause (5) or a heritage conservation management plan is submitted under subclause (6).

##### (5) Heritage assessment

The consent authority may, before granting consent to any development:

- (a) on land on which a heritage item is located, or
- (b) on land that is within a heritage conservation area, or
- (c) on land that is within the vicinity of land referred to in paragraph (a) or (b),

require a heritage management document to be prepared that assesses the extent to which the carrying out of the proposed development would affect the heritage significance of the heritage item or heritage conservation area concerned.

##### (6) Heritage conservation management plans

The consent authority may require, after considering the heritage significance of a heritage item and the extent of change proposed to it, the submission of a heritage conservation management plan before granting consent under this clause.



(7) **Archaeological sites**

The consent authority must, before granting consent under this clause to the carrying out of development on an archaeological site (other than land listed on the State Heritage Register or to which an interim heritage order under the Heritage Act 1977 applies):

- (a) notify the Heritage Council of its intention to grant consent, and
- (b) take into consideration any response received from the Heritage Council within 28 days after the notice is sent.

(8) **Aboriginal places of heritage significance**

The consent authority must, before granting consent under this clause to the carrying out of development in an Aboriginal place of heritage significance:

- (a) consider the effect of the proposed development on the heritage significance of the place and any Aboriginal object known or reasonably likely to be located at the place by means of an adequate investigation and assessment (which may involve consideration of a heritage impact statement), and
- (b) notify the local Aboriginal communities, in writing or in such other manner as may be appropriate, about the application and take into consideration any response received within 28 days after the notice is sent.

...

Clause 5.10 set out above is potentially applicable to the Project with respect to direct disturbance or indirect effects (e.g. subsidence) that could impact on Aboriginal or historic heritage sites located within or adjacent to the Development Application area.

Aboriginal and historic heritage assessments have been conducted for the Project and are provided in Appendices F and G. Where relevant, these studies identified suitable management and mitigation measures for potential direct and indirect impacts of the Project.

Accordingly, the IPC or the Minister can be satisfied as to these matters.

Clause 7.1 outlines considerations relating to the provision of public utility infrastructure:

**7.1 Public utility infrastructure**

- (1) The objective of this clause is to ensure that sufficient infrastructure is available to service development.

- (2) Development consent must not be granted for development on land unless the consent authority is satisfied that any public utility infrastructure that is essential for the proposed development is available or that adequate arrangements have been made to make that infrastructure available when it is required.

...

- (4) In this clause:

**public utility infrastructure** includes infrastructure for any of the following:

- (a) the supply of water,
- (b) the supply of electricity,
- (c) the disposal and management of sewage.

Adequate arrangements have been made for the provision of this infrastructure services for the Project as follows:

- Underground and surface operations at the Dendrobium Mine would continue to use a combination of potable and recycled water. Potable water would be supplied by Sydney Water. Recycled water would continue to be sourced from underground workings, including the adjacent Nebo workings (Section 3.10.6).
- The Endeavour Energy high voltage distribution network would continue to supply the majority of electricity requirements for the Project, while electricity for the Project underground mining operations would be distributed via the existing substation located adjacent to the Kemira Valley Coal Loading Facility (Section 3.10.3).
- Sewage produced at the Dendrobium Pit Top and sewage and effluent produced at the Dendrobium CPP would continue to be plumbed into the town sewerage system. Wastewater from bathhouses at the Dendrobium Pit Top would be treated at the on-site water treatment facility. Treated bathhouse water from the Dendrobium Pit Top would be recycled on-site. Sewage and effluent at the Kemira Valley Coal Loading Facility would continue to be removed by a licensed waste contractor. Sewage and effluent at the Cordeaux Pit Top would continue to be held in the sewage holding tank and removed by a licensed waste contractor.

Accordingly, the IPC or the Minister can be satisfied as to these matters.

Clause 7.2 relates to the assessment and management of impacts to biodiversity. As parts of the Project area are identified under the Wollongong LEP as land within the Natural Resource Sensitivity – Biodiversity area, the following subclauses are relevant to the Project:

**7.2 Natural resource sensitivity - biodiversity**

- (3) *The objective of this clause is to protect, maintain or improve the diversity and condition of the native vegetation and habitat, including:*
  - (a) *protecting biological diversity of native flora and fauna, and*
  - (b) *protecting the ecological processes necessary for their continued existence, and*
  - (c) *encouraging the recovery of threatened species, communities, populations and their habitats.*
- (4) *This clause applies to land that is identified as “Natural resource sensitivity—biodiversity” on the Natural Resource Sensitivity—Biodiversity Map.*
- (5) *Development consent must not be granted for development on land to which this clause applies unless the consent authority has considered the impact of the development on:*
  - (a) *native terrestrial flora and fauna and its habitat, and*
  - (b) *native aquatic flora and fauna and its habitat, and*
  - (c) *the ecological role of the land, waterways, riparian land or wetland, and*
  - (d) *threatened species, communities, populations and their habitats.*
- (6) *Development consent must not be granted to development on land to which this clause applies unless the consent authority is satisfied that the development is consistent with the objectives of this clause and:*
  - (a) *the development is designed, sited and managed to avoid potential adverse environmental impact, or*
  - (b) *if a potential adverse environmental impact cannot be avoided, the development:*
    - (i) *is designed and sited so as to have minimum adverse environmental impact, and*
    - (ii) *incorporates effective measures so as to have minimal adverse environmental impact, and*
    - (iii) *mitigates any residual adverse environmental impact through the restoration of any existing disturbed or modified area on the site.*

Clause 7.2 set out above is potentially applicable to the Project with respect to direct disturbance or indirect effects that could impact on the diversity and condition of the flora and fauna located within or adjacent to the Development Application area.

Additionally, clause 7.4 outlines considerations relating to Riparian lands:

- (1) *The objective of this clause is to ensure that development does not adversely impact upon riparian lands.*
- (2) *This clause applies to land shown as “riparian land” on the Riparian Land Map.*
- (3) *Despite any other provision of this Plan, development consent must not be granted for development on land to which this clause applies unless the consent authority has considered the impact of the proposed development on the land and any opportunities for rehabilitation of aquatic and riparian vegetation and habitat on that land.*

Clause 7.4 is applicable to the Project as areas located near the Dendrobium Pit Top and Kemira Valley Coal Loading Facility are classified as “Riparian land”, as referred to in the Wollongong LEP. Surface upgrades to the Dendrobium Pit Top outside the current disturbance area (including the development of additional car parking facilities and extensions to existing buildings) would not impact on identified Riparian land. Similarly, upgrades to the Kemira Valley Coal Loading Facility during the life of the Project would be within the current disturbance footprint and would not impact on Riparian land.

Additionally, Biodiversity and Aquatic Ecology assessments have been undertaken for the Project and are provided in Appendices D and E and, where relevant, identified in consideration of the requirements of the *Framework for Biodiversity Assessment – NSW Biodiversity Offsets Policy for Major Projects* (OEH 2014), the *NSW Addendum to NSW Biodiversity Offsets Policy for Major Projects: Upland swamps impacted by longwall mining subsidence* (OEH 2016a) and the *NSW Biodiversity Conservation Act, 2016*. (Sections 6.7 to 6.9) and suitable management and mitigation measures for potential direct and indirect impacts of the Project in regard to biodiversity and Riparian land are included for the Project.

Accordingly, the IPC or Minister can be satisfied as to these matters.

Clause 7.6 outlines considerations relating to earthworks:

**7.6 Earthworks**

- (1) *The objectives of this clause are as follows:*
  - (a) *to ensure that any earthworks will not have a detrimental impact on environmental functions and processes, neighbouring uses or heritage items and features surrounding land,*
  - (b) *to allow earth works of a minor nature without separate development consent.*
- (2) *Development consent is required for earthworks, unless:*
  - (a) *the work is exempt development under this Plan, or*
  - (b) *the consent authority is satisfied the work is of a minor nature.*
- (3) *Before granting development consent for earthworks, the consent authority must consider the following matters:*
  - (a) *the likely disruption of, or any detrimental effect on, existing drainage patterns and soil stability in the locality,*
  - (b) *the effect of the proposed development on the likely future use or redevelopment of the land,*
  - (c) *the quality of the fill or of the soil to be excavated, or both,*
  - (d) *the effect of the proposed development on the existing and likely amenity of adjoining properties,*
  - (e) *the source of any fill material or the destination of any excavated material,*
  - (f) *the likelihood of disturbing Aboriginal objects or other relics,*
  - (g) *proximity to and potential for adverse impacts on any watercourse, drinking water catchment or environmentally sensitive area.*

Earthworks would be associated primarily with the construction of additional car parking facilities at the Dendrobium Pit Top, as well as for the development of additional surface infrastructure associated with mine ventilation and gas management.

The development of additional ventilation shafts would include the installation of erosion and sediment control infrastructure. Excavated material resulting from construction of the shafts would be used as engineering fill and for the construction of sediment dams. Excess material would be stockpiled on-site, revegetated and used for future rehabilitation of the shaft site upon further decommissioning (Section 3.4.3).

Accordingly, the IPC or the Minister can be satisfied as to these matters.

Clause 7.8 outlines considerations relating to the Illawarra Escarpment conservation area:

**7.8 Illawarra Escarpment area conservation**

- (1) *The objective of this clause is to provide specific controls to protect, conserve and enhance the Illawarra Escarpment.*
- (2) *This clause applies to land shown as being within the Illawarra Escarpment area on the Illawarra Escarpment Map.*
- (3) *Development consent must not be granted to development on land to which this clause applies unless the consent authority is satisfied that the development:*
  - (a) *will be located so as to minimise any adverse impact on the natural features and environment of the Illawarra Escarpment, and*
  - (b) *will incorporate on the land, conservation and rehabilitation measures to enhance the Illawarra Escarpment.*

Surface infrastructure at the Dendrobium Pit Top and Kemira Valley Coal Loading Facility are located proximal to the Illawarra Escarpment State Conservation Area. Additional surface disturbances associated with the Dendrobium Pit Top outside the existing disturbance area would not have an adverse affect on the Illawarra Escarpment. Upgrades to the Kemira Valley Coal Loading Facility would be within the current disturbance area and would not impact on the Illawarra Escarpment. Additionally, rehabilitation measures will be incorporated post mine closure.

Accordingly, the IPC or the Minister can be satisfied as to these matters.

**A6.3 WINGECARRIBEE LOCAL ENVIRONMENTAL PLAN 2010**

Portions of the Project area located within the Wingecarribee LGA include proposed underground mining Area 6 as well as associated ventilation shaft sites.

**A6.3.1 Objectives**

Clause 1.2 of the Wingecarribee LEP outlines the aims of the plan, with the following aims particularly of relevance to the Project:

(2) *The particular aims of this Plan are as follows:*

- (a) *to conserve and enhance, for current and future generations, the ecological integrity, environmental heritage and environmental significance of Wingecarribee,*
- ...
- (c) *to provide opportunities for development and land use activities that:*
  - (i) *make an effective contribution towards the economic wellbeing of the community in a socially and environmentally responsible manner, and*
  - (ii) *do not adversely impact on natural systems and processes and the overall quality of Wingecarribee's natural environment, and*
  - (iii) *retain the critical natural, rural and built environmental landscape elements that make up the scenic and cultural heritage value of Wingecarribee*
- ...
- (g) *to strengthen the viability of Wingecarribee's business centres as central places for investment, employment and cultural activity, and encourage a majority of future housing opportunities to be located in relatively close proximity to those centres,*
- (h) *to promote the economic wellbeing of the community in a socially and environmentally responsible way, focusing new employment growth at identified employment hubs like business centres and enterprise zones that can be better accessed by public and private transport,*
- ...
- (j) *to conserve the Aboriginal and European cultural and environmental heritage of Wingecarribee,*

- (k) *to protect areas of high scenic landscape value,*
- (l) *to develop an ecologically sustainable future for Wingecarribee through the conservation, rehabilitation and regeneration of native vegetation (particularly threatened species populations and ecological communities), soil, waterways, riparian land and water quality (surface and groundwater),*
- (m) *to prevent loss of life and property by bush fires, by discouraging the establishment of incompatible uses in bush fire prone areas and incorporating as part of compatible developments protective measures that minimise bush fire risk without unacceptable environmental degradation,*
- ...
- (o) *to ensure that extractive resources and mineral deposits are not rendered sterile by future development, but at the same time ensuring that subsequent extraction, open cut mining and transportation activities are undertaken in a way that maintains residential amenity,*
- (p) *to protect and enhance waterways, riparian land and water quality in the drinking water catchments of Wingecarribee.*

The Project has regard to the aims of the Wingecarribee LEP, as:

- Mining operations and nearby land uses, such as State Conservation Areas and suburban areas have historically co-existed and this would continue for the Project, therefore the Project would not adversely impact on, or be inconsistent with adjoining land uses.
- The Project includes Biodiversity, Ecology, Groundwater and Surface Water assessments and a proposal for offsetting unavoidable impacts on ecology in consideration of the requirements of the *Framework for Biodiversity Assessment – NSW Biodiversity Offsets Policy for Major Projects* (OEH 2014), the *NSW Addendum to NSW Biodiversity Offsets Policy for Major Projects: Upland swamps impacted by longwall mining subsidence* (OEH 2016a) and the *NSW Biodiversity Conservation Act, 2016* (Sections 6.7 to 6.9), as well as other management and mitigation measures (Sections 6 and 8 and Appendices B to E).



- The Project would continue to facilitate local and regional employment and economic development opportunities (Appendix K).
- The Project would continue to operate in accordance with the existing Bushfire Management Plan, that would be updated as required for the Project (Section 6.22.3).
- The Project has been developed in a manner that has considered potential impacts to the drinking water catchment and riparian land, and has adopted a number of longwall design constraints including setbacks from the Avon and Cordeaux Dam walls, a minimum 300 m longwall setback from the existing dam FSLs, setbacks from named watercourses (i.e. Cordeaux River, Avon River and Donalds Castle Creek) and is also avoiding the direct undermining of mapped 'key stream features' identified during site investigations (Section 3.5.3).
- The Project would incorporate a number of measures that achieve a net neutral or beneficial effect on water quality in the Sydney drinking water catchment (Sections 6.6 and 9.3.4).
- The Project includes Aboriginal and historic heritage assessments, which would identify suitable management and mitigation measures for potential direct and indirect impacts of the Project (Section 6 and Appendices F and G).

The potential Project impacts of the continuation of the Dendrobium Mine surface facilities has been considered from an amenity perspective in the Air Quality and Noise and Blasting Assessments (Sections 6.13, 6.14 and 6.17 and Appendices I and J).

Accordingly, the IPC or the Minister can be satisfied as to these matters.

### A6.3.2 Permissibility

Part 2 of the Wingecarribee LEP outlines the land use zone objectives that are relevant in determining whether the Project (or any part of the Project) is prohibited by the Wingecarribee LEP, in any of the zones within the Project area.

The Project area includes land zoned under the Wingecarribee LEP as:

- Zone E2 (Environmental Conservation); and
- Zone SP2 (Infrastructure).

Under the Land Use Table in the Wingecarribee LEP "underground mining" is prohibited in these zones. However, the effects of clause 7(1)(a) and section 4.3 of the Mining SEPP is that notwithstanding any prohibition contained in the land use table of the Wingecarribee LEP, development for the purpose of underground mining may be carried out with development consent, as the provisions of the Mining SEPP prevail.

### A6.3.3 Zone Objectives

#### Zone E2 (Environmental Conservation)

The objectives of Zone E2 (Environmental Conservation) are as follows:

- *To protect, manage and restore areas of high ecological, scientific, cultural or aesthetic values.*
- *To prevent development that could destroy, damage or otherwise have an adverse effect on those values.*

The Project is consistent with the objectives of Zone E2 (Environmental Conservation) as:

- The Project would be developed in a manner that would manage and mitigate potential impacts on high value biodiversity areas, as well as areas of Aboriginal and historic heritage significance and aesthetic value.

Accordingly, the IPC or the Minister can be satisfied as to these matters.

#### Zone SP2 (Infrastructure)

The objectives of Zone SP2 (Infrastructure) are as follows:

- *To provide for infrastructure and related uses.*
- *To prevent development that is not compatible with or that may detract from the provision of infrastructure.*
- *To ensure that the scale and character of infrastructure is compatible with the landscape setting and built form of surrounding development.*

The Project is consistent with the objectives of Zone SP2 (Infrastructure) as:

- the Project would enhance the potential for infrastructure development in the region;
- the Project would be compatible with the provision of infrastructure in the region; and

- additional infrastructure developed for the Project would not have an adverse impact on the surrounding environment setting.

Accordingly, the IPC or the Minister can be satisfied as to these matters.

### A6.3.4 Special Provisions

Part 5 to Part 7 of the Wingecarribee LEP provide a number of provisions of potential relevance to the Project, including the relevant clauses described below.

Clause 5.10 relates to the assessment and management of impacts to historic heritage or Aboriginal heritage and includes the following subclauses relevant to the Project:

#### 5.10 Heritage conservation

**Note.** Heritage items (if any) are listed and described in Schedule 5. Heritage conservation areas (if any) are shown on the Heritage Map as well as being described in Schedule 5.

##### (1) Objectives

The objectives of this clause are as follows:

- to conserve the environmental heritage of Wingecarribee,
- to conserve the heritage significance of heritage items and heritage conservation areas, including associated fabric, settings and views,
- to conserve archaeological sites,
- to conserve Aboriginal objects and Aboriginal places of heritage significance.

##### (2) Requirement for consent

Development consent is required for any of the following:

- demolishing or moving any of the following or altering the exterior of any of the following (including, in the case of a building, making changes to its detail, fabric, finish or appearance):
  - a heritage item,
  - an Aboriginal object,
  - a building, work, relic or tree within a heritage conservation area,
- altering a heritage item that is a building by making structural changes to its interior or by making changes to anything inside the item that is specified in Schedule 5 in relation to the item,

- disturbing or excavating an archaeological site while knowing, or having reasonable cause to suspect, that the disturbance or excavation will or is likely to result in a relic being discovered, exposed, moved, damaged or destroyed,
- disturbing or excavating an Aboriginal place of heritage significance,
- erecting a building on land:
  - on which a heritage item is located or that is within a heritage conservation area, or
  - on which an Aboriginal object is located or that is within an Aboriginal place of heritage significance,
- subdividing land:
  - on which a heritage item is located or that is within a heritage conservation area, or
  - on which an Aboriginal object is located or that is within an Aboriginal place of heritage significance.

...

##### (4) Effect of proposed development on heritage significance

The consent authority must, before granting consent under this clause in respect of a heritage item or heritage conservation area, consider the effect of the proposed development on the heritage significance of the item or area concerned. This subclause applies regardless of whether a heritage management document is prepared under subclause (5) or a heritage conservation management plan is submitted under subclause (6).

##### (5) Heritage assessment

The consent authority may, before granting consent to any development:

- on land on which a heritage item is located, or
- on land that is within a heritage conservation area, or
- on land that is within the vicinity of land referred to in paragraph (a) or (b),

require a heritage management document to be prepared that assesses the extent to which the carrying out of the proposed development would affect the heritage significance of the heritage item or heritage conservation area concerned.

(6) **Heritage conservation management plans**

*The consent authority may require, after considering the heritage significance of a heritage item and the extent of change proposed to it, the submission of a heritage conservation management plan before granting consent under this clause.*

(7) **Archaeological sites**

*The consent authority must, before granting consent under this clause to the carrying out of development on an archaeological site (other than land listed on the State Heritage Register or to which an interim heritage order under the Heritage Act 1977 applies):*

- (a) *notify the Heritage Council of its intention to grant consent, and*
- (b) *take into consideration any response received from the Heritage Council within 28 days after the notice is sent.*

(8) **Aboriginal places of heritage significance**

*The consent authority must, before granting consent under this clause to the carrying out of development in an Aboriginal place of heritage significance:*

- (a) *consider the effect of the proposed development on the heritage significance of the place and any Aboriginal object known or reasonably likely to be located at the place by means of an adequate investigation and assessment (which may involve consideration of a heritage impact statement), and*
- (b) *notify the local Aboriginal communities, in writing or in such other manner as may be appropriate, about the application and take into consideration any response received within 28 days after the notice is sent.*

...

Clause 5.10 set out above is potentially applicable to the Project with respect to direct disturbance or indirect effects (e.g. subsidence) that could impact on Aboriginal or historic heritage sites located within or adjacent to the Development Application area.

Aboriginal and historic heritage assessments have been conducted for the Project and are provided in Appendices F and G and, where relevant, identified suitable management and mitigation measures for potential direct and indirect impacts of the Project.

Accordingly, the IPC or the Minister can be satisfied as to these matters.

Clause 7.3 outlines considerations relating to earthworks:

**7.3 Earthworks**

(1) *The objectives of this clause are as follows:*

- (a) *to ensure that any earthworks will not have a detrimental impact on environmental functions and processes, neighbouring uses or heritage items and features surrounding land,*
- (b) *to allow earth works of a minor nature without separate development consent.*

(2) *Development consent is required for earthworks, unless:*

- (a) *the work does not alter the ground level (existing) by more than 800 millimetres, or*
- (b) *the work is exempt development under this Plan or another applicable environmental planning instrument, or*
- (c) *the work is ancillary to other development for which development consent has been granted.*

(3) *Before granting development consent for earthworks, the consent authority must consider the following matters:*

- (a) *the likely disruption of, or any detrimental effect on, existing drainage patterns and soil stability in the locality,*
- (b) *the effect of the proposed development on the likely future use or redevelopment of the land,*
- (c) *the quality of the fill or of the soil to be excavated, or both,*
- (d) *the effect of the proposed development on the existing and likely amenity of adjoining properties,*
- (e) *the source of any fill material or the destination of any excavated material,*
- (f) *the likelihood of disturbing Aboriginal objects or other relics,*
- (g) *proximity to and potential for adverse impacts on any watercourse, drinking water catchment or environmentally sensitive area.*

Earthworks would include the development of additional ventilation shafts which would include the installation of erosion and sediment control infrastructure. Excavated material resulting from construction of the shafts would be used as engineering fill and for the construction of sediment dams. Excess material would be stockpiled on-site, revegetated and used for future rehabilitation of the shaft site upon decommissioning (Section 3.4.3).

Accordingly, the IPC or the Minister can be satisfied as to these matters.

Clause 7.4 relates to the assessment and management of impacts to biodiversity. As parts of the Project area are identified as land within the Natural Resource Sensitivity – Biodiversity area, the following subclauses are relevant to the Project:

**7.4 Natural resource sensitivity - biodiversity**

- (1) *The objective of this clause is to maintain terrestrial and aquatic biodiversity, including:*
  - (a) *protecting native fauna and flora, and*
  - (b) *protecting the ecological processes necessary for their continued existence, and*
  - (c) *encouraging the recovery of native fauna and flora, and their habitats.*
- (2) *This clause applies to land identified as “Regional Wildlife Habitat Corridor” on the Natural Resource Sensitivity Map.*
- (3) *Before granting development consent for development on land to which this clause applies, the consent authority must consider any potential adverse impact of the proposed development on the following:*
  - (a) *the native ecological community,*
  - (b) *the habitat of any threatened species, population or ecological community,*
  - (c) *any regionally significant species of fauna, flora or habitat,*
  - (d) *habitat elements providing connectivity.*
- (4) *Development consent must not be granted to development on land to which this clause applies unless the consent authority is satisfied that:*
  - (a) *the development is designed, sited and managed to avoid any potential adverse environmental impact, or*
  - (b) *if that impact cannot be avoided—the development is designed, sited and will be managed to minimise that impact, or*

- (c) *if that impact cannot be minimised—the development will be managed to mitigate that impact.*

Clause 7.4 set out above is potentially applicable to the Project with respect to direct disturbance or indirect effects that could impact on the diversity and condition of the flora and fauna located within or adjacent to the Development Application area.

Biodiversity and Aquatic Ecology assessments have been undertaken for the Project and are provided in Appendices D and E and, where relevant, identified suitable management and mitigation measures for potential direct and indirect impacts of the Project in regard to biodiversity. The Project would also include the provision of a biodiversity offset strategy that has been developed in consideration of the requirements of the *Framework for Biodiversity Assessment – NSW Biodiversity Offsets Policy for Major Projects* (OEH 2014), the *NSW Addendum to NSW Biodiversity Offsets Policy for Major Projects: Upland swamps impacted by longwall mining subsidence* (OEH 2016a) and the *NSW Biodiversity Conservation Act, 2016*. (Sections 6.7 to 6.9).

Accordingly, the IPC or the Minister can be satisfied as to these matters.

Clause 7.5 outlines considerations relating to water quality and Riparian lands and natural waterbodies:

**7.5 Natural resource sensitivity - water**

- (1) *The objective of this clause is to maintain the hydrological functions of riparian land waterways and aquifers, including:*
  - (a) *protecting water quality, and*
  - (b) *protecting natural water flows, and*
  - (c) *protecting stability of the bed and banks of waterways, and*
  - (d) *protecting groundwater systems.*
- (2) *This clause applies to riparian land or land identified as “Natural Waterbodies” on the Natural Resources Sensitivity Map.*
- (3) *Before granting development consent for development on land to which this clause applies, the consent authority must consider any potential adverse impact of the proposed development on the following:*
  - (a) *the natural flow regime,*
  - (b) *the water quality of receiving waters,*
  - (c) *the waterway’s natural flow paths,*
  - (d) *the stability of the waterway’s bed, shore and banks,*



- (e) *the flow, capacity and quality of groundwater systems.*
- (4) *Development consent must not be granted to development on land to which this clause applies unless the consent authority is satisfied that:*
  - (a) *the development is designed, sited and managed to avoid any potential adverse environmental impact, or*
  - (b) *if that impact cannot be avoided—the development is designed, sited and will be managed to minimise that impact, or*
  - (c) *if that impact cannot be minimised—the development will be managed to mitigate that impact.*

Consideration of potential groundwater and surface water impacts associated with the Project are provided in Sections 6.5 and 6.6 and Appendices B and C.

The Project lies within the Metropolitan Special Area. However, the Project has adopted a number of longwall design constraints including setbacks from the Avon and Cordeaux Dam walls, a minimum 300 m longwall setback from the existing dam FSLs, setbacks from named watercourses (i.e. Cordeaux River, Avon River and Donalds Castle Creek) and is also avoiding the direct undermining of mapped 'key stream features' identified during site investigations (Section 3.5.3). The Project would not have a significant adverse impact on the quality or yield of water in the Sydney drinking water catchment Special Area storages and would incorporate suitable water quality offset measures and payment for any induced ancillary surface water take, where applicable (Sections 6.5 to 6.6).

Additionally, components of the Project area are located near areas identified as "Riparian land", as referred to in the Wingecarribee LEP. Infrastructure development at Shaft No 6A is not expected to have an adverse impact on identified Riparian land near Cordeaux River. Additionally, subsidence effects are not expected to impact other Riparian land identified within the Project area.

Biodiversity and Aquatic Ecology assessments have been undertaken for the Project and are provided in Appendices D and E and, where relevant, identified suitable management and mitigation measures for potential direct and indirect impacts of the Project in regard to Riparian land. The Project would also include the provision of a biodiversity offset strategy that has been developed in consideration of the requirements of the *Framework for Biodiversity Assessment – NSW Biodiversity Offsets Policy for Major Projects* (OEH 2014), the *NSW Addendum to NSW Biodiversity Offsets Policy for Major Projects: Upland swamps impacted by longwall mining subsidence* (OEH 2016a) and the *NSW Biodiversity Conservation Act, 2016*. (Sections 6.7 to 6.9).

Accordingly, the IPC or the Minister can be satisfied as to these matters.

#### **A6.4 WOLLONDILLY LOCAL ENVIRONMENTAL PLAN 2011**

Portions of the Project area located within the Wollondilly LGA include proposed new underground mining Area 5 and associated ventilation shaft sites, Cordeaux Pit Top as well as the West Cliff Coal Wash Emplacement.

##### **A6.4.1 Objectives**

Clause 1.2 of the Wollondilly LEP outlines the aims of the plan, with the following aims particularly of relevance to the Project:

- (2) *The particular aims of this Plan are as follows:*
  - (a) *to provide for the management of natural resources and the protection of the natural landscape character,*
  - (b) *to protect, conserve and enhance the built, landscape and Aboriginal cultural heritage,*
  - (c) *to protect water quality in land that is situated within water supply catchments,*
  - (d) *to encourage development that provides for an integrated transport and infrastructure system and adequate facilities and service provision for future growth,*

- (e) *to recognise, manage and protect rural resource lands for sustainable agriculture and extractive industry practices,*

...

The Project has regard to the aims of the Wollondilly LEP, as:

- Mining operations and nearby land uses, such as State Conservation Areas, National Parks and the Illawarra Escarpment have historically co-existed. This would continue for the Project and the proposal would not be inconsistent with maintaining the character of the current landscape.
- Aboriginal and historic heritage assessments have been completed for any potential impacts of the Project on items of Aboriginal and historic heritage (Appendices F and G, respectively). Measures to manage and mitigate potential impacts are discussed in Sections 6.10 and 6.11.
- The Project has been developed in a manner that considers the potential impacts to the Metropolitan Special Area, including potential impacts on groundwater and surface water (Sections 6.3 to 6.6 and Appendices A to C). The Project has adopted a number of longwall design constraints including setbacks from the Avon and Cordeaux Dam walls, a minimum 300 m longwall setback from the existing dam FSLs, setbacks from named watercourses (i.e. Cordeaux River, Avon River and Donalds Castle Creek) and is also avoiding the direct undermining of mapped 'key stream features' identified during site investigations (Section 3.5.3).
- The Project has been developed in a manner that considers the benefits and consequences of the Project, including use of the public road transport network (Section 6).

Accordingly, the IPC or the Minister can be satisfied as to these matters.

#### **A6.4.2 Permissibility**

Part 2 of the Wollondilly LEP outlines the land use zone objectives that are relevant in determining whether the Project (or any part of the Project) is prohibited by the Wollondilly LEP, in any of the zones within the Project area.

The Project area includes land zoned under the Wollondilly LEP as:

- Zone E2 (Environmental Conservation); and
- Zone SP2 (Infrastructure).

The Land Use Table in the Wollondilly LEP lists land uses that are prohibited in these zones. However, the effects of clause 7(1) and section 4.3 of the Mining SEPP, is that notwithstanding any prohibition contained in the land use table of the Wollondilly LEP, development for the purpose of underground mining that was the subject of a mining lease under the *Mining Act, 1992* prior to the commencement of the Mining SEPP may be carried out with development consent, as the provisions of the Mining SEPP prevail.

#### **A6.4.3 Zone Objectives**

##### ***Zone E2 (Environmental Conservation)***

The objectives of Zone E2 (Environmental Conservation) are as follows:

- *To protect, manage and restore areas of high ecological, scientific, cultural or aesthetic values.*
- *To prevent development that could destroy, damage or otherwise have an adverse effect on those values.*

The Project is consistent with the objectives of Zone E2 (Environmental Conservation) as:

- The Project would be developed in a manner that would manage and mitigate potential impacts on high value biodiversity areas, as well as areas of Aboriginal and historic heritage significance and aesthetic value.

Accordingly, the IPC or the Minister can be satisfied as to these matters.

##### ***Zone SP2 (Infrastructure)***

The objectives of Zone SP2 (Infrastructure) are as follows:

- *To provide for infrastructure and related uses.*
- *To prevent development that is not compatible with or that may detract from the provision of infrastructure.*

The Project is consistent with the objectives of Zone SP2 (Infrastructure) as:

- the Project would enhance the potential for infrastructure development in the region; and
- the Project would be compatible with the provision of infrastructure in the region.

Accordingly, the IPC or the Minister can be satisfied as to these matters.

#### A6.4.4 Special Provisions

Part 5 to Part 7 of the Wollondilly LEP provide a number of provisions of potential relevance to the Project, including the relevant clauses described below.

Clause 5.10 relates to the assessment and management of impacts to historic heritage or Aboriginal heritage and includes the following subclauses relevant to the Project:

##### 5.10 Heritage conservation

**Note.** *Heritage items (if any) are listed and described in Schedule 5. Heritage conservation areas (if any) are shown on the Heritage Map as well as being described in Schedule 5.*

##### (1) Objectives

*The objectives of this clause are as follows:*

- (a) *to conserve the environmental heritage of Wollondilly,*
- (b) *to conserve the heritage significance of heritage items and heritage conservation areas, including associated fabric, settings and views,*
- (c) *to conserve archaeological sites,*
- (d) *to conserve Aboriginal objects and Aboriginal places of heritage significance.*

##### (2) Requirement for consent

*Development consent is required for any of the following:*

- (a) *demolishing or moving any of the following or altering the exterior of any of the following (including, in the case of a building, making changes to its detail, fabric, finish or appearance):*
  - (i) *a heritage item,*
  - (ii) *an Aboriginal object,*
  - (iii) *a building, work, relic or tree within a heritage conservation area,*

- (b) *altering a heritage item that is a building by making structural changes to its interior or by making changes to anything inside the item that is specified in Schedule 5 in relation to the item,*
- (c) *disturbing or excavating an archaeological site while knowing, or having reasonable cause to suspect, that the disturbance or excavation will or is likely to result in a relic being discovered, exposed, moved, damaged or destroyed,*
- (d) *disturbing or excavating an Aboriginal place of heritage significance,*
- (e) *erecting a building on land:*
  - (i) *on which a heritage item is located or that is within a heritage conservation area, or*
  - (ii) *on which an Aboriginal object is located or that is within an Aboriginal place of heritage significance,*
- (f) *subdividing land:*
  - (i) *on which a heritage item is located or that is within a heritage conservation area, or*
  - (ii) *on which an Aboriginal object is located or that is within an Aboriginal place of heritage significance.*

...

##### (4) Effect of proposed development on heritage significance

*The consent authority must, before granting consent under this clause in respect of a heritage item or heritage conservation area, consider the effect of the proposed development on the heritage significance of the item or area concerned. This subclause applies regardless of whether a heritage management document is prepared under subclause (5) or a heritage conservation management plan is submitted under subclause (6).*

##### (5) Heritage assessment

*The consent authority may, before granting consent to any development:*

- (a) *on land on which a heritage item is located, or*
- (b) *on land that is within a heritage conservation area, or*
- (c) *on land that is within the vicinity of land referred to in paragraph (a) or (b),*

*require a heritage management document to be prepared that assesses the extent to which the carrying out of the proposed development would affect the heritage significance of the heritage item or heritage conservation area concerned.*

**(6) Heritage conservation management plans**

*The consent authority may require, after considering the heritage significance of a heritage item and the extent of change proposed to it, the submission of a heritage conservation management plan before granting consent under this clause.*

**(7) Archaeological sites**

*The consent authority must, before granting consent under this clause to the carrying out of development on an archaeological site (other than land listed on the State Heritage Register or to which an interim heritage order under the Heritage Act 1977 applies):*

- (a) notify the Heritage Council of its intention to grant consent, and*
- (b) take into consideration any response received from the Heritage Council within 28 days after the notice is sent.*

**(8) Aboriginal places of heritage significance**

*The consent authority must, before granting consent under this clause to the carrying out of development in an Aboriginal place of heritage significance:*

- (a) consider the effect of the proposed development on the heritage significance of the place and any Aboriginal object known or reasonably likely to be located at the place by means of an adequate investigation and assessment (which may involve consideration of a heritage impact statement), and*
- (b) notify the local Aboriginal communities, in writing or in such other manner as may be appropriate, about the application and take into consideration any response received within 28 days after the notice is sent.*

...

Clause 5.10 set out above is potentially applicable to the Project with respect to direct disturbance or indirect effects (e.g. subsidence) that could impact on Aboriginal or historic heritage sites located within or adjacent to the Development Application area.

Aboriginal and historic heritage assessments have been conducted for the Project and are provided in Appendices F and G and, where relevant, identified suitable management and mitigation measures for potential direct and indirect impacts of the Project.

Accordingly, the IPC or the Minister can be satisfied as to these matters.

Clause 7.1 outlines considerations relating to the provision of essential services:

**7.1 Essential services**

- (1) Development consent must not be granted to development unless the consent authority is satisfied that any of the following services that are essential for the proposed development are available or that adequate arrangements have been made to make them available when required:*

- (a) the supply of water,*
- (b) the supply of electricity,*
- (c) the disposal and management of sewerage.*

...

Adequate arrangements have been made for the provision of essential services for the Project as follows:

- Underground and surface operations would continue to use a combination of potable and recycled water. Potable water would be supplied by Sydney Water. Recycled water would continue to be sourced from underground workings, including the adjacent Nebo workings. Water supply for ventilation shaft construction would be provided by pipeline located within existing disturbed corridors (subject to agreement from WaterNSW), and/or water truck. Top up water for the gas plant would be supplied by water truck and/or from the underground fire water system (Section 3.10.6).
- The Endeavour Energy high voltage distribution network would continue to supply the majority of electricity requirements for the Project, with electricity for the Project underground mining operations distributed via the existing substation located adjacent to the Kemira Valley Coal Loading Facility (Section 3.10.3). South32 has consulted with Endeavour Energy in regard to electricity requirements for the Project (Section 5).

Accordingly, the IPC or the Minister can be satisfied as to these matters.



Clause 7.2 outlines considerations relating to the protection of biodiversity:

**7.2 Biodiversity protection**

- (1) *The objective of this clause is to maintain terrestrial and aquatic biodiversity, including:*
  - (a) *protecting native fauna and flora, and*
  - (b) *protecting the ecological processes necessary for their continued existence, and*
  - (c) *encouraging the recovery of native fauna and flora, and their habitats, and*
  - (d) *protecting water quality within drinking water catchments.*
- (2) *This clause applies to land identified as “sensitive land” on the Natural Resources—Biodiversity Map.*
- (3) *Before determining a development application for land to which this clause applies, the consent authority must consider any adverse impact of the proposed development on the following:*
  - (a) *native ecological communities,,*
  - (b) *the habitat of any threatened species, populations or ecological community,*
  - (c) *regionally significant species of fauna and flora or habitat,*
  - (d) *habitat elements providing connectivity,*
  - (e) *water quality within drinking water catchments.*
- (4) *Development consent must not be granted to development on land to which this clause applies unless the consent authority is satisfied that:*
  - (a) *the development is designed, sited and will be managed to avoid any adverse environmental impact, or*
  - (b) *if that impact cannot be avoided—the development is designed, sited and will be managed to minimise that impact, or*
  - (c) *if that impact cannot be minimised—the development will be managed to mitigate that impact.*

Clause 7.2 set out above is potentially applicable to the Project with respect to direct disturbance or indirect effects that could impact on the diversity and condition of the flora and fauna located within or adjacent to the Development Application area.

Biodiversity and Aquatic Ecology assessments have been undertaken for the Project and are provided in Appendices D and E and, where relevant, identified suitable management and mitigation measures for potential direct and indirect impacts of the Project in regard to biodiversity. The Project would also include the provision of a biodiversity offset strategy that has been developed in consideration of the requirements of the *Framework for Biodiversity Assessment – NSW Biodiversity Offsets Policy for Major Projects* (OEH 2014), the *NSW Addendum to NSW Biodiversity Offsets Policy for Major Projects: Upland swamps impacted by longwall mining subsidence* (OEH 2016a) and the *NSW Biodiversity Conservation Act, 2016* (Sections 6.7 to 6.9).

The Project is situated within the Sydney drinking water catchment, however, the Project would not have a significant adverse impact on the quality or yield of water in the Sydney drinking water catchment Special Area storages and would incorporate suitable water quality offset measures and payment for any induced ancillary surface water take, where applicable (Sections 6.5 and 6.6). The quality of water within the Cordeaux River and Cordeaux Dam would be maintained.

Accordingly, the IPC or the Minister can be satisfied as to these matters.

Clause 7.5 outlines considerations relating to earthworks:

**7.5 Earthworks**

- (1) *The objectives of this clause are as follows:*
  - (a) *to ensure that any earthworks will not have a detrimental impact on environmental functions and processes, neighbouring uses, cultural or heritage items or features of the surrounding land,*
  - (b) *to allow earthworks of a minor nature without separate development consent.*
- (2) *Development consent is required for earthworks, unless:*
  - (a) *the work is exempt development under this Plan or another applicable environmental planning instrument, or*
  - (b) *the work is ancillary to other development for which development consent has been given.*
- (3) *Before granting development consent for earthworks, the consent authority must consider the following matters:*

- (a) *the likely disruption of, or any detrimental effect on, existing drainage patterns and soil stability in the locality,*
- (b) *the effect of the proposed development on the likely future use or redevelopment of the land,*
- (c) *the quality of the fill or of the soil to be excavated, or both,*
- (d) *the effect of the proposed development on the existing and likely amenity of adjoining properties,*
- (e) *the source of any fill material and the destination of any excavated material,*
- (f) *the likelihood of disturbing relics,*
- (g) *proximity to and potential for adverse impacts on any watercourse, drinking water catchment or environmentally sensitive area.*

Earthworks involved with the development of additional ventilation shafts for Area 6 would include the installation of erosion and sediment control infrastructure. Excavated material resulting from construction of the shafts would be used as engineering fill and for the construction of sediment dams. Excess material would be stockpiled on-site, revegetated and used for future rehabilitation of the shaft site upon decommissioning (Section 3.4.3).

Accordingly, the IPC or the Minister can be satisfied as to these matters.

## **A6.5 STRATEGIC PLANNING DOCUMENTS**

### **A6.5.1 Development Control Plans**

Clause 11 of the State and Regional Development SEPP indicates that development control plans (whether made before or after the commencement of the SEPP) do not apply to State Significant Development, and hence do not apply to the Project.

### **A6.5.2 WaterNSW Principles for Managing Mining and Coal Seam Gas Impacts in Declared Catchment Areas**

The *Water NSW Principles for Managing Mining and Coal Seam Gas Impacts in Declared Catchment Areas* (WaterNSW, undated) were developed to protect the drinking water catchments and Special/Controlled areas, and catchment infrastructure works in relation to the management of mining impacts.

The *Water NSW Principles for Managing Mining and Coal Seam Gas Impacts in Declared Catchment Areas* is focussed around six key principles to achieve this outcome:

1. *Protection of water quantity*
2. *Protection of water quality in Declared Catchment Areas*
3. *Protection of human health in Declared Catchment Areas*
4. *Protection of water supply infrastructure*
5. *Protection of ecological integrity in Special Areas*
6. *Sound and robust evidence regarding environmental impacts*

The Project is generally consistent with the principles of the *Water NSW Principles for Managing Mining and Coal Seam Gas Impacts in Declared Catchment Areas* as:

- The Project has adopted a number of longwall design constraints including setbacks from the Avon and Cordeaux Dam walls, a minimum 300 m longwall setback from the existing dam FSLs, setbacks from named watercourses (i.e. Cordeaux River, Avon River and Donalds Castle Creek) and is also avoiding the direct undermining of mapped 'key stream features' identified during site investigations (Section 3.5.3). The Project would not have a significant adverse impact on the quality or yield of water in the Sydney drinking water catchment Special Area storages and would incorporate suitable water quality offset measures and payment for any induced ancillary surface water take, where applicable (Sections 6.5 and 6.6).
- Project surface upgrades are not expected to impact the water quality of the surface catchment, and management measures would be in place to contain or remove any potential pollutants (Section 6.6).
- A PHA has been conducted to assess the potential hazards associated with the Project (Section 6.22 and Appendix N).
- The Project has been developed in a manner that has considered potential subsidence impacts to the water supply infrastructure, including Cordeaux Dam and Avon Dam (Section 6.3).

- The Project includes Biodiversity and Ecology assessments and a proposal for offsetting unavoidable impacts on ecology in consideration of the requirements of the *Framework for Biodiversity Assessment – NSW Biodiversity Offsets Policy for Major Projects* (OEH 2014), the *NSW Addendum to NSW Biodiversity Offsets Policy for Major Projects: Upland swamps impacted by longwall mining subsidence* (OEH 2016a) and the *NSW Biodiversity Conservation Act, 2016* (Sections 6.7 to 6.9) and other compensatory measures (Sections 6 and 8 and Appendices D and E).
- The Project would incorporate appropriate monitoring measures to assess the potential environmental impacts over the life of the Project (Section 6).

#### A6.5.3 Special Areas Strategic Plan of Management 2015

The *Special Areas Strategic Plan of Management 2015* (WaterNSW and OEH, 2015) was developed to provide the strategic framework for the planning, delivery and reporting of land management activities within the Special Areas to secure high quality water for the storages, maintain ecosystem integrity and manage cultural values.

The *Special Areas Strategic Plan of Management 2015* contains nine key strategic management objectives:

- *Pollutants are controlled so that impacts on water quality and natural and cultural values are minimised.*
- *Surface and groundwater sources and their interactions will be better understood so decisions are made that seek to minimise impacts on Special Areas hydrological integrity.*
- *Pests and weeds are controlled so that impacts on water quality and ecological integrity are minimised.*
- *Measures are in place to minimise the impacts of built assets within the Special Areas on water quality, ecological integrity and cultural values.*
- *Access to the Special Areas is controlled to protect water quality and ecological integrity while providing for appropriate visitor opportunities.*
- *Fire management within Special Areas maximises protection of life and property, and minimises impact on water quality and ecological integrity.*

- *Ecological integrity including threatened plant and animal species, endangered populations, endangered ecological communities, geodiversity and other natural values are maintained.*
- *Cultural heritage values are acknowledged and conserved, and community associations supported.*
- *Management of Special Areas is supported by appropriate policy, planning and evaluation.*

The Project is generally consistent with the principles of the *Special Areas Strategic Plan of Management 2015* as:

- The Project has been developed to consider potential sources of pollution from both surface and underground operations, and would implement appropriate mitigation and control measures to avoid potential risks.
- The Project has been developed using the best available science and assessment methods to understand the potential impacts on both groundwater and surface water (Sections 6.5 and 6.6 and Appendices B and C);
- Pest and weed control measures would continue to be implemented for the Project in accordance with current control measures.
- The Project would continue to operate in accordance with the existing Bushfire Management Plan, that would be updated as required for the Project (Section 6.22.3).
- The Project includes Biodiversity and Ecology assessments and a proposal for offsetting unavoidable impacts on ecology in consideration of the requirements of the *Framework for Biodiversity Assessment – NSW Biodiversity Offsets Policy for Major Projects* (OEH 2014), the *NSW Addendum to NSW Biodiversity Offsets Policy for Major Projects: Upland swamps impacted by longwall mining subsidence* (OEH 2016a) and the *NSW Biodiversity Conservation Act, 2016* (Sections 6.7 to 6.9) and other compensatory measures (Sections 6 and 8 and Appendices D and E).
- The Project includes Aboriginal and historic heritage assessments, which would identify suitable management and mitigation measures for potential direct and indirect impacts of the Project (Section 6 and Appendices F and G).
- South32 would continue to consult with relevant authorities in regard to the management of Special Areas (Section 5).

#### A6.5.4 A Plan for Growing Sydney

*A Plan for Growing Sydney* was released by the DPE in December 2014 and applies to the Sydney Metropolitan Area, inclusive of 41 local government areas. This area includes, of relevance to the Project, the Wollondilly LGA which encompasses the majority of proposed underground mining Area 6 and associated infrastructure.

This document aims to provide a framework for growth and managing competing land uses, and outlines four key goals to be achieved (NSW Government, 2014):

- *A competitive economy with world-class services and transport.*
- *A city of housing choice with homes that meet our needs and lifestyles.*
- *A great place to live with communities that are strong, healthy and well connected.*
- *A sustainable and resilient city that protects the natural environment and has a balanced approach to the use of land and resources.*

The Project is generally consistent with the principles of *A Plan for Growing Sydney* as:

- The Project would benefit the regional economy through creation of employment opportunities and regional expenditure (Section 9.5 and Appendix L).
- Illawarra Coal is a local company that has been mining metallurgical coal for steelmaking for over 80 years. The Project would continue to coexist with the local community as well as with the wider land uses within the region.
- The Project has been developed to incorporate comprehensive management and monitoring measures in regard to maintaining the natural environment (Section 4 and 8).

#### A6.5.5 South East and Tablelands Regional Plan 2036

The *South East and Tablelands Regional Plan 2036* (South East and Tablelands Plan) was released by the DPE in 2017, and covers a wide region, including Canberra, Bega and Bateman's Bay. This area includes, of relevance to the Project, the Wingecarribee LGA which encompasses proposed underground mining Area 5 and associated infrastructure.

The South East and Tablelands Plan has four main regional goals (NSW Government, 2017):

- *A connected and prosperous economy.*
- *A diverse environment interconnected by biodiversity corridors.*
- *Healthy and connected communities.*
- *Environmentally sustainable housing choices.*

The Project is generally consistent with the principles of the South East and Tablelands Plan as:

- The Project would benefit the economy through the creation of employment opportunities and regional expenditure (Section 9.4 and Appendix L).
- The Project incorporates a range of strategies to manage and minimise potential impacts on the surrounding environment (Section 4 and Section 8).
- The Project would continue to coexist with the community, and has been developed in a manner that has both considered the potential economic and social impacts to the region and would promote community growth and development (Appendix K).

#### A6.5.6 Western City District Plan

*A Western City District Plan* (Western City Plan) applies to the Western City District, inclusive of 8 local government areas. This area includes, of relevance to the Project, the Wollondilly LGA which encompasses the majority of proposed underground mining Area 6 and associated infrastructure.

The Western City Plan has five main strategic themes for the region, namely infrastructure and collaboration, liveability, productivity, sustainability and implementation (NSW Government, 2018). Each of these strategic themes is underpinned by numerous planning strategies.

The Project is generally consistent with the Western City Plan as:

- The Project has been developed in a manner that considers coexistence with the community and associated infrastructure, including with users of the road transport network (Section 6).



- The Project would facilitate local and regional employment and facilitate economic development opportunities (Appendix K).
- The Project incorporates relevant ecologically sustainable development (ESD) considerations (Section 9.3.5).

#### **A6.5.7 Wollongong 2022: Our Community Strategic Plan 2012-2022**

The *Wollongong 2022: Our Community Strategic Plan 2012-2022* (Wollongong Strategic Plan) provides a future direction for the community within the Wollongong LGA.

The Wollongong Strategic Plan has six goals for the region (Wollongong City Council, 2012):

- *We value and protect our environment.*
- *We have an innovative and sustainable economy.*
- *Wollongong is a creative, vibrant city.*
- *We are a connected and engaged community.*
- *We are a healthy community in a liveable city.*
- *We have sustainable, affordable and accessible transport.*

The Project is generally consistent with the Wollongong Strategic Plan as:

- The Project incorporates a range of strategies to manage and minimise potential impacts on the surrounding environment (Section 6).
- Illawarra Coal is a local company that has been operating in the region for over 80 years. The Project would continue to benefit the economy through the development of employment opportunities and regional expenditure (Section 9.4 and Appendix L).
- The Project would be developed in a manner that incorporates community engagement through the Project EIS consultation program (Section 5) as well as the public exhibition of the EIS document.

#### **A6.5.8 Wingecarribee Local Planning Strategy 2015-2031**

The *Wingecarribee Local Planning Strategy 2015-2031* (Wingecarribee Planning Strategy) has five main strategic themes for the region, namely leadership, people, places, environment and the economy (Wingecarribee Shire Council, 2016). Each of these strategic themes is underpinned by numerous goals and planning strategies.

The Project is generally consistent with the Wingecarribee Planning Strategy as:

- Illawarra Coal has been a leader in the metallurgical coal industry within the region for over 80 years, and would continue to do so in a manner consistent with the objectives of the Wingecarribee LEP and Wingecarribee Planning Strategy.
- The Project would benefit the economy through the creation of employment opportunities and regional expenditure (Section 9.4 and Appendix L).
- The Project has been developed in a manner that considers the potential impacts on the surrounding environment and heritage items, and mitigation measures and management measures are proposed, where applicable (Section 6).

#### **A6.5.9 Wollondilly Community Strategic Plan 2033**

The *Wollondilly Community Strategic Plan 2033* (Wollondilly Strategic Plan) focuses on five main strategic themes, namely sustainable and balanced growth, management and provision of infrastructure, caring for the environment, looking after the community and efficient and effective council (Wollondilly Shire Council, 2017). Each of these strategic themes is underpinned by numerous outcomes and strategies.

The Project is generally consistent with the Wollondilly Strategic Plan as:

- The Project would continue to benefit the economy through the creation of employment opportunities and the generation of direct and indirect revenue in the region (Section 9.4 and Appendix L).

- The Project has been developed in a manner that considers the potential impacts on the surrounding environment, and mitigation measures and management measures are proposed, where applicable (Section 6).

#### **A6.5.10 Greater Sydney Local Strategic Plan 2016-2021**

The *Greater Sydney Local Strategic Plan 2016-2021* (Greater Sydney Strategic Plan) applies to the Greater Sydney region, inclusive of 43 local government areas. This area includes, of relevance to the Project, the Wollondilly LGA which encompasses the majority of proposed underground mining Area 6 and associated infrastructure.

The Greater Sydney Strategic Plan outlines four key goals to be achieved (Greater Sydney Local Land Services, 2016):

- *Resilient, self-reliant and prepared local communities.*
- *Biosecure, profitable, productive and sustainable primary industries.*
- *Healthy, diverse and connected natural environments.*
- *Board members and staff who are collaborative, innovative and commercially focused.*

The Project is generally consistent with goals described in the Greater Sydney Strategic Plan as:

- The Project would benefit current and future generations through the expansion of employment and regional expenditure associated with the Project (Section 9.5).
- Flora and fauna, subsidence, water resources, road transport, historic heritage, noise and air quality impact assessments have been conducted for the Project and measures to manage and mitigate impacts are discussed in Section 6.

#### **A6.5.11 NSW Climate Change Policy Framework**

The NSW Government's *NSW Climate Change Policy Framework* (OEH, 2016b) commits NSW to the "aspirational long-term objective" of achieving net-zero emissions by 2050. The NSW Government's aspiration long-term objective is consistent with the target of South32's Climate Change Strategy. Project-specific greenhouse gas mitigation measures are described in Section 6.21.

#### **A6.5.12 Guidelines for Developments Adjoining Land Managed by the Office of Environment and Heritage**

The *Guidelines for Developments Adjoining Land Managed by the Office of Environment and Heritage* (Office of Environment & Heritage, 2013) lists the following matters to be considered with respect to proposals adjoining OEH land:

- erosion and sediment control;
- stormwater runoff;
- wastewater;
- management implications relating to pests, weeds and edge effects;
- fire and the location of asset protection zones;
- boundary encroachments and access through OEH lands;
- visual, odour, noise, vibration, air quality and amenity impacts;
- threats to ecological connectivity and groundwater dependent ecosystems; and
- cultural heritage.

The Project is generally consistent with the aims of the *Guidelines for Developments adjoining Land Managed by the Office of Environment and Heritage* as:

- The Project incorporates erosion sediment control measures (for stormwater runoff) designed in consideration of *Managing Urban Stormwater Soils and Construction – Volume 2E – Mines and Quarries* (DECC, 2008).

- There would be no release of wastewater into catchments reporting to the Upper Nepean or Illawarra Escarpment State Conservation Areas.
- Weed and pest management measures would be implemented for the Project to avoid/minimise potential edge effects.
- The Project would continue to operate in accordance with the existing Bushfire Management Plan, that would be updated as required for the Project (Section 6.22.3).
- Access to the Project through the Upper Nepean or Illawarra Escarpment State Conservation Areas would generally not be required, and would be limited as far as is practicable.
- Potential impacts to amenity (including visual, noise and air quality), ecology and groundwater dependent ecosystems are described in Section 6, along with measures to avoid, minimise and offset potential impacts.
- Potential impacts to cultural heritage are described in Appendices F and G, along with management measures.

#### **A6.5.13 Other Relevant NSW Assessment Policies**

A range of NSW assessment policies for various potential environmental aspects are documented in the Project SEARs (Attachment 1). These include policies that pertain to assessment or residual offset methodology (e.g. *NSW Biodiversity Offsets Policy for Major Projects* [OEH, 2014]) and to the application of Project assessment findings (e.g. the *Voluntary Land Acquisition and Mitigation Policy* [NSW Government, 2018]).

Where relevant to assessment of the potential impacts of the Project, the requirements of these policies and the assessed outcomes relative to these policies are presented in Section 6 of the EIS and/or the associated specialist Appendices A to P.

## A6.6 REFERENCES

- Department of Energy and Climate Change (2008). *Managing Urban Stormwater Soils and Construction – Volume 2E – Mines and Quarries.*
- Department of Planning (1995) *Circular B35 State Environmental Planning Policy No. 44 – Koala Habitat Protection.*
- Department of Planning (2011a). *Hazardous Industry Planning Advisory Paper No. 4: Risk Criteria for Land Use Safety Planning.*
- Department of Planning (2011b). *Hazardous Industry Planning Advisory Paper No.6: Hazard Analysis.*
- Department of Planning and Infrastructure (2011). *Multi-Level Risk Assessment.*
- Department of Urban Affairs and Planning and Environmental Protection Agency (1998). *Managing Land Contamination – Planning Guidelines SEPP 55 – Remediation of Land.*
- Greater Sydney Local Land Services (2016) *Greater Sydney Local Strategic Plan 2016-2021.*
- JBS&G (2019). *Dendrobium Mine – Plan for the Future: Coal for Steelmaking Land Contamination Review.*
- NSW Government (2014) *A Plan for Growing Sydney.*
- NSW Government (2017) *South East and Tablelands Regional Plan.*
- NSW Government (2018) *Our Greater Sydney 2056: Draft Western City District Plan – connecting communities.*
- Office of Environment and Heritage (2013). *Guidelines for Developments Adjoining Land Managed by the Office of Environment and Heritage*
- Office of Environment and Heritage (2014). *Framework for Biodiversity Assessment – NSW Biodiversity Offsets Policy for Major Projects.*
- Office of Environment and Heritage (2016a). *Addendum to NSW Biodiversity Offset Policy for Major Projects: Upland swamps impacted by longwall mining subsidence.*
- Office of Environment and Heritage (2016b). *NSW Climate Change Policy Framework.*
- WaterNSW (undated) *WaterNSW Principles for Managing Mining and Coal Seam Gas Impacts in Declared Catchment Areas.*
- WaterNSW and Office of Environment and Heritage (2015) *Special Areas Strategic Plan of Management 2015.*  
Website: [https://www.waternsw.com.au/data/assets/pdf\\_file/0010/119890/Mining-principles.pdf](https://www.waternsw.com.au/data/assets/pdf_file/0010/119890/Mining-principles.pdf)  
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