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Independent Planning Commission

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Cadia Continued Operations Project

Gateway Application GA-74105711 – amendments to the project design and associated disturbance area

Mining and Petroleum Gateway Panel Gateway Certificate Amendment Report

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Defined Terms

ABBREVIATION	DEFINITION
AIP	<u>NSW Aquifer Interference Policy (DPI, 2012)</u>
Applicant	Cadia Holdings Pty Limited (CHPL), a wholly owned subsidiary of Newmont Corporation
BSAL	Biophysical Strategic Agricultural Land
BSAL Protocol	<u>Strategic Regional Land Use Policy – Interim Protocol for Site Verification and Mapping of Biophysical Strategic Agricultural Land (NSW Government, 2013)</u>
DCCEEW	NSW Department of Climate Change, Energy, the Environment and Water
CHPL	Cadia Holdings Pty Limited (the Applicant)
CCOP	Cadia Continued Operations Project
ECM	Ecohydrological Conceptual Model
EP&A Act	<i>Environmental Planning and Assessment Act 1979</i>
GA-74105711	Gateway Certificate Application for the Project dated 30 July 2024. On 25 October 2024, the Mining and Petroleum Gateway Panel determined GA-74105711 by granting a conditional Gateway Certificate.
Gateway Certificate Amendment Application	<u>Cadia Continued Operations Project (Gateway Application GA-74105711) – amendments to the project design and associated disturbance area</u> , submitted to the Mining and Petroleum Gateway Panel via the Department of Planning, Housing and Infrastructure on 3 February 2025
Gateway Certificate Amendment Report	<u>Gateway Report – Amendment Memorandum Cadia Continued Operations Project MS-051_Final v2</u> , prepared for Cadia Holdings Pty Ltd by Minesoils Pty Ltd and dated January 2025
Gateway Panel	Mining and Petroleum Gateway Panel
GDEs	Groundwater dependent ecosystems
ha	Hectares
IESC	Commonwealth Independent Expert Scientific Committee
IPD	Impact Pathway Diagram
LSC	Land and Soil Capability
Material	Material listed in Section 5 of this report
ML	Mining Lease
Project	Cadia Continued Operations Project
Revised GAA	Revised Gateway Application Area as proposed by the Gateway Certificate Amendment Application
Revised GDA	Revised Gateway Disturbance Area as proposed by the Gateway Certificate Amendment Application
SEPP Resources & Energy	<i>State Environmental Planning Policy (Resources and Energy) 2021</i>
Site	The Cadia Continued Operations Project site, as defined in Section 3 of this report
STSFx	Southern Tailings Storage Facility extension

1. Introduction

1. Cadia Holdings Pty Limited (CHPL) (**Applicant**) owns and operates the Cadia mine, located approximately 20 kilometres (km) SSW of Orange in the Central Tablelands region of New South Wales (NSW). The current Project Approval (PA 06_0295) regulates mining operations at the Cadia mine until 30 June 2031. With confirmed mineable resources extending well beyond that date, the Applicant is planning for the continuation of mining operations at the existing Cadia mine beyond 30 June 2031 under the Cadia Continued Operations Project (**Project**).
2. The Project involves the continuation and extension of underground mining. The Applicant has identified that the Project will require a development application for consent under the *Environmental Planning and Assessment Act 1979*.
3. Section 50A of the *Environmental Planning and Assessment Regulation 2021* requires that a development application for consent to mining or petroleum development on certain identified land (including land shown on the [Strategic Agricultural Land Map](#)) must be accompanied by either a gateway certificate, or a site verification certificate that certifies that the land on which the proposed development is to be carried out is not biophysical strategic agricultural land (**BSAL**).
4. The Applicant has identified that the subject land contains BSAL and therefore any future development application for the Project must be accompanied by a Gateway Certificate.
5. On 30 July 2024, the Applicant applied for a Gateway Certificate (**GA-74105711**) for the Project.
6. On 25 October 2024, the Mining and Petroleum Gateway Panel (**Gateway Panel**) determined GA-74105711 by granting a conditional Gateway Certificate.
7. On 3 February 2025, the Applicant wrote to notify the Department of Planning, Housing and Infrastructure of changes to the design of the Project and the resulting need to apply for an amendment to GA-74105711. This was referred to the Gateway Panel which accepted this correspondence, together with additional material provided by the Applicant, as a **Gateway Certificate Amendment Application**.
8. The Gateway Certificate Amendment Application has been submitted to the Gateway Panel pursuant to section 2.35 of the *State Environmental Planning Policy (Resources and Energy) 2021* (**SEPP Resources & Energy**).
9. Professor Neal Menzies, as Chair of the Gateway Panel, nominated himself, Dr Clinton Foster and Mr Hugh Middlemis to constitute the Panel determining the Gateway Certificate Amendment Application in accordance with section 2.40 of the SEPP Resources & Energy.
10. In accordance with section 2.31 of the SEPP Resources & Energy, this report states the Gateway Panel's reasons for the formation of the opinions in the Conditional Gateway Certificate issued on this day for the Project (and the reasons for the making of any recommendations included in the Certificate).
11. The terms of reference for the Gateway Panel in determining this Gateway Certificate Amendment Application are those set out in sub-sections 2.31(4) and 2.31(5) of the SEPP Resources & Energy.

12. The role of the Gateway Panel is to assess the impacts of State significant mining or coal seam gas proposals on strategic agricultural land and its associated water resources before a development application is lodged. The Gateway Panel's assessment is conducted against targeted scientific criteria relating to agricultural and water impacts. There are certain matters that the Gateway Panel cannot take into account, such as historic applications, any past planning law breaches by the Applicant or the reputation of the Applicant. Additionally, the Gateway Panel is not involved in the Department of Planning, Housing and Infrastructure's assessment of State significant development applications.

2. The Gateway Certificate Amendment Application

13. The development description for the Project as originally proposed in GA-74105711 has not changed as a result of the Gateway Certificate Amendment Application other than through the removal of the South Water Storage (as struck-out below) (Gateway Report – Amendment Memorandum, dated January 2025 (**Gateway Certificate Amendment Report**) pg 3):
- Continuation of operations beyond 2031 (for a period of 25 years from the date of approval, nominally to 2050) using existing and approved but not constructed infrastructure and supporting site services
 - Continuation of and extension to underground mining within the Cadia East and Ridgeway mining areas, and associated changes in subsidence surface expression
 - The continued emplacement of tailings from ore processing over the life of the continued operations within existing approved storage facilities and an extension of the existing Southern Tailings Storage Facility (Southern Tailings Storage Facility extension or **STSFx**)
 - ~~Development of an additional water storage on Cadiangullong Creek (known as the South Water Storage) to provide improved security of water supply~~
 - Realignment of portions of Panuara Road and Cadia Road to maintain public safety and account for the above project features
 - Changes to site infrastructure and facilities to enable ongoing mining operations.
14. The Gateway Certificate Amendment Report states (pp 4-5) that:
- Following lodgement of GA 74105711, further detailed field investigations and technical studies, CHPL has identified additional opportunities to reduce the footprint of the CCOP and improve social and environmental outcomes by removing the South Water Storage and the associated infrastructure and construction related disturbance proposed to be constructed on Cadiangullong Creek. The South Water Storage was initially proposed to support water supplies over the extended operational life, however its removal from the Project reduces the Project disturbance area and avoids associated agricultural, water resource, biodiversity, heritage and amenity impacts.*
- Cadia will continue to minimise its operational water demands by reusing water held within the mine's surface water management system. As occurs with the current operations, additional water requirements beyond those that can be serviced through reuse would be sourced from Cadiangullong Dam, Flyers Creek Weir, Cadia Creek Weir, the Belubula River, on-site groundwater bores and treated municipal waste water. As part of Newmont's commitment to minimising operational water usage,*

further studies into the optimisation of water use on site will continue throughout the Project life.

CHPL has also identified additional opportunities to relocate support services, topsoil stockpile areas and ancillary infrastructure elements to reduce the disturbance footprint for the CCOP and optimise the design of project elements, such as the geometric and intersection design of the realigned section of Panuara Road. While these opportunities provide significant overall improvements in Project outcomes, they require the disturbance of minor additional lands located outside of the existing Gateway Application Area (GAA) for the CCOP (namely, in the north east within Forestry Corporation NSW lands, as well as a minor extent to the east at the convergence of Cadia and Panuara Roads).

15. As outlined in Table 1 below, the Revised Gateway Disturbance Area (**Revised GDA**) will result in a direct surface impact to BSAL over an area of up to 411 ha, within the broader 1,101 ha of the Revised GDA. This is a 33 ha increase in impacted BSAL to that covered by GA-74105711 (refer Figure 2).

Table 1 - Change in impact to BSAL within the GDA (source: Gateway Amendment Report Table 1)

GDA	Total Area (ha)	Area of Impacted BSAL	
		ha	%
Original GDA (GA-74105711)	1,253	378	30
Revised GDA (Gateway Certificate Amendment Application)	1,101	411	37
Net change	-152	+33	+7

3. The Revised Gateway Application Area

16. The Revised Gateway Application Area (**Revised GAA**) sits outside the existing Cadia mining leases and is illustrated in Figure 1 below. The area within the Revised GAA that will be disturbed by the Project is the Revised Gateway Disturbance Area (**Revised GDA**) and is also illustrated in Figure 1.
17. Verified and assumed BSAL within the Revised GAA is illustrated in Figure 2 (below).

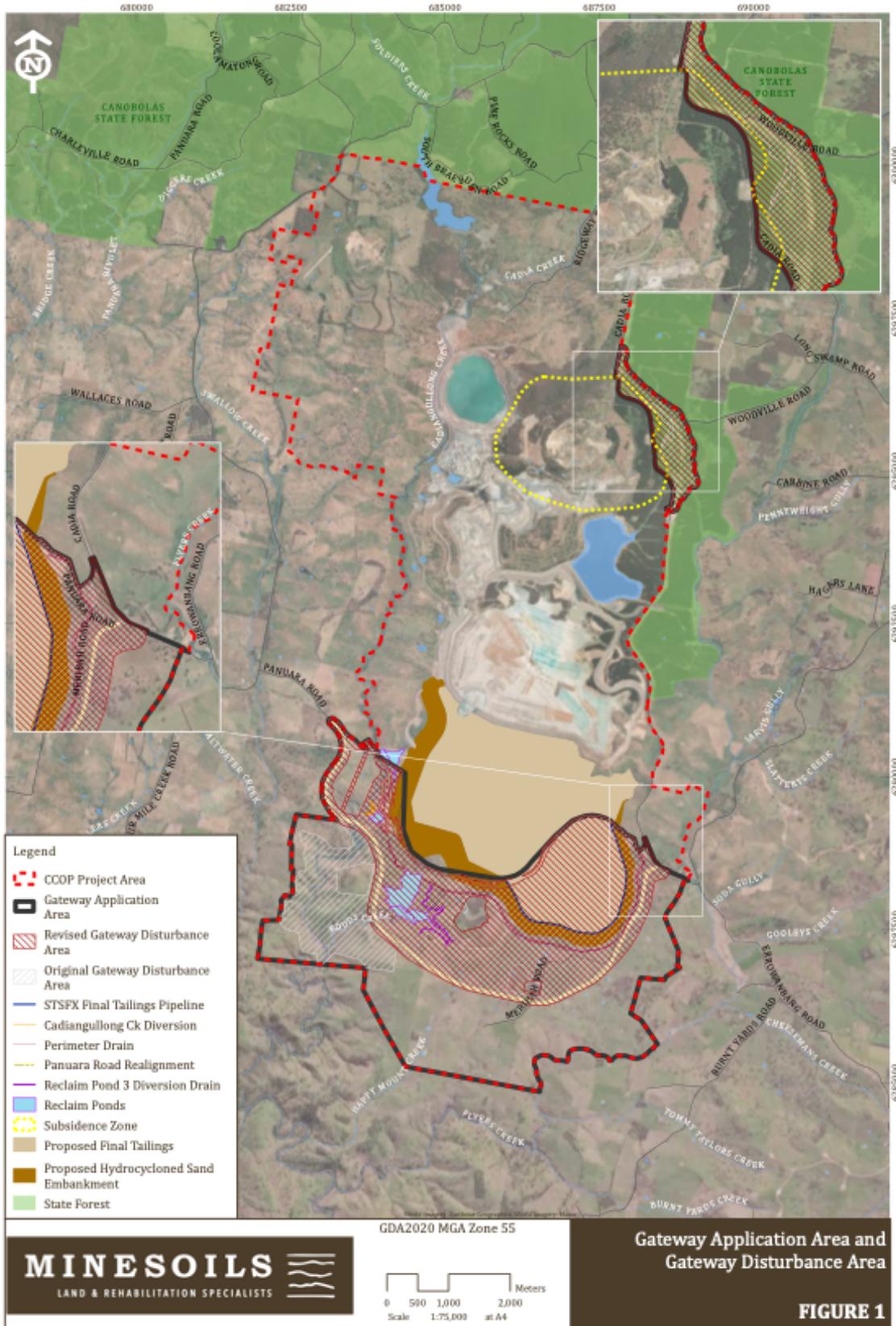


Figure 1 – Revised Gateway Application Area (Source: Gateway Certificate Amendment Report Fig. 1)

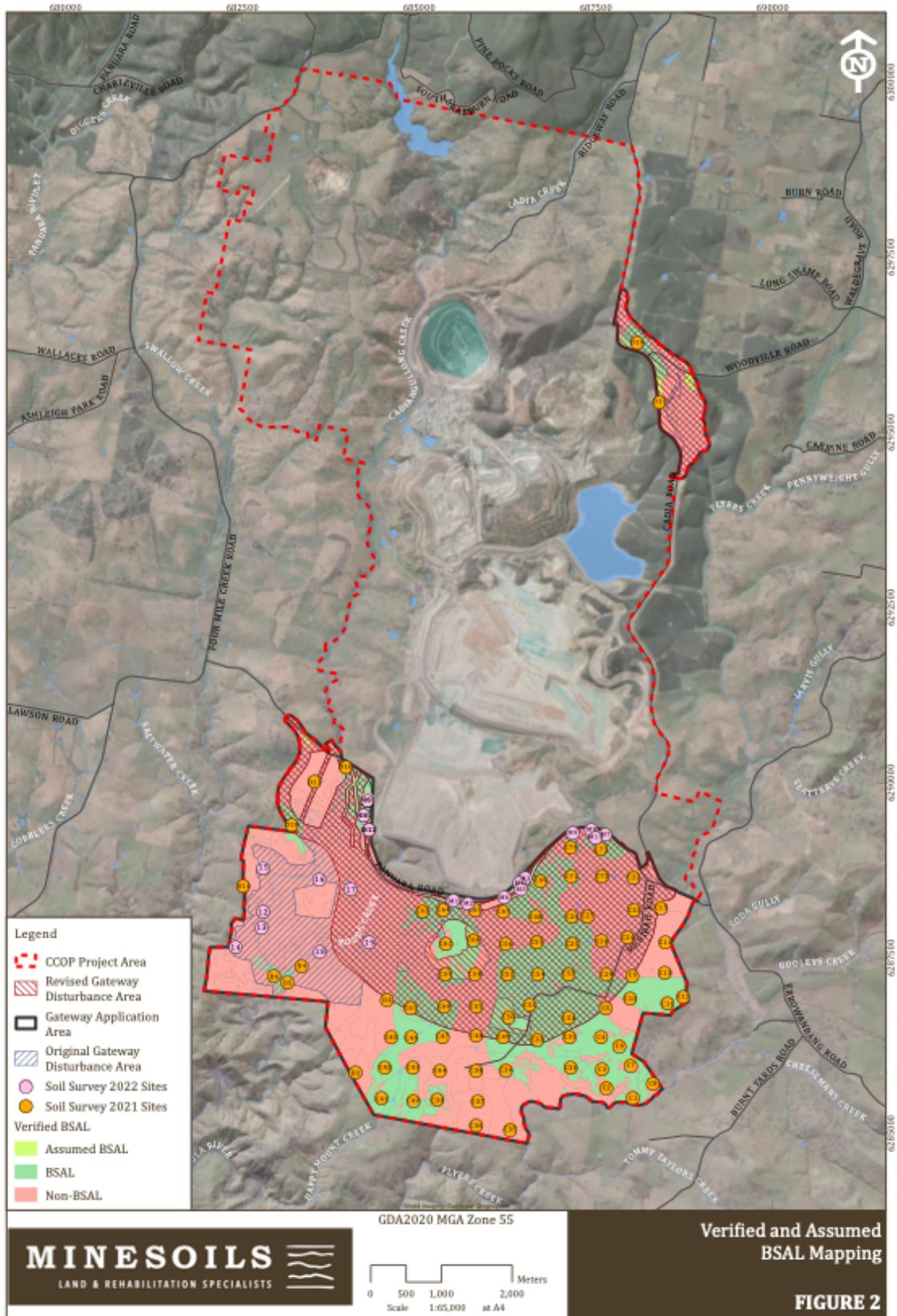


Figure 2 – Verified and Assumed BSAL Mapping (Source: Gateway Certificate Amendment Report Fig. 2)

4. Consultation

18. Section 2.35 of the SEPP Resources & Energy provides for the amendment of gateway certificates on application to the Gateway Panel. It also provides that the Gateway Panel may determine, as it sees fit, whether to refer such amendment applications to the Commonwealth Independent Expert Scientific Committee (**IESC**) and the NSW Minister for Regional Water.
19. GA-74105711 was referred to both of the above parties and the advice received was incorporated into the conditional Gateway Certificate relating to that application.
20. Despite the limited nature and scope of the Gateway Certificate Amendment Application and the likelihood that it would not materially change the advice received with respect to GA-74105711, the Gateway Panel determined on 18 February 2025 that both the IESC and the NSW Minister for Regional Water should be offered the opportunity to update their previous advice:
- updated advice was sought from the NSW Minister for Regional Water (received 24 April 2025); and
 - communication between the respective secretariats of the Gateway Panel and the IESC confirmed that the IESC would not be able to provide updated advice within the required timeframe (section 2.32 of the SEPP Resources & Energy states that the Gateway Panel must determine an application within 90 days of it being made).
21. The Gateway Certificate process is an independent scientific assessment of the impact of new State significant mining and coal seam gas proposals on strategic agricultural land and its associated water resources. The process does not involve public consultation. The Project will also be the subject of a State significant development application that is subject to public consultation in accordance with the *Environmental Planning and Assessment Act 1979 (EP&A Act)*.

5. Material

22. In considering the Gateway Certificate Amendment Application, the Gateway Panel reviewed the following documents (**Material**):
- Cadia Continued Operations Project (Gateway Application GA 74105711) – Notification of amendments to the project design and associated disturbance area, dated 3 February 2025 (**Gateway Certificate Amendment Application**);
 - Gateway Report – Amendment Memorandum Cadia Continued Operations Project, dated January 2025 (**Gateway Certificate Amendment Report**);
 - Advice (including an attached technical assessment by DCCEEW-Water Group) from the NSW Minister for Regional Water, dated 22 April 2025; and
 - [Groundwater Productivity in NSW – 2013](#), NSW Department of Primary Industries (Office of Water).
 - [IESC Information Guidelines Explanatory Note on Impact Pathway Diagrams \(IPD\) and Ecohydrological Conceptual Models \(ECM\)](#).

6. Strategic agricultural land verification

Biophysical Strategic Agricultural Land (BSAL)

23. As described in paragraph 15, the Gateway Certificate Amendment Application confirms that part of the GAA is classified as BSAL in accordance with the BSAL Protocol.
24. The Gateway Panel finds the Applicant's methodology for the verification of BSAL to be in accordance with the BSAL Protocol and that it is acceptable for a Gateway Certificate Amendment Application.
25. The Gateway Certificate Amendment Application states that the GDA covers 1,101 ha and the Project would impact up to 411 ha of BSAL, being an increase of 33 ha on that covered by the current Gateway Certificate.

Critical Industry Cluster land

26. The Gateway Certificate Amendment Application states there is no Critical Industry Cluster land within the GAA. The Gateway Panel accepts this conclusion and notes that Critical Industry Cluster land is confined to the Upper Hunter region of NSW.

7. Consideration of impacts on BSAL

27. The Gateway Panel has considered the proposed development's impact on BSAL, duration of impact and proposed mitigation measures in respect of any such impact in accordance with sub-sections 2.31(4) and (5) of the SEPP Resources & Energy. The Gateway Panel's findings are set out below.

Section 2.31(4)(a)(i) Impacts on the land through surface area disturbance and subsidence

28. The Gateway Panel finds that 411 ha of verified BSAL land will be impacted:
- much of this area is agricultural land that will be buried under the STSFx. In this area, an Agricultural Impact Risk Ranking consequence value of 1 (Severe and/or permanent damage - Irreversible impacts) and probability of A (Almost certain) is appropriate.
 - a smaller area of BSAL land currently used for forestry is located to the northeast of the mine and may be impacted by subsidence. There will be no direct ground disturbance in this area, and the impacts to existing forestry practices are expected to be negligible; an Agricultural Impact Risk Ranking consequence value of 4 (*Minor damage and/or short-term impact to agricultural resources or industries - Can be managed as part of routine operations*) and probability of B (*Likely*) is appropriate.
29. The Gateway Panel recommends that the EIS:
- gives consideration to the long-term monitoring and maintenance of the STSFx with respect to the potential for settling/subsidence to influence water flows, potentially causing water to concentrate in defined flow paths and reducing the overall stability of the landform;
 - establishes a baseline to allow any subsidence in the northeastern area over the life of the Project to be determined; and
 - considers opportunities for additional avoidance and reductions in impacts to BSAL.

Section 2.31(4)(a)(ii) Impacts on soil fertility, effective rooting depth or soil drainage

30. The Gateway Panel finds that construction of the STSFx will result in burial of the existing agricultural land surface. A new land surface consisting of tailings material will have altered soil fertility and soil drainage. Effective rooting depth cannot be estimated on the basis of existing information. It is anticipated that land in the tailings storage area (STSFx tailings area and tailings embankment) will be permanently removed from agricultural land use.
31. The Gateway Panel recommends that the EIS includes a management plan to ensure that the land proposed to be temporarily disturbed by the Application is rehabilitated to the highest practically achievable Land and Soil Capability (LSC) class appropriate for agriculture at the end of the Project.

Section 2.31(4)(a)(iii) Increases in land surface micro-relief, soil salinity, rock outcrop, slope and surface rockiness or significant changes to soil pH

32. The Gateway Panel finds that construction of the STSFx will result in the existing land surface being buried and a new surface consisting of tailings material being created. This new surface is likely to have reduced micro-relief and reduced surface rockiness without rock outcrops. Levels of soil salinity and soil pH cannot be estimated on the basis of existing information.
33. The Gateway Panel recommends that the EIS addresses the matters identified in section 2.31(4)(a)(i) and (ii).

Section 2.31(4)(a)(iv) Impacts on highly productive groundwater

34. The Gateway Panel finds that the Revised GDA directly overlies mapped areas of the Orange Basalt Groundwater Source, which is classified as a highly productive aquifer. Although there is evidence to indicate that the Orange Basalt may be discontinuous in these areas, and may potentially not meet the high yield criterion (>5 L/s), the Panel notes advice from DCCEEW-Water Group that the highly productive categorisation applies to the whole of a groundwater resource as defined in a water sharing plan, not to the specific groundwater conditions that may be able to be mapped at a particular location. The Panel finds that the Gateway Amendment Report does not provide an assessment of potential groundwater impacts consistent with AIP requirements, as required by the SEPP, although it reports that such an assessment is in progress.
35. The Gateway Panel recommends that the EIS:
- demonstrates an improved understanding of surface water and groundwater resources, surface water-groundwater interactions, and groundwater dependent ecosystems (GDEs), including:
 - relevant baseline information on water quality, hydrological connectivity and flow regimes;
 - confirming the geospatial distribution of the Orange Basalt within the Revised GAA;
 - the results of site-specific investigations to identify and map the presence, and assess the groundwater-dependence, of any aquatic, terrestrial and/or subterranean GDEs in and near the Revised GAA;
 - describes proposed Project activities in more detail and develops an ecohydrological conceptual model (ECM) to describe how hydrological components (surface water and groundwater) relate to ecological ones (e.g., animal and plant species, communities and ecosystems);

- uses the ECM to generate one or more impact pathway diagrams (IPDs) to demonstrate a sound understanding of how and where the Project may impact water resources and related environmental assets;
- includes a groundwater impact assessment prepared in accordance with the Groundwater Assessment Toolbox for State Significant Development/State Significant Infrastructure (DPE 2022) which presents the minimum requirements for the assessment of the Project against the minimal impact considerations of the AIP;
- identifies and quantifies potential surface and groundwater impacts, including an assessment of:
 - the likely extent and magnitude of groundwater level and water quality changes from underground mining, tailings deposition and water management infrastructure, including construction and operation of the STSFx;
 - changes to hydraulic connections between aquifers, especially in the subsidence zones;
 - additional water take requirements during and post mining;
 - drawdown and water quality impacts to GDEs, culturally significant sites and water supply works (including landholder bores and licensed water users);
 - the ability to obtain additional water entitlements where required;
- includes a cumulative impact assessment that explicitly considers the existing Cadia Valley Operations (**CVO**) project and other relevant land and water uses in and near the Project area.
- sets out proposed impact avoidance and mitigation measures; and
- includes a detailed description of a monitoring program to assess the effectiveness of the avoidance and mitigation strategies and detect any residual impacts.

Section 2.31(4)(a)(v) Fragmentation of agricultural land uses

36. The Gateway Panel finds that the Gateway Certificate Amendment Application will not result in the fragmentation of agricultural land uses as there will be a permanent 411 ha reduction in the area of verified/assumed BSAL land bounding the existing mine. The Application therefore meets the criterion and no recommendations have been made.

Section 2.31(4)(a)(vi) Reduction in the area of BSAL

37. The Gateway Panel finds that the Gateway Certificate Amendment Application will result in a permanent 411 ha reduction in the area of verified/assumed BSAL land.
38. The Gateway Panel recommends that the EIS addresses the matters identified in section 2.31(4)(a)(i) and (ii) and (iv).

Section 2.31(5)(a) Duration of any impacts

39. The Gateway Panel finds that the impacts on BSAL:
- will be permanent and severe in the STSFx area to the south of the existing mine; and
 - will be permanent in the area to the north-east of the existing mine, and while they are unlikely to substantially alter the forestry production system, they will very likely permanently impact the highly productive Orange Basalt Groundwater Source, as mapped by the former NSW Department of Primary Industries (Office of Water) in [Groundwater Productivity in NSW – 2013](#).
40. The Gateway Panel recommends that the EIS addresses the matters identified in section 2.31(4)(a)(i) and (ii) and (iv).

Section 2.31(5)(b) Proposed mitigation measures in respect of any impacts

41. No mitigation measures are proposed for the STSFx area. In other areas soil stripping and reuse will be implemented to mitigate impacts.
42. The Gateway Panel recommends that the EIS:
- includes a management plan to ensure that the land proposed to be temporarily disturbed by the Gateway Certificate Amendment Application is rehabilitated to a Land and Soil Capability (LSC) class appropriate for agriculture at the end of the Project.
 - includes management/mitigation plans for groundwater and connected surface water systems consistent with AIP requirements.

8. Consideration of impacts on Critical Industry Cluster land

43. The Gateway Panel has considered the Gateway Certificate Amendment Application's impact on Critical Industry Cluster land, as well as the duration of impact and proposed mitigation measures in respect of any such impact in accordance with sub-sections 2.31(4) and (5) of the SEPP Resources & Energy.
44. The Gateway Certificate Amendment Report states that there is no Critical Industry Cluster land within the Revised GAA. The Gateway Panel accepts this finding, noting that Critical Industry Cluster land is confined to the Upper Hunter region of NSW, and therefore finds that the proposed development will have no impact on such land:

Section 2.31 (4)(b)(i) Any impacts on the land through surface area disturbance and subsidence

45. Nil impacts.

Section 2.31 (4)(b)(ii) Reduced access to, or impacts on, water resources and agricultural resources

46. Nil impacts.

Section 2.31 (4)(b)(iii) Reduced access to support services and infrastructure

47. Nil impacts.

Section 2.31 (4)(b)(iv) Reduced access to transport routes

48. Nil impacts.

Section 2.31 (4)(b)(v) The loss of scenic and landscape values

49. Nil impacts.

Section 2.31 (5)(a) Duration of any impacts

50. Not applicable.

Section 2.31 (5)(b) Proposed mitigation measures in respect of any impacts

51. Not applicable.

9. Determination

52. The Gateway Panel has assessed the proposed development as described in the Gateway Certificate Amendment Application against the relevant criteria set out in section 2.31 of the SEPP Resources & Energy and has had regard to the duration of potential impacts and any proposed avoidance, mitigation, offset or rehabilitation measures.
53. Based on its consideration of the Material, the Gateway Panel is of the opinion that the proposed development:
- does not meet the following relevant criteria and therefore may significantly reduce the agricultural productivity of the impacted BSAL in relation to those criteria:
 - section 2.31(4)(a)(i)
 - section 2.31(4)(a)(ii)
 - section 2.31(4)(a)(iii)
 - section 2.31(4)(a)(iv)
 - section 2.31(4)(a)(vi)
 - meets the following relevant criterion in relation to the fragmentation of agricultural land uses:
 - section 2.31(4)(a)(v)
 - meets the following relevant criteria and therefore will not have a significant impact on a Critical Industry:
 - section 2.31(4)(b)(i)
 - section 2.31(4)(b)(ii)
 - section 2.31(4)(b)(iii)
 - section 2.31(4)(b)(iv)
 - section 2.31(4)(b)(v)
54. Overall, the Gateway Panel is of the opinion that the proposed development does not meet all of the relevant criteria set out above and has therefore determined the application by issuing a conditional Gateway Certificate in accordance with section 2.31 of the SEPP Resources & Energy.
55. The reasons for the formation of this opinion are set out in sections 7 and 8 of this report.



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Petroleum Gateway Panel



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