# **Development Consent**

# Section 89E of the Environmental Planning and Assessment Act 1979

As delegate for the Minister for Planning, the Planning Assessment Commission of NSW approves the development application referred to in Schedule 1, subject to the conditions in Schedules 2 to 6.

These conditions are required to:

- prevent, minimise, and/or offset adverse environmental impacts;
- set standards and performance measures for acceptable environmental performance;
- require regular monitoring and reporting; and
- provide for the ongoing environmental management of the development.

| Member of the Commission | Member of the Commission          |  |
|--------------------------|-----------------------------------|--|
|                          |                                   |  |
| Sydney                   | 2015                              |  |
|                          | SCHEDULE 1                        |  |
| Application Number:      | SSD_5581                          |  |
| Applicant:               | Centennial Springvale Pty Limited |  |
| Approval Authority:      | Minister for Planning             |  |
| Land:                    | See Appendix 1                    |  |
| Development:             | Springvale Mine Extension Project |  |
|                          |                                   |  |

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#### DEFINITIONS

Adaptive management includes monitoring subsidence effects and impacts and, Adaptive management based on the results, modifying the mine plan as mining proceeds to ensure that the effects, impacts and/or associated environmental consequences remain within the predicted and/or designated ranges and in compliance with the conditions of this consent The review required by condition 4 of Schedule 6 Annual Review Centennial Springvale Pty Limited and Springvale SK Kores Pty Limited, or any Applicant other person entitled to benefit from this consent Approved Mine Plan The mine plan depicted in the figure in Appendix 2 BCA Building Code of Australia **Built features** Includes any building or work erected or constructed on land, and includes dwellings and infrastructure such as any formed road, street, path, walk, or driveway; and any pipeline, water, sewer, telephone, gas or other service main CCC **Community Consultative Committee** Cliff Continuous rock face, including overhangs, having a minimum length of 20 metres, a minimum height of 10 metres and a minimum slope of 2 to 1 (>  $63.4^{\circ}$ ) Conditions of this consent Conditions contained in Schedules 2 to 6 inclusive The demolition of buildings or works, carrying out of works and erection of Construction buildings covered by this consent Lithgow City Council Council Australian Bureau of Statistics Consumer Price Index CPI Day The period from 7 am to 6 pm on Monday to Saturday, and 8 am to 6 pm on Sundays and Public Holidays Department of Planning and Environment Department Springvale Mine Extension Project, as described in the EIS Development EIS Environmental Impact Statement titled Springvale Mine Extension Project -State significant Development 5594 (dated April 2014) including the associated Response to Submissions (dated September 2014), and the following additional information: Additional Simulations of the Regional Water Quality Impact Assessment Model (25 March 2015) undertaken by Jacobs Group (Australia) Limited. Springvale Colliery Mine Extension Project, Economic Impact Assessment (March 2015) undertaken by Aigis Group. The environmental consequences of subsidence impacts, including: damage to Environmental consequences built features; loss of surface water flows to the subsurface; loss of standing pools; adverse water quality impacts; cliff falls; rock falls; damage to Aboriginal heritage sites; impacts on aquatic ecology; and ponding. EPA Environment Protection Authority EP&A Act Environmental Planning and Assessment Act 1979 Environmental Planning and Assessment Regulation 2000 **EP&A Regulation** Environment Protection Licence issued under the Protection of the Environment EPL **Operations Act 1997** Evenina The period from 6 pm to 10 pm Feasible Feasible relates to engineering considerations and what is practical to build or to implement First workings Extraction of coal by bord and pillar workings and the like GDF Groundwater dependent ecosystem Heritage item An item defined under the Heritage Act 1977 and/or an Aboriginal Object or Aboriginal Place as defined under the National Parks and Wildlife Act 1974 A set of circumstances that: Incident causes or threatens to cause material harm to the environment; and/or breaches or exceeds the limits or performance measures/criteria in this consent INP NSW Industrial Noise Policy (NSW EPA, 2000) In general, the definition of land is consistent with the definition in the EP&A Act. Land However, in relation to the noise and air quality conditions in Schedule 4 it means the whole of a lot, or contiguous lots owned by the same landowner, in a current plan registered at the Land Titles Office at the date of this consent Material harm to the environment Actual or potential harm to the health or safety of human beings or to ecosystems that is not trivial Minewater Water that accumulates within, or drains from, active mining areas, emplacements, stockpiles, tailings dams and infrastructure areas Extraction, processing, handling and storage of coal on the site Mining operations Minister for Planning, or delegate Minister Minor Not very large, important or serious

NSW Government Department of Planning and Environment Minor cliff A continuous rock face, including overhangs, which has a: minimum length of 20 metres and a height between 5 metres and 10 metres: and minimum slope of 2 to 1 (> 63.4°) Mitigation Activities associated with reducing the impacts of the development prior to or during those impacts occurring Negligible Small and unimportant, such as to be not worth considering Night The period from 10 pm to 7 am, Monday to Saturday, 10 pm to 8 am on Sundays and Public Holidavs NOW New South Wales Office of Water Department of Trade & Investment, Regional Infrastructure & Services **NSW Trade & Investment** OEH Office of Environment and Heritage Pagoda formations Distinctive smooth or platy conical sandstone formations found in the Blue POEO Act Mountain Region of NSW Protection of the Environment Operations Act 1997 Privately-owned land Land that is not owned by a public agency, a mining company (or its subsidiary) or an electricity generator Public infrastructure Linear and related infrastructure and the like that provides services to the general public, such as roads, railways, water supply, drainage, sewerage, gas supply, electricity, telephone, telecommunications, etc Reasonable Reasonable relates to the application of judgement in arriving at a decision, taking into account: mitigation benefits, cost of mitigation versus benefits provided, community views and the nature and extent of potential improvements The costs agreed between the Department and the Applicant for obtaining Reasonable costs independent experts to review the adequacy of any aspects of the extraction plan, or where such costs cannot be agreed, the costs determined by a dispute resolution process Rehabilitation The restoration of land disturbed by the development to a good condition, to ensure it is safe, stable and non-polluting Activities associated with partially or fully repairing or rehabilitating the impacts of Remediation the development or controlling the environmental consequences of this impact ROM coal Run-of-mine coal RMS **Roads and Maritime Services** Safe, serviceable & repairable Safe means no danger to users who are present, serviceable means available for its intended use, and repairable means damaged components can be repaired economically Sydney Catchment Authority SCA Second workings Extraction of coal from longwall panels, mini-wall panels or pillar extraction Secretary of the Department, or any person authorised to act on their behalf Secretary nominee Secretary, NSW Trade & Secretary of NSW Trade & Investment, or nominee Investment Land to which the development consent applies (see Appendix 1) Site Springvale Delta Water Transfer Existing pipeline that transfers groundwater inflows from the underground Scheme workings and dewatering bores to licenced discharge point No. 9 (refer to Appendix 2) Statement of Commitments The Applicant's commitments set out in Appendix 3 Steep slope An area of land having a gradient between 1 in 3 (33% or 18.3°) and 2 in 1 (200% or 63.4°) Subsidence The totality of subsidence effects, subsidence impacts and environmental consequences of subsidence impacts Subsidence effects Deformation of the ground mass due to mining, including all mining-induced ground movements, including both vertical and horizontal displacement, tilt, strain and curvature Subsidence impacts Physical changes to the ground and its surface caused by subsidence effects, including tensile and shear cracking of the rock mass, localised buckling of strata caused by valley closure and upsidence and surface depressions or troughs TSC Act Threatened Species Conservation Act 1995

#### SCHEDULE 2 ADMINISTRATIVE CONDITIONS

# **OBLIGATION TO MINIMISE HARM TO THE ENVIRONMENT**

1. In addition to meeting the specific performance criteria established under this consent, the Applicant shall implement all reasonable and feasible measures to prevent and/or minimise any material harm to the environment that may result from the construction, operation, or rehabilitation of the development.

#### **TERMS OF APPROVAL**

- 2. The Applicant shall carry out the development generally in accordance with the:
  - (a) EIS;
  - (b) statement of commitments; and
  - (c) conditions of this consent.

#### Notes:

- The general layout of the development is shown in Appendix 2
- The Applicant's statement of commitments is shown in Appendix 3.
- 3. If there is any inconsistency between the above documents, the more recent document shall prevail to the extent of the inconsistency. However, the conditions of this consent shall prevail to the extent of any inconsistency.
- 4. The Applicant shall comply with any reasonable requirement/s of the Secretary arising from the Department's assessment of:
  - (a) any strategies, plans, programs, reviews, audits, reports or correspondence that are submitted in accordance with this consent;
  - (b) any reviews, reports or audits undertaken or commissioned by the Department regarding compliance with this consent; and
  - (c) the implementation of any actions or measures contained in these documents.

# LIMITS ON CONSENT

#### **Mining Operations**

- 5. The Applicant may carry out mining operations on the site until 31 December 2028.
  - Note: Under this consent, the Applicant is required to rehabilitate the site and perform additional undertakings to the satisfaction of the Secretary and the Deputy Secretary, Resources and Energy. Consequently this consent will continue to apply in all other respects other than the right to conduct mining operations until the rehabilitation of the site and these additional undertakings have been carried out satisfactorily.

#### **Coal Extraction**

6. The Applicant shall not extract more than 4.5 million tonnes of ROM coal from the site per calendar year.

#### **Hours of Operation**

7. The Applicant may undertake mining operations 24 hours a day, 7 days a week.

#### **Coal Transport**

8. The Applicant shall not transport more than 50,000 tonnes of ROM coal by road from the site to local domestic customers in any calendar year.

#### SURRENDER OF EXISTING DEVELOPMENT CONSENTS

9. By 30 June 2016, or as otherwise agreed by the Secretary, the Applicant shall surrender any remaining relevant development consents that remain in force in accordance with Section 104A of the EP&A Act.

Prior to the surrender or lapsing of any existing development consents, the conditions of this consent shall prevail to the extent of any inconsistency with the conditions of these consents.

Note: This requirement does not extend to the surrender of construction and occupation certificates for existing and proposed building works under Part 4A of the EP&A Act. Surrender of a consent should not be understood as implying that works legally constructed under a valid consent can no longer be legally maintained or used.

#### APPLICATION OF EXISTING MANAGEMENT PLANS

10. Prior to the approval of management plans under this consent, the Applicant shall manage development undertaken pursuant to this consent in accordance with any equivalent or similar management plan/s required under any existing development consents.

# STRUCTURAL ADEQUACY

11. The Applicant shall ensure that all new buildings and structures, and any alterations or additions to existing buildings and structures, are constructed in accordance with the relevant requirements of the BCA.

Notes:

- Under Part 4A of the EP&A Act, the Applicant is required to obtain construction and occupation certificates for the proposed building works; and
- Part 8 of the EP&A Regulation sets out the requirements for the certification of the development.

# DEMOLITION

12. The Applicant shall ensure that all demolition work is carried out in accordance with Australian Standard AS 2601-2001: The Demolition of Structures, or its latest version.

### PROTECTION OF PUBLIC INFRASTRUCTURE

- 13. Unless the Applicant and the applicable authority agree otherwise, the Applicant shall:
  - (a) repair, or pay the full costs associated with repairing, any public infrastructure that is damaged by the development; and
  - (b) relocate, or pay the full costs associated with relocating, any public infrastructure that needs to be relocated as a result of the development.

Note: This condition does not apply to any damage to roads caused as a result of general road usage.

#### **OPERATION OF PLANT AND EQUIPMENT**

- 14. The Applicant shall ensure that all plant and equipment used on site is:
  - (a) maintained in a proper and efficient condition; and
  - (b) operated in a proper and efficient manner.

#### **UPDATING & STAGING STRATEGIES, PLANS OR PROGRAMS**

- 15. With the approval of the Secretary, the Applicant may:
  - (a) submit any strategy, plan or program required by this consent on a progressive basis; and
  - (b) combine any strategy, plan or program required by this consent with any similar strategy, plan or program required for the development.

To ensure these strategies, plans or programs are updated on a regular basis, the Applicant may at any time submit revised strategies, plans or programs to the Secretary for approval.

With the agreement of the Secretary, the Applicant may prepare any revised strategy, plan or program without undertaking consultation with all parties under the applicable condition of this consent.

Notes:

- While any strategy, plan or program may be submitted on a progressive basis, the Applicant will need to ensure that the existing operations on site are covered by suitable strategies, plans or programs at all times.
- If the submission of any strategy, plan or program is to be staged, then the relevant strategy, plan or program must clearly
  describe the specific stage to which the strategy, plan or program applies, the relationship of this stage to any future stages,
  and the trigger for updating the strategy, plan or program.

# SCHEDULE 3 ENVIRONMENTAL CONDITIONS – UNDERGROUND MINING

# SUBSIDENCE

# Performance Measures – Natural and Heritage Features

1. The Applicant shall ensure that the development does not cause any exceedance of the performance measures in Table 1, to the satisfaction of the Secretary.

Table 1: Subsidence Impact Performance Measures
Water Resources

| Water Resources   |   |
|---|---|
| Wolgan River, and other watercourses located<br>outside the site<br>Carne Creek, Marrangaroo Creek and<br>Paddy's Creek   | <ul> <li>No greater than negligible subsidence impacts or<br/>environmental consequences including:</li> <li>negligible diversion of flows or changes in the natural<br/>drainage behaviour of pools;</li> <li>negligible reduction in water quality;</li> <li>negligible increase in bank erosion or sediment load.</li> <li>No greater subsidence impacts or environmental<br/>consequences than predicted in the EIS.</li> </ul>   |
| Other watercourses  | consequences than predicted in the Ers.   |
| Swamps  |   |
| Shrub swamps: Sunnyside<br>Nine Mile  | <ul> <li>Negligible environmental consequences including:</li> <li>negligible erosion of the surface of the swamp;</li> <li>negligible change in the size of the swamp;</li> <li>negligible change in the ecosystem functionality of the swamp;</li> <li>negligible change to the composition or distribution of species within the swamp; and</li> <li>negligible change to the structural integrity of the bedrock base or any controlling rockbar/s of the swamp.</li> </ul> |
| Hanging swamps  | <ul> <li>Negligible environmental consequences including:</li> <li>negligible change in the size of the swamp;</li> <li>negligible change in the ecosystem functionality of the swamp; and</li> <li>negligible change to the composition or distribution of species within the swamp.</li> </ul>  |
| Land  |   |
| Cliffs, minor cliffs, steep slopes and pagoda formations  | No greater subsidence impacts or environmental consequences than predicted in the EIS.  |
| Biodiversity  |   |
| Threatened species, populations or their habitats<br>and endangered ecological communities (except<br>Sunnyside East, Carne West, Gang Gang South<br>West, Gang Gang East, Pine, Pine Upper,<br>Paddys, Marangaroo Creek and Marrangaroo<br>Creek Upper Swamps) | Negligible environmental consequences.  |
| Heritage Features   | 1   |
| Aboriginal heritage sites (except sites 45-1-<br>0002, 45-1-005 and 45-1-0065)  | Negligible impact or environmental consequences.  |
| Aboriginal heritage sites 45-1-0002, 45-1-005 and 45-1-0065   | No greater subsidence impact or environmental consequences than predicted in the EIS.   |
| Historic heritage sites   | Negligible impact or environmental consequences.  |
|   |   |

Notes:

 The Applicant will be required to define more detailed performance indicators (including impact assessment criteria) for each of these performance measures in the various management plans that are required under this consent (see eg condition 8 below).

2) Measurement and/or monitoring of compliance with performance measures and performance indicators is to be undertaken using generally accepted methods that are appropriate to the environment and circumstances in which the feature or characteristic is located. These methods are to be fully described in the relevant management plans. In the event of a dispute over the appropriateness of proposed methods, the Secretary will be the final arbiter.

<sup>3)</sup> The requirements of this condition only apply to the impacts and consequences of mining operations, construction or demolition undertaken following the date of this consent.

- 2. The Applicant must assess and manage development-related risks to ensure that there are no exceedances of the performance measures in Table 1. Any exceedance of these performance measures constitutes a breach of this consent and may be subject to penalty or offence provisions under the EP&A Act or EP&A Regulation, notwithstanding actions taken pursuant to paragraphs (a)-(c) or condition 3 below. Where any exceedance of these performance measures has occurred, the Applicant must, at the earliest opportunity:
  - (a) take all reasonable and feasible steps to ensure that the exceedance ceases and does not recur;
  - (b) consider all reasonable and feasible options for remediation and submit a report to the Department describing those options and any preferred remediation measures or other course of action; and
  - (c) implement remediation measures as directed by the Secretary,
  - to the satisfaction of the Secretary.

# Offsets

- 3. If the Applicant exceeds the performance measures in Table 1 and the Secretary determines that:
  - (a) it is not reasonable or feasible to remediate the impact or environmental consequence; or
  - (b) remediation measures implemented by the Applicant have failed to satisfactorily remediate the impact or environmental consequence;

then the Applicant shall provide a suitable offset to compensate for the impact or environmental consequence, to the satisfaction of the Secretary.

The offset must give priority to like-for-like physical environmental offsets, but may also consider payment into any NSW Offset Fund established by OEH, or funding or implementation of supplementary measures such as:

- actions outlines in threatened species recovery programs;
- actions that contribute to threat abatement programs;
- biodiversity research and survey programs; and/or
- rehabilitating degraded habitat.

Note: Any offset required under this condition must be proportionate with the significance of the impact or environmental consequence.

- 4. If mining under this consent causes impacts on any of the Sunnyside East, Carne West, Gang Gang South West, Gang Gang East, Pine, Pine Upper, Paddys, Marangaroo Creek or Marrangaroo Creek Upper Swamps which exceed 'negligible environmental consequences', and the Secretary determines that:
  - (a) it is not reasonable or feasible to remediate the impact or environmental consequences; or
  - (b) remediation measures implemented by the Applicant have failed to satisfactorily remediate the impact or environmental consequences;

then the Applicant shall provide a suitable offset to compensate for the environmental consequences in accordance with the requirements of condition 3 above, to the satisfaction of the Secretary.

Exceedances of 'negligible environmental consequences' under this condition are defined as:

- greater than negligible erosion of the surface of the swamp;
- greater than negligible changes in the size of the swamp;
- greater than negligible changes in the ecosystem functionality of the swamp;
- greater than negligible change to the composition or distribution of species within the swamp; and
- greater than negligible change to the structural integrity of any controlling rockbar/s for the swamp.

# Performance Measures – Built Features

5. The Applicant shall ensure that the development does not cause any exceedances of the performance measures in Table 2, to the satisfaction of the Secretary.

| Table 2: Subsidence Impact Performance Measure | s |
|--|---|
| Built Footuros                                 |   |

| Built Features  |  |
|---|--|
| Key public infrastructure: Lithgow Water Supply Dam   | No damage or additional risk.  |
| Power transmission lines and associated towers,<br>unsealed roads and road culverts, fire trails, other<br>public infrastructure, fences and other built features | Always safe.<br>Serviceability should be maintained wherever<br>practicable. Loss of serviceability must be fully<br>compensated.<br>Damage must be fully repairable, and must be fully<br>repaired or else replaced or fully compensated. |
| Public safety   |  |
| Public Safety   | No additional risk   |

Notes:

- The Applicant will be required to define more detailed performance indicators (including impact assessment criteria) for each of these performance measures in Built Features Management Plan or Public Safety Management Plan (see condition 8 below).
- 2) Measurement and/or monitoring of compliance with performance measures and performance indicators is to be undertaken using generally accepted methods that are appropriate to the environment and circumstances in which the feature or characteristic is located. These methods are to be fully described in the relevant management plans. In the event of a dispute over the appropriateness of proposed methods, the Secretary will be the final arbiter.
- 3) The requirements of this condition only apply to the impacts and consequences of mining operations undertaken following the date of this consent.
- 4) Any breach of this condition is taken to be a breach of this consent, and may be subject to penalty or offence provisions under the EP&A Act or EP&A Regulation.
- 5) Requirements regarding safety or serviceability do not prevent preventative or mitigatory actions being taken prior to or during mining in order to achieve or maintain these outcomes.
- 6. Any dispute between the Applicant and the owner of any built feature over the interpretation, application or implementation of the performance measures in Table 2 is to be settled by the Secretary, following consultation with the MSB and the Secretary, NSW Trade & Investment. Any decision by the Secretary shall be final and not subject to further dispute resolution under this consent.

# **First Workings**

- 7. The Applicant may carry out first workings within the underground mining area, other than in accordance with an approved Extraction Plan, provided that Secretary, NSW Trade & Investment is satisfied that the first workings are designed to remain stable and non-subsiding in the long-term, except insofar as they may be impacted by approved second workings.
  - Note: The intent of this condition is not to require an additional approval for first workings, but to ensure that first workings are built to geotechnical and engineering standards sufficient to ensure long term stability, with negligible resulting direct subsidence impacts.

# **Extraction Plan**

- 8. The Applicant shall prepare and implement an Extraction Plan for all second workings on site to the satisfaction of the Secretary. Each Extraction Plan must:
  - (a) be prepared by suitably qualified and experienced persons whose appointment has been endorsed by the Secretary;
  - (b) be approved by the Secretary before the Applicant carries out any of the second workings covered by the plan;
  - (c) include detailed plans of existing and proposed first and second workings and any associated surface development;
  - (d) include detailed performance indicators for each of the performance measures in Tables 1 and 2;
  - (e) provide revised predictions of the potential subsidence effects, subsidence impacts and environmental consequences of the proposed second workings, incorporating any relevant information obtained since this consent;
  - (f) describe the measures that would be implemented to ensure compliance with the performance measures in Tables 1 and 2, and manage or remediate any impacts and/or environmental consequences;
  - (g) include a Built Features Management Plan, which has been prepared in consultation with the Secretary, NSW Trade & Investment and the owners of affected infrastructure, to manage the potential subsidence impacts and/or environmental consequences of the proposed second workings, and which:
    - addresses in appropriate detail all items of key public infrastructure, other public infrastructure and all classes of other built features;
    - has been prepared following appropriate consultation with the owner/s of potentially affected feature/s;
    - recommends appropriate remedial measures and includes commitments to mitigate, repair, replace
      or compensate all predicted impacts on potentially affected built features in a timely manner; and
    - in the case of all key public infrastructure, and other public infrastructure except roads, trails and associated structures, reports external auditing for compliance with ISO 31000 (or alternative standard agreed with the infrastructure owner) and provides for annual auditing of compliance and effectiveness during extraction of longwalls which may impact the infrastructure;
  - (h) include a Water Management Plan, which has been prepared in consultation with SCA (for relevant catchments) and NOW, which provides for the management of the potential impacts and/or environmental consequences of the proposed second workings on watercourses and aquifers, including:
    - detailed baseline data on:
      - surface water flows and quality in water bodies that could be affected by subsidence,
        - including Wolgan River, Carne Creek, Marangaroo Creek, Coxs River and all major associated tributaries ;
      - groundwater levels, yield and quality in the region;
    - surface and groundwater impact assessment criteria, including trigger levels for investigating any potentially adverse impacts on water resources or water quality;

- a surface water monitoring program to monitor and report on:
  - stream flows and quality;
  - stream and riparian vegetation health;
  - channel and bank stability;
- a groundwater monitoring program to monitor and report on:
  - groundwater inflows to the underground mining operations;
    - the height of groundwater depressurisation;
    - background changes in groundwater yield/quality against mine-induced changes;
    - permeability, hydraulic gradient, flow direction and any connectivity of the deep and shallow groundwater aquifers;
    - impacts of the development on upland swamps (refer to condition 9 below) and other groundwater dependent ecosystems;
- a program to validate the surface water and groundwater models for the development, and compare monitoring results with modelled predictions; and
  - a plan to respond to any exceedances of the surface water and groundwater assessment criteria;
- (i) include a Biodiversity Management Plan, which has been prepared in consultation with OEH, which provides for the management of the potential impacts and/or environmental consequences of the proposed second workings on aquatic and terrestrial flora and fauna, with a specific focus on threatened species, populations and their habitats; endangered ecological communities; swamps and other groundwater dependent ecosystems;
- (j) include a Land Management Plan, which has been prepared in consultation with any affected public authorities, to manage the potential impacts and/or environmental consequences of the proposed second workings on land in general;
- (k) include a Heritage Management Plan, which has been prepared in consultation with OEH and relevant stakeholders for both Aboriginal and historic heritage, to manage the potential environmental consequences of the proposed second workings on both Aboriginal and non-Aboriginal heritage items. This plan must reflect all requirements under condition 24 of Schedule 4;
- (I) include a Public Safety Management Plan, which has been prepared in consultation with the Secretary, NSW Trade & Investment, to ensure public safety in the mining area;
- (m) include a Subsidence Monitoring Program, which has been prepared in consultation with the Secretary, NSW Trade & Investment, to:
  - describe the on-going subsidence monitoring program;
  - provide data to assist with the management of the risks associated with subsidence;
  - validate the subsidence predictions;
  - analyse the relationship between the predicted and resulting subsidence effects and predicted and resulting impacts under the plan and any ensuing environmental consequences; and
    - inform the contingency plan and adaptive management process;
- (n) include Trigger Action Response Plans, or equivalent, to address potential subsidence impacts and environmental consequences that may result from mining subsidence;
- include a contingency plan that expressly provides for adaptive management where monitoring indicates that there has been an exceedance of any performance measure in Tables 1 and 2, or where any such exceedance appears likely;
- (p) proposes appropriate revisions to the Rehabilitation Management Plan required under condition 30 of Schedule 4; and
- (q) include a program to collect sufficient baseline data for future Extraction Plans.
- Note: This condition does not apply to second workings for other underground mine workings which are covered by a Subsidence Management Plan or Extraction Plan approved as at the date of this consent.

# Swamp Monitoring Program

- 9. The Applicant shall prepare and implement an Swamp Monitoring Program for the development to the satisfaction of the Secretary. This plan must:
  - (a) be prepared in consultation with OEH, NOW and SCA, and submitted to the Secretary for approval prior to the commencement of second workings under this consent;
  - (b) detail the proposed swamp monitoring program, including (as a minimum):
    - additional upslope and downslope piezometers in all shrub swamps in order to better understand the down-slope movement of shallow groundwater;
    - additional flow monitoring points in all shrub swamps (in which pairs of piezometers upslope and downslope are installed) and in selected hanging swamps;
    - measures to record the nature and condition of terrestrial and aquatic flora and fauna within the swamps;
    - measures to characterise soils or peat layers within the swamps to determine:
      - porosity;
      - a basis for relating water levels to rainfall and evapotranspiration; and
      - the presence, or absence, of clay materials at the interface with the underlying bedrock;

- (c) include a program for monthly review of the water balance of all monitored swamps based on recorded rainfall, estimated evapotranspiration and recorded surface and shallow groundwater levels and outflow measurements; and
- (d) include detailed performance indicators for the relevant performance measures in Table 1 and the requirements of condition 4 above, including performance indicators relating to surface and shallow groundwater levels and outflow measurements.

# PAYMENT OF REASONABLE COSTS

10. The Applicant shall pay all reasonable costs incurred by the Department to engage suitably qualified, experienced and independent persons to review the adequacy of any aspect of an Extraction Plan.

#### SCHEDULE 4 ENVIRONMENTAL CONDITIONS – GENERAL

# NOISE

# Noise Criteria

1. From the date of this consent until 30 June 2016, the Applicant shall ensure that the noise generated by the development does not exceed the criteria in Table 3 at any residence on privately-owned land.

| Location                       | Day           | Evening       | Ni            | ght                     |
|--------------------------------|---------------|---------------|---------------|-------------------------|
| Receiver Number                | LAeq (15 min) | LAeq (15 min) | LAeq (15 min) | L <sub>A1 (1 min)</sub> |
| S1                             | 44            | 44            | 46            | 52                      |
| S2                             | 43            | 43            | 46            | 53                      |
| S3                             | 35            | 35            | 35            | 60                      |
| S4                             | 35            | 35            | 35            | 45                      |
| S5                             | 35            | 35            | 35            | 45                      |
| All other privately-owned land | 35            | 35            | 35            | 45                      |

Table 3: Noise Criteria dB(A)

Note: To interpret the land referred to in Table 3 see the applicable figure in Appendix 4.

Noise generated by the development is to be measured in accordance with the relevant requirements of the NSW Industrial Noise Policy (as may be updated from time-to-time). Appendix 5 details the meteorological conditions under which these criteria apply and the requirements for evaluating compliance with these criteria.

However, these criteria do not apply if the Applicant has an agreement with the owner/s of the relevant residence or land to generate higher noise levels, and the Applicant has advised the Department in writing of the terms of this agreement.

2. From 1 July 2016, the Applicant shall ensure that the noise generated by the development does not exceed the criteria in Table 4 at any residence on privately-owned land, or have notified, in accordance with Schedule 5, the owners of residences represented by Receiver Numbers S1 and S2 that they are entitled to acoustic treatment of their residence.

| Location                       | Day                       | Evening                   | Nig                       | ght                     |
|--------------------------------|---------------------------|---------------------------|---------------------------|-------------------------|
| Receiver Number                | L <sub>Aeq (15 min)</sub> | L <sub>Aeq (15 min)</sub> | L <sub>Aeq (15 min)</sub> | L <sub>A1 (1 min)</sub> |
| S1                             | 44                        | 44                        | 42                        | 52                      |
| S2                             | 43                        | 43                        | 43                        | 53                      |
| S3                             | 35                        | 35                        | 35                        | 60                      |
| S4                             | 35                        | 35                        | 35                        | 45                      |
| S5                             | 35                        | 35                        | 35                        | 45                      |
| All other privately-owned land | 35                        | 35                        | 35                        | 45                      |

#### Table 4: Noise Criteria dB(A)

Note: To interpret the land referred to in Table 3 see the applicable figure in Appendix 4.

#### **Operating Conditions**

- 3. The Applicant shall:
  - (a) implement best management practice to minimise the construction, operational and road noise of the development;
  - (b) operate a comprehensive noise management system that uses real-time noise monitoring data to guide day to day planning of mining operations and the implementation of both proactive and reactive noise mitigation measures to ensure compliance with the relevant conditions of this consent;

- (c) minimise the noise impacts of the development during meteorological conditions under which the noise limits in this consent do not apply (see Appendix 5); and
- (d) carry out regular monitoring to determine whether the development is complying with the relevant conditions of this consent,

to the satisfaction of the Secretary.

# Noise Management Plan

- 4. The Applicant shall prepare and implement a Noise Management Plan for the development to the satisfaction of the Secretary. This plan must:
  - (a) be prepared in consultation with EPA, and submitted to the Secretary for approval within three months of the date of this consent, unless otherwise agreed by the Secretary;
  - (b) describe the measures that would be implemented to ensure:
    - compliance with the noise criteria and operating conditions of this consent; and
    - the noise impacts of the development are minimised during meteorological conditions when the noise limits of this consent do not apply;
  - (c) describe the proposed noise management system in detail;
  - (d) include a noise monitoring program that:
    - evaluates and reports on:
      - the effectiveness of the on-site noise management system;
      - compliance against the noise criteria in this consent; and
      - compliance against the operating conditions in condition 3 above;
      - includes a program to calibrate and validate the real-time noise monitoring results with the attended monitoring results over time;
      - defines what constitutes a noise incident, and includes a protocol for identifying and notifying the Department and relevant stakeholders of any noise incidents; and
      - outlines procedures to manage responses to any complaints or issues raised by the owners of affected residences

#### AIR QUALITY

# Air Quality Criteria

5. The Applicant shall ensure that all reasonable and feasible avoidance and mitigation measures are employed so that particulate matter emissions generated by the development do not cause exceedances of the criteria in Table 5 at any residence on privately-owned land.

Table 5: Air quality criteria

| Pollutant   | Averaging<br>Period | Crit                                   | terion                                   |
|---|---------------------|--|--|
| Particulate matter < 10 $\mu$ m (PM <sub>10</sub> ) | Annual              | a,d 3(                                 | ) μg/m³                                  |
| Particulate matter < 10 µm (PM <sub>10</sub> )      | 24 hour             | <sup>a</sup> 50 μg/m <sup>3</sup>      |  |
| Total suspended particulates (TSP)                  | Annual              | <sup>а,d</sup> 90 µg/m <sup>3</sup>    |  |
| <sup>C</sup> Deposited dust                         | Annual              | <sup>b</sup> 2 g/m <sup>2</sup> /month | <sup>a,d</sup> 4 g/m <sup>2</sup> /month |

Notes to Table 5:

a Cumulative impact (ie increase in concentrations due to the development plus background concentrations due to all other sources).

<sup>b</sup> Incremental impact (ie increase in concentrations due to the development alone, with zero allowable exceedances of the criteria over the life of the development.

<sup>c</sup> Deposited dust is to be assessed as insoluble solids as defined by Standards Australia, AS/NZS 3580.10.1:2003: Methods for Sampling and Analysis of Ambient Air - Determination of Particulate Matter - Deposited Matter - Gravimetric Method.

<sup>d</sup> Excludes extraordinary events such as bushfires, prescribed burning, dust storms, fire incidents or any other activity agreed by the Secretary.

# **Operating Conditions**

6. The Applicant shall:

- (a) implement all reasonable and feasible measures to minimise the:
  - odour, fume and dust emissions of the development; and
  - release of greenhouse gas emissions from the development;

- (b) implement all reasonable and feasible measures to minimise the release of greenhouse gas emissions from the site:
- minimise any visible off-site air pollution generated by the development; (c)
- minimise the surface disturbance of the site; (d)
- regularly assess the air quality monitoring data, and modify operations on site to ensure compliance with the (e) relevant conditions of this consent;
- minimise the air quality impacts of the development during adverse meteorological conditions and (f) extraordinary events (see note d to Table 5 above).
- to the satisfaction of the Secretary.

#### Air Quality & Greenhouse Gas Management Plan

- The Applicant shall prepare and implement an Air Quality Management Plan for the development to the satisfaction 7. of the Secretary. This plan must:
  - be prepared in consultation with the EPA, and submitted to the Secretary within 3 months of the date of this (a) consent:
  - (b) describe all reasonable and feasible measures to minimise air quality impacts would be implemented and to ensure compliance with the relevant conditions of this consent;
  - (c) describe all reasonable and feasible measures that would be implemented to minimise the release of greenhouse gas emissions from the site;
  - describe the air quality management system; (d)
  - include an air quality monitoring program that: (e)
    - uses monitors to evaluate the performance of the development against the air quality criteria in this . consent.
    - adequately supports the air quality management system;
    - evaluates and reports on the:
      - the effectiveness of the air quality management system;
      - compliance with the air quality criteria;
      - compliance with the operating conditions in condition 6 above; and
    - defines what constitutes an air quality incident, and includes a protocol for identifying and notifying the Department and relevant stakeholders of any air quality incidents.

#### **Meteorological Monitoring**

- 8. For the life of the development, the Applicant shall ensure that there is a meteorological station operating in the vicinity of the site that:
  - complies with the requirements in the Approved Methods for Sampling of Air Pollutants in New South Wales (a) guideline; and
  - (b) is capable of continuous real-time measurement of temperature lapse rate in accordance with the NSW Industrial Noise Policy, unless a suitable alternative is approved by the Secretary following consultation with the EPA.

# WATER

#### Water Supply

- 9. The Applicant shall ensure that it has sufficient water for all stages of the development, and if necessary, adjust the scale of operations on site to match its available water supply.
  - Under the Water Act 1912 and/or the Water Management Act 2000, the Applicant is required to obtain the necessary Note: water licences for the development.

#### Water Pollution

10. Unless an EPL authorises otherwise, the Applicant shall comply with section 120 of the POEO Act.

#### Water Management Performance Measures

11. The Applicant shall comply with the performance measures in Table 6 to the satisfaction of the Secretary.

| Table 6. Water Management Performance Measures |  |  |
|--|--|--|
| Feature  | Performance Measure  |  |
| Water Management –                             | Minimise the use of clean water on site                                      |  |
| General  | Minimise the use of water from external sources                              |  |
| Construction and                               | Design, install and maintain erosion and sediment controls generally in      |  |
| operation of                                   | accordance with the series Managing Urban Stormwater: Soils and Construction |  |
|  |  |  |

# Table 6: Water Management Performance Measures

| infrastructure                                 | including Volume 1, Volume 2A – Installation of Services and Volume 2C –<br>Unsealed Roads   |
|--|--|
|  | • Design, install and maintain the infrastructure within 40 m of watercourses generally in accordance with the <i>Guidelines for Controlled Activities on Waterfront Land (DPI 2012)</i> , or its latest version   |
|  | <ul> <li>Design, install and maintain creek crossings generally in accordance with the<br/>Policy and Guidelines for Fish Friendly Waterway Crossings (NSW Fisheries,<br/>2003) and Why Do Fish Need To Cross The Road? Fish Passage Requirements<br/>for Waterway Crossings (NSW Fisheries 2003), or their latest versions</li> </ul> |
| Clean water diversion & storage infrastructure | Maximise as far as reasonable and feasible the diversion of clean water around<br>disturbed areas on site  |
| Sediment Dams                                  | <ul> <li>Design, install and maintain the dams generally in accordance with the series<br/>Managing Urban Stormwater: Soils and Construction – Volume 1 and Volume 2E<br/>Mines and Quarries</li> </ul>  |
| Mine water storages                            | <ul> <li>Design, install and maintain mine water storage infrastructure to ensure no<br/>unlicensed or uncontrolled discharge of mine water off-site</li> </ul>  |
|  | <ul> <li>New on-site storages are suitably treated to comply with a permeability standard<br/>of &lt; 1 x 10<sup>-9</sup> m/s</li> </ul>   |
| Chemical and<br>hydrocarbon storage            | Chemical and hydrocarbon products to be stored in bunded areas in accordance<br>with the relevant Australian Standards   |
| Aquatic and riparian                           | Maintain or improve baseline channel stability   |
| ecosystems                                     | <ul> <li>Develop site-specific water quality objectives in accordance with ANZECC 2000<br/>and Using the ANZECC Guidelines and Water Quality Objectives in NSW<br/>procedures (DECC 2006), or its latest version</li> </ul>  |
| Mine water discharges                          | Discharge all groundwater inflow mine water through the Springvale Delta Water<br>Transfer Scheme  |

# Upper Coxs River Action Plan

- 12. The Applicant shall prepare an Upper Coxs River Action Plan for the development to the satisfaction of the Secretary. This plan must:
  - (a) be prepared in consultation with NOW, SCA, EPA and Energy Australia;
  - (b) be submitted to the Secretary for approval by 30 June 2016, unless otherwise agreed by the Secretary;
  - (c) provide criteria for the volume and quality of mine water discharged from Springvale, Angus Place and Clarence mines to the Upper Coxs River;
  - (d) identify water management options designed to achieve the volume and quality criteria; and
  - (e) provide enforceable mechanisms for the implementation of these options and a timetable for their implementation.

# Water Management Plan

- 13. The Applicant shall prepare and implement a Water Management Plan for the development to the satisfaction of the Secretary. This plan must:
  - (a) be prepared in consultation with NOW, SCA (for relevant catchments) and the EPA, by suitably qualified and experienced persons whose appointment has been approved by the Secretary;
  - (b) be submitted to the Secretary for approval within 6 months of the date of this consent, unless otherwise agreed by the Secretary;
  - (c) include detailed performance criteria and describes measure to ensure that the Applicant complies with the Water Management Performance Measures (see Table 6);
  - (d) in addition to the standard requirements for management plans (see condition 3 of Schedule 6), this plan must include a:
    - (i) Site Water Balance that:
      - includes details of:
        - sources and security of water supply, including contingency planning for future reporting periods;
        - water use and management on site;
        - any off-site water discharges;
          - reporting procedures, including the preparation of a site water balance for each calendar year; and
      - describes the measures that would be implemented to minimise clean water use on site;
    - (ii) Surface Water Management Plan, that includes:
      - detailed baseline data on water flows and quality in the waterbodies that could be affected by the development, including Wolgan River, Carne Creek, Marrangaroo Creek and Paddy's Creek, Cox's River, Lake Lyell, Lake Wallace, Lake Burragorang and associated tributaries;

- a detailed description of the water management systems on site, including the pit top and all shaft sites and associated facilities;
- detailed plans, including design objectives and performance criteria;
- detailed performance criteria for the following, including trigger levels for investigating any potentially adverse impacts associated with the development:
  - the water management system;
  - downstream surface water quality;
  - downstream flooding impacts; and
  - stream and riparian vegetation health for rivers and creeks and their tributaries potentially impacted by the development;
- a program to monitor and report on:
  - the effectiveness of the water management system;
  - surface water flows and quality, stream and riparian vegetation health in the watercourses that could be affected by the surface facilities associated with the
    - development;
    - the seepage/leachate from on-site water storages; and
  - downstream flooding impacts;
- reporting procedures for the results of the monitoring program; and
- a plan to respond to any exceedances of the performance criteria, and mitigate any adverse surface water impacts of the development; and
- (iii) Groundwater Management Plan that is generally consistent with NOW's guideline entitled *Groundwater Monitoring and Modelling Plans – Introduction for prospective mining and petroleum activities*, and includes:
  - detailed baseline data of groundwater levels, yield and quality in the region that could be affected by the development, including licensed privately-owned groundwater bores and a detailed survey/schedule of groundwater dependent ecosystems;
  - groundwater assessment criteria including trigger levels for investigating any potentially adverse groundwater impacts;
  - a program to monitor and report on:
  - groundwater inflows transferred to the surface water management system;
    - the seepage/leachate from water storages and any emplacements;
      - impacts of the development on:
        - o regional and local (including alluvial) aquifers;
        - o groundwater supply of potentially affected landowners; and
        - groundwater dependent ecosystems (including rules for the management of groundwater level impacts to GDEs), and riparian vegetation;
  - a program to validate the groundwater model for the development, including an independent review of the model every 3 years, and comparison of monitoring results with modelled predictions; and
  - a plan to respond to any exceedences of the performance criteria.

#### BIODIVERSITY

# Biodiversity Offset Strategy

- 14. By the end of December 2016, the Applicant shall update the Western Projects Biodiversity Strategy (RPS Australia East Pty Ltd, 1 October 2014) to provide a suitable offset for:
  - (a) the clearing of 4 hectares of native vegetation associated with the construction of Bore 8, including residual impacts on *Persoonia hindii*;
  - (b) the clearing of 11.44 hectares of native vegetation associated with surface infrastructure for the development;
  - (c) potential impacts to nine shrub swamps totalling 61.02 hectares (including Sunnyside East, Carne West, Gang Gang South West, Gang Gang East, Pine, Pine Upper, Paddys, Marrangaroo Creek and Marrangaroo Creek Upper Swamps),

to the satisfaction of OEH and the Secretary.

Note: Offsets should be developed in accordance with the NSW Biodiversity Offset Policy for Major Projects, 2014 and the draft Policy Framework for Biodiversity Offsets for Upland Swamps and Associated Threatened Species Impacted by Longwall Mining Subsidence (April, 2015), or its current version.

#### Long Term Security of Offset

15. By the end of December 2016, unless the Secretary agrees otherwise, the Applicant shall make suitable arrangements to protect the biodiversity offset areas referred to in Condition 14(a) and (b) above in perpetuity, to the satisfaction of the Secretary.

#### Persoonia hindii Management and Research Program

16. The Applicant shall implement the research and monitoring program detailed in the report titled *Persoonia Hindii Species, Distribution and Security on the Newnes Plateau* (Dr Erskine *et al*, April 2015), in accordance with the timeframes specified in the report and to the satisfaction of the Secretary.

# Stygofauna Assessment

- 17. The Applicant shall prepare and implement a Regional Stygofauna Monitoring and Assessment Plan for the development to the satisfaction of the Secretary. This plan must:
  - (a) be prepared in consultation with OEH, and be submitted to the Secretary for approval within 6 months of the date of this consent, unless otherwise agreed by the Secretary;
  - (b) provide for ongoing monitoring for stygofauna in at least one borehole in each aquifer where stygofauna are known to occur;
  - (c) monitor for the presence of stygofauna in the deep aquifer system (AQ1 to AQ3);
  - (d) collate existing available information on groundwater bores, water quality and characteristics in Centennial Coal's area of operations throughout the Western Coalfield;
  - (e) use this information to form a prioritisation list of likely areas for GDE to occur;
  - (f) use the prioritisation protocol to identify bores that can be sampled to provide data on the presence and significance of fauna both within and outside mine areas;
  - (g) identify any stygofauna found to a minimum of Family level;
  - (h) advise on the significance of the findings; and
  - (i) examine relationship between bore characteristics and presence of stygofauna
- 18. The Applicant shall prepare and implement a Biodiversity Management Plan for the development to the satisfaction of the Secretary. This plan must:
  - (a) be prepared in consultation with OEH, Forestry Corporation of NSW and DoE and be submitted to the Secretary for approval by the end of December 2016,, unless otherwise agreed by the Secretary;
  - (b) establish baseline data for the existing habitat on site;
  - (c) describe the short, medium, and long-term measures that would be implemented to manage the remnant vegetation and habitat on the site, including but not limited to swamps
  - (d) describe an ongoing monitoring and Trigger Action Response Plan (TARP) for swamps and endangered ecological communities (EECs) with a particular focus on subsidence related changes to surface and ground water drainage in which EECs are located;
  - (e) include a detailed description of the measures that would be implemented to :
    - minimise the impacts to fauna on site, including undertaking pre-clearance surveys;
    - control weeds and feral pests;
    - control erosion;
    - control access; and
    - manage bushfire risk;
  - (f) include a program to monitor and report on the effectiveness of these measures, and progress against the detailed performance and completion criteria; and
  - (g) include details of who would be responsible for monitoring, reviewing, and implementing the plan.

# TRANSPORT

# **Monitoring of Coal Transport**

- 19. The Applicant shall:
  - (a) keep accurate records of the amount of coal transported from the site by conveyor, private haul roads and, if used, public roads (on a daily basis);
  - (b) make these records publicly available on its website at the end of each calendar quarter.

#### **Road Transport Restrictions**

- 20. The Applicant shall ensure that any truck leaving the site:
  - (a) does not carry dirt or mud onto public roads; and
  - (b) is free of material that may fall on the road and create a road safety hazard or public nuisance,
  - to the satisfaction of the Secretary.

#### Mine Access Road Intersection Upgrade

21. Prior to 30 June 2016, or earlier if the peak traffic volume exceeds 400 vehicles per hour, unless the Secretary agrees otherwise, the Applicant shall upgrade the road intersection from the Castlereagh Highway to the Springvale Mine Access Road to include a Channelised Right Turn in accordance Austroads standards, to the satisfaction of RMS.

# Forestry Roads

22. The Applicant shall maintain the forestry access roads that it uses as part of this development, to the satisfaction of the Forestry Corporation of NSW.

# HERITAGE

# **Protection of Aboriginal Heritage Items**

23. Unless otherwise authorised under the *National Parks and Wildlife Act 1974*, the Applicant shall ensure that the development does not cause any direct or indirect impact on identified Aboriginal heritage items located outside the approved disturbance area of the development on the site.

Note: Identified Aboriginal heritage items are shown on the figure in Appendix 6.

#### Heritage Management Plan

- 24. The Applicant shall prepare and implement a Heritage Management Plan for the development to the satisfaction of the Secretary. This Plan must:
  - (a) be prepared by suitably qualified and experienced persons whose appointment has been endorsed by the Secretary;
  - (b) be prepared in consultation with OEH, LCC and local Aboriginal stakeholders (in relation to management of Aboriginal heritage values);
  - (c) be submitted to the Secretary for approval within 6 months of the date of this consent, unless the Secretary agrees otherwise;
  - (d) include a description of the measures that would be implemented for:
    - managing the discovery of human remains or previously unidentified heritage items, including historic heritage items, on site;
    - ensuring any workers on site receive suitable heritage inductions prior to carrying out any development on site, and that suitable records are kept of these inductions;
  - (e) include the following for the management of Aboriginal Heritage:
    - a description of the measures that would be implemented for:
      - protecting, monitoring and/or managing (including any proposed archaeological investigations and/or salvage measures) the heritage items identified in Table 1;
      - managing the discovery of previously unidentified Aboriginal items on site;
      - conserving the sites outside the surface disturbance area (see Appendix 6), including measures that would be implemented to secure, analyse and record any sites at risk of subsidence impacts;
      - maintaining and managing reasonable access for Aboriginal stakeholders to heritage items on site;
      - ongoing consultation with the Aboriginal stakeholders in the conservation and management of Aboriginal cultural heritage on site; and
      - a strategy for the storage of any heritage items salvaged on site, both during the development and in the long-term;
  - (f) include the following for the management of historic heritage items:
    - a description of the measures that would be implemented for:
      - managing the discovery of previously unidentified cultural heritage items on site; and
      - ensuring for the long-term storage of moveable heritage items.
  - Note: This plan can be incorporated with any Aboriginal Cultural Heritage Management Plan for Centennial's other mines and mine infrastructure in the Lithgow Local Government Area.

# VISUAL

# **Visual and Lighting**

- 25. The Applicant shall:
  - (a) implement all reasonable and feasible measures to minimise the visual and off-site lighting impacts of the development;

- (b) ensure that all external lighting associated with the development complies with Australian Standard AS4282 (INT) 1997 Control of Obtrusive Effects of Outdoor Lighting, or its latest version;
- (c) ensure that the visual appearance of all buildings, structures, facilities or works (including paint colours and specifications) is aimed at blending as far as possible with the surrounding landscape,

to the satisfaction of the Secretary.

# WASTE

- 26. The Applicant shall:
  - (a) implement all reasonable and feasible measures to minimise the waste generated by the development;
  - (b) ensure that the waste generated by the development is appropriately stored, handled and disposed of; and
  - (c) monitor and report on effectiveness of the waste minimisation and management measures in the Annual Review,
  - to the satisfaction of the Secretary.

### **BUSHFIRE MANAGEMENT**

- 27. The Applicant shall:
  - (a) ensure that the development is suitably equipped to respond to any fires on site; and
  - (b) assist the Rural Fire Service and emergency services as much as possible if there is a fire in the surrounding area.

#### REHABILITATION

#### **Rehabilitation Objectives**

28. The Applicant shall rehabilitate the site to the satisfaction of the Secretary, NSW Trade & Investment. This rehabilitation must be generally consistent with the proposed rehabilitation strategy described in the EIS, and comply with the objectives in Table 7.

| Feature   | Objective   |
|---|---|
| Mine site (as a whole)  | <ul> <li>Safe, stable &amp; non-polluting.</li> <li>Final landforms to: <ul> <li>compatible with surrounding land uses; and</li> <li>be designed to minimise, as far as is reasonable and feasible, the visual impacts of the development; and</li> <li>be in keeping with the natural terrain features of the area.</li> </ul> </li> </ul> |
| Surface infrastructure  | <ul> <li>To be decommissioned and removed (unless the Secretary, NSW<br/>Trade &amp; Investment agrees otherwise).</li> </ul>   |
| Portals and vent shafts   | <ul><li>To be decommissioned and made safe and stable.</li><li>Retain habitat for threatened species (eg bats), where practicable.</li></ul>  |
| Watercourses of 3 <sup>nd</sup> order or higher subject to subsidence impacts | Hydraulically and geomorphologically stable.  |
| Cliffs and steep slopes   | <ul> <li>No additional risk to public safety compared to prior to mining.</li> </ul>  |
| Other land affected by the development  | <ul> <li>Restore ecosystem function, including maintaining or establishing<br/>self-sustaining ecosystems comprised of local native plant species<br/>(unless the Secretary, NSW Trade &amp; Investment agrees otherwise).</li> </ul>   |
| Built features damaged by mining operations                                   | <ul> <li>Repair to pre-mining condition or equivalent unless the:</li> <li>owner agrees otherwise; or</li> <li>damage is fully restored, repaired or compensated for under the<br/>Mine Subsidence Compensation Act 1961.</li> </ul>  |
| Community   | <ul> <li>Ensure public safety.</li> <li>Minimise the adverse socio-economic effects associated with mine closure.</li> </ul>  |

Table 7: Rehabilitation Objectives

Notes:

- These rehabilitation objectives apply to all subsidence impacts and environmental consequences caused by mining taking
  place after the date of this consent; and to all surface infrastructure parts of the development, whether constructed prior to or
  following the date of this consent.
- Rehabilitation of subsidence impacts and environmental consequences caused by mining which took place prior to the date of this consent may be subject to the requirements of other approvals (eg an existing consent, mining lease, or Subsidence Management Plan approval) or the Applicant's commitments.

#### **Progressive Rehabilitation**

29. The Applicant shall rehabilitate the site progressively, that is, as soon as reasonably practicable following disturbance. All reasonable and feasible measures must be taken to minimise the total area exposed for dust

generation at any time. Interim rehabilitation strategies shall be employed when areas prone to dust generation cannot yet be permanently rehabilitated.

#### **Rehabilitation Management Plan**

- 30. The Applicant shall prepare and implement a Rehabilitation Management Plan for the development to the satisfaction of the Secretary, NSW Trade & Investment. This plan must:
  - (a) be prepared in consultation with the Department, NOW, OEH, Council. SCA and the CCC;
  - (b) be submitted to the Secretary, NSW Trade & Investment for approval within 6 months of the date of this consent;
  - (c) be prepared in accordance with any relevant NSW Trade & Investment guideline(s);
  - (d) include detailed performance and completion criteria for evaluating the performance of the rehabilitation of the site, and triggering remedial action (if necessary);
  - (e) describe the measures that would be implemented to ensure compliance with the relevant conditions of this consent, and address all aspects of rehabilitation including mine closure, final landform, and final land use;
  - (f) provide for detailed mine closure planning, including measures to minimise socio-economic effects due to mine closure, to be conducted prior to the site being placed on care and maintenance;
  - (g) include a program to monitor and report on the effectiveness of the measures, and progress against the detailed performance and completion criteria; and
  - (h) build to the maximum extent practicable on the other management plans required under this consent.

#### SCHEDULE 5 ADDITIONAL PROCEDURES

# NOTIFICATION OF LANDOWNERS

- 1. As soon as practicable after obtaining monitoring results showing:
  - (a) an exceedance of any relevant criteria in Schedule 4, the Applicant shall notify the affected landowners in writing of the exceedance, and provide regular monitoring results to these landowners until the development is again complying with the relevant criteria; and
  - (b) an exceedance of any relevant air quality criteria in Schedule 4, the Applicant shall send a copy of the NSW Health fact sheet entitled "Mine Dust and You" (as may be updated from time to time) to the affected landowners and/or existing tenants of the land (including the tenants of any mine-owned land).

#### INDEPENDENT REVIEW

2. If an owner of privately-owned land considers the development to be exceeding the relevant criteria in Schedule 4, then he/she may ask the Secretary in writing for an independent review of the impacts of the development on his/her land.

If the Secretary is satisfied that an independent review is warranted, then within 2 months of the Secretary's decision the Applicant shall:

- (a) commission a suitably qualified, experienced and independent person, whose appointment has been approved by the Secretary, to:
  - consult with the landowner to determine his/her concerns;
  - conduct monitoring to determine whether the development is complying with the relevant criteria in Schedule 4;
  - if the development is not complying with these criteria then identify the measures that could be implemented to ensure compliance with the relevant criteria; and
- (b) give the Secretary and landowner a copy of the independent review.

#### SCHEDULE 6 ENVIRONMENTAL MANAGEMENT, REPORTING AND AUDITING

# ENVIRONMENTAL MANAGEMENT

# **Environmental Management Strategy**

- 1. The Applicant shall prepare and implement an Environmental Management Strategy for the development to the satisfaction of the Secretary. This strategy must:
  - (a) be submitted to the Secretary for approval within 6 months of the date of this consent, unless the Secretary agrees otherwise;
  - (b) provide the strategic framework for the environmental management of the development;
  - (c) identify the statutory approvals that apply to the development;
  - (d) describe the role, responsibility, authority and accountability of all key personnel involved in the environmental management of the development;
  - (e) describe the procedures that would be implemented to:
    - keep the local community and relevant agencies informed about the operation and environmental performance of the development;
      - receive, handle, respond to, and record complaints;
      - resolve any disputes that may arise during the course of the development;
      - respond to any non-compliance;
      - respond to emergencies; and
  - (f) include:
    - copies of any strategies, plans and programs approved under the conditions of this consent; and
    - a clear plan depicting all the monitoring required to be carried out under the conditions of this consent.

#### Adaptive Management

2. The Applicant shall assess and manage development-related risks to ensure that there are no exceedances of the criteria and/or performance measures in Schedules 3 and 4. Any exceedance of these criteria and/or performance measures constitutes a breach of this consent and may be subject to penalty or offence provisions under the EP&A Act or EP&A Regulation.

Where any exceedance of these criteria and/or performance measures has occurred, the Applicant must, at the earliest opportunity:

- (a) take all reasonable and feasible steps to ensure that the exceedance ceases and does not recur;
- (b) consider all reasonable and feasible options for remediation (where relevant) and submit a report to the Department describing those options and any preferred remediation measures or other course of action; and
- (c) implement remediation measures as directed by the Secretary,
- to the satisfaction of the Secretary.

# **Management Plan Requirements**

- 3. The Applicant shall ensure that the management plans required under this consent are prepared in accordance with any relevant guidelines, and include:
  - (a) detailed baseline data;
  - (b) a description of:

(e)

(h)

- the relevant statutory requirements (including any relevant approval, licence or lease conditions);
- any relevant limits or performance measures/criteria;
- the specific performance indicators that are proposed to be used to judge the performance of, or guide the implementation of, the development or any management measures;
- (c) a description of the measures that would be implemented to comply with the relevant statutory requirements, limits, or performance measures/criteria;
- (d) a program to monitor and report on the:
  - impacts and environmental performance of the development;
  - effectiveness of any management measures (see c above);
  - a contingency plan to manage any unpredicted impacts and their consequences;
- (f) a program to investigate and implement ways to improve the environmental performance of the development over time;
- (g) a protocol for managing and reporting any:
  - incidents;
  - complaints;
  - non-compliances with statutory requirements; and
  - exceedances of the impact assessment criteria and/or performance criteria; and
  - a protocol for periodic review of the plan.

Note: The Secretary may waive some of these requirements if they are unnecessary or unwarranted for particular management plans.

# **Annual Review**

- 4. By the end of March each year, unless the Secretary agrees otherwise, the Applicant shall review the environmental performance of the development to the satisfaction of the Secretary. This review must:
  - (a) describe the development (including any rehabilitation) that was carried out in the past calendar year, and the development that is proposed to be carried out over the current calendar year;
  - (b) include a comprehensive review of the monitoring results and complaints records of the development over the past calendar year, which includes a comparison of these results against the:
    - the relevant statutory requirements, limits or performance measures/criteria;
      - requirement of any plan or program required under this consent;
      - the monitoring results of previous years; and
      - the relevant predictions in the EIS;
  - (c) identify any non-compliance over the past year, and describe what actions were (or are being) taken to ensure compliance;
  - (d) identify any trends in the monitoring data over the life of the development;
  - (e) identify any discrepancies between the predicted and actual impacts of the development, and analyse the potential cause of any significant discrepancies; and
  - (f) describe what measures will be implemented over the next year to improve the environmental performance of the development.

# **Revision of Strategies, Plans and Programs**

- 5. Within 3 months of:
  - (a) the submission of an annual review under condition 4 above;
  - (b) the submission of an incident report under condition 7 below;
  - (c) the submission of an audit under condition 9 below; or
  - (d) any modification to the conditions of this consent (unless the conditions require otherwise),

the Applicant shall review, and if necessary revise, the strategies, plans, and programs required under this consent to the satisfaction of the Secretary.

Where this review leads to revisions in any such document, then within 4 weeks of the review, unless the Secretary agrees otherwise, the revised document must be submitted to the Secretary for approval.

Note: This is to ensure the strategies, plans and programs are updated on a regular basis, and incorporate any recommended measures to improve the environmental performance of the development.

#### **Community Consultative Committee**

6. The Applicant shall operate a Community Consultative Committee (CCC) for the development to the satisfaction of the Secretary. This CCC must be operated in accordance with the *Guidelines for Establishing and Operating Community Consultative Committees for Mining Developments* (Department of Planning, 2007, or its latest version.

Notes:

- The CCC is an advisory committee. The Department and other relevant agencies are responsible for ensuring that the Applicant complies with this consent;
- In accordance with the guideline, the Committee should be comprised of an independent chair and appropriate representation from the Applicant, Council, recognised environmental groups and the local community;
- The requirement for this CCC may be fulfilled by the operation of a regional CCC for Centennial's mines and mine infrastructure in the Lithgow Local Government Area, and
- The Department will accept the continued representation from existing CCC members.

#### REPORTING

#### **Incident Reporting**

7. The Applicant shall immediately notify the Secretary and any other relevant agencies of any incident. Within 7 days of the date of the incident, the Applicant shall provide the Secretary and any relevant agencies with a detailed report on the incident, and such further reports as may be requested.

# **Regular Reporting**

8. The Applicant shall provide regular reporting on the environmental performance of the development on its website, in accordance with the reporting arrangements in any plans or programs approved under the conditions of this consent, and to the satisfaction of the Secretary.

# INDEPENDENT ENVIRONMENTAL AUDIT

- 9. Prior to 30 June 2016, and every 3 years thereafter, unless the Secretary directs otherwise, the Applicant shall commission and pay the full cost of an Independent Environmental Audit of the development. This audit must:
  - (a) be conducted by a suitably qualified, experienced and independent team of experts whose appointment has been endorsed by the Secretary;
  - (b) include consultation with the relevant agencies;
  - (c) assess the environmental performance of the development and assess whether it is complying with the requirements in this consent and any relevant EPL or Mining Lease (including any assessment, plan or program required under these approvals);
  - (d) review the adequacy of strategies, plans or programs required under the abovementioned approvals; and
  - (e) recommend appropriate measures or actions to improve the environmental performance of the development, and/or any assessment, plan or program required under the abovementioned approvals.
  - Note: This audit team must be led by a suitably qualified auditor and include experts in any fields specified by the Secretary.
- 10. Within 6 weeks of the completion of this audit, or as otherwise agreed by the Secretary, the Applicant shall submit a copy of the audit report to the Secretary, together with its response to any recommendations contained in the audit report.

#### ACCESS TO INFORMATION

(a)

- 11. Within 3 months from the date of this consent, the Applicant shall:
  - make copies of the following publicly available on its website:
    - the EIS;
    - current statutory approvals for the development;
    - approved strategies, plans and programs required under the conditions of this consent;
    - a comprehensive summary of the monitoring results of the development, reported in accordance with the specifications in any conditions of this consent, or any approved plans and programs;
    - a complaints register, which is to be updated monthly;
    - minutes of CCC meetings;
    - the last five annual reviews;
    - any independent environmental audit of the development, and the Applicant's response to the recommendations in any audit;
    - any other matter required by the Secretary; and

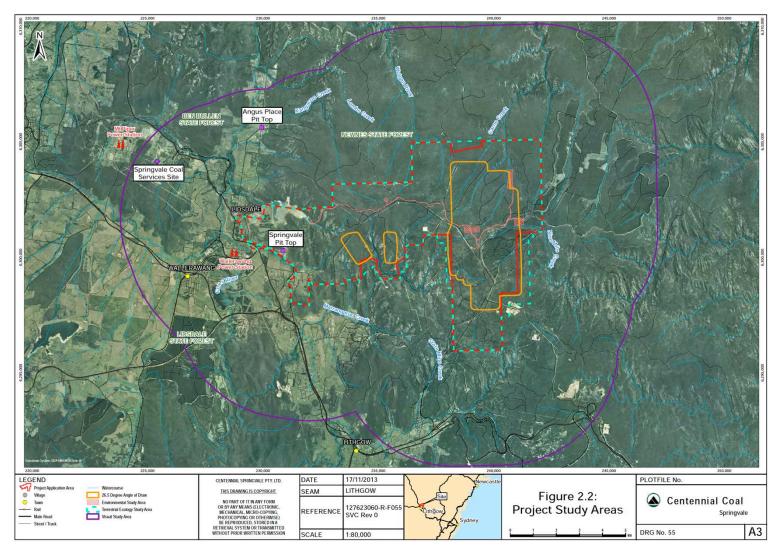
(b) keep this information up-to-date,

to the satisfaction of the Secretary.

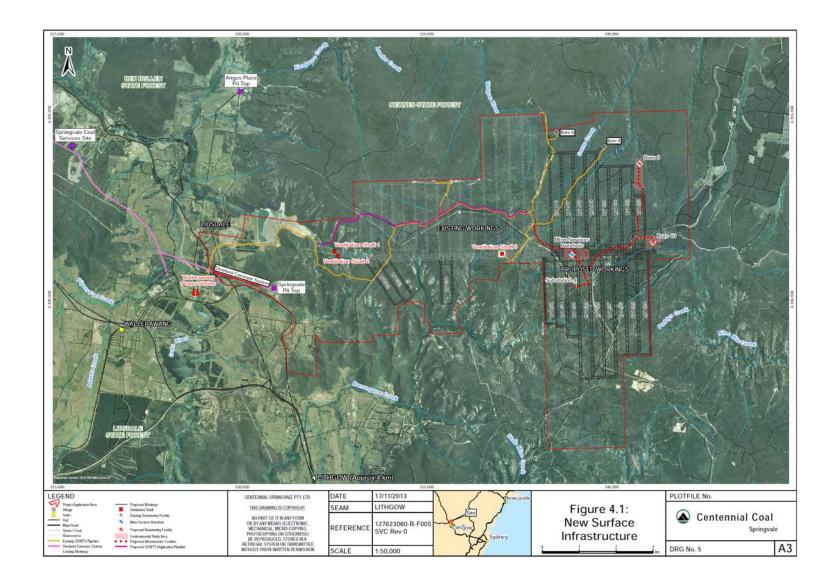
| APPENDIX 1: SCHEDULE OF LAND | <b>APPENDIX 1</b> : | SCHEDULE | OF LAND |
|------------------------------|---------------------|----------|---------|
|------------------------------|---------------------|----------|---------|

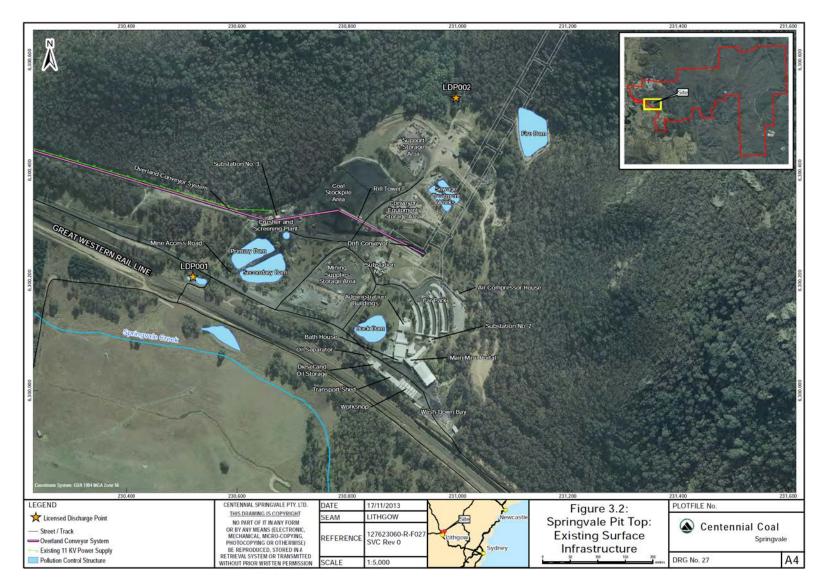
| Land Status | Created date | Last_Update | Lot DP       |
|-------------|--------------|-------------|--------------|
| FREEHOLD    | 19930804     | 20041126    | 9//16283     |
| FREEHOLD    | 19930804     | 20041126    | 10//16283    |
| FREEHOLD    | 19930804     | 20041126    | 26//16283    |
| FREEHOLD    | 19930804     | 20041126    | 23//16283    |
| FREEHOLD    | 19930804     | 20041126    | B//417872    |
| FREEHOLD    | 19930804     | 20041126    | 14//16283    |
| FREEHOLD    | 19930804     | 20041126    | 1//551636    |
| FREEHOLD    | 19930804     | 20041126    | 19//16283    |
| FREEHOLD    | 19930804     | 20041126    | 2//607402    |
| FREEHOLD    | 19930804     | 20041126    | 28//16283    |
| FREEHOLD    | 19930804     | 20041126    | 30//16283    |
| FREEHOLD    | 19930804     | 20041126    | 1//421721    |
| FREEHOLD    | 20010504     | 20041126    | 2//1018958   |
| FREEHOLD    | 19930804     | 20041126    | 18//16283    |
| FREEHOLD    | 19930804     | 20041126    | 8//16283     |
| FREEHOLD    | 20000308     | 20041126    | 101//829410  |
| FREEHOLD    | 19930804     | 20041126    | 1//607402    |
| FREEHOLD    | 19960418     | 20041126    | 1//825124    |
| FREEHOLD    | 19940418     | 20041126    | 3//829137    |
| FREEHOLD    | 19930804     | 20041126    | 16//16283    |
| FREEHOLD    | 19930804     | 20041126    | 24//16283    |
| FREEHOLD    | 19930804     | 20041126    | 20//16283    |
| FREEHOLD    | 19930804     | 20041126    | 29//16283    |
| FREEHOLD    | 19930804     | 20041126    | 25//16283    |
| FREEHOLD    | 19930804     | 20041126    | 3//607402    |
| FREEHOLD    | 19930804     | 20041126    | A//417872    |
| FREEHOLD    | 19930804     | 20041126    | 12//16283    |
| FREEHOLD    | 19930804     | 20041126    | 15//16283    |
| FREEHOLD    | 19940418     | 20041126    | 2//829137    |
| FREEHOLD    | 19930804     | 20041126    | 11//16283    |
| FREEHOLD    | 19930804     | 20041126    | C//417872    |
| FREEHOLD    | 19930804     | 20041126    | 7//16283     |
| FREEHOLD    | 19930804     | 20041126    | 17//16283    |
| FREEHOLD    | 19930804     | 20041126    | 13//16283    |
| FREEHOLD    | 19930804     | 20041126    | 27//16283    |
| FREEHOLD    | 20060925     | 20060925    | 23//1101696  |
| FREEHOLD    | 20060925     | 20060925    | 21//1101696  |
| FREEHOLD    | 20060925     | 20060925    | 22//1101696  |
| FREEHOLD    | 20081023     | 20081023    | 228//1131953 |
| FREEHOLD    | 20090712     | 20090715    | 10//1139978  |
| FREEHOLD    | 20090712     | 20090715    | 11//1139978  |
| FREEHOLD    | 20010504     | 20041126    | 1//1018958   |
| FREEHOLD    | 19940418     | 20041126    | 1//175470    |
| FREEHOLD    | 19930804     | 20041126    | 4//805024    |
| FREEHOLD    | 19930804     | 20041126    | 33//751655   |
| FREEHOLD    | 19930804     | 20041126    | 32//751655   |
| FREEHOLD    | 19930804     | 20041126    | 39//751655   |
| FREEHOLD    | 19930804     | 20090407    | 72//751651   |
| FREEHOLD    | 19930804     | 20090407    | 302//751651  |
|             |              |             |              |

| FREEHOLD             | 19930804                | 20090407 | 68//751651    |
|----------------------|-------------------------|----------|---------------|
| FREEHOLD             | 19930804                | 20090407 | 407//751651   |
|                      |                         |          |               |
| CROWN                | 19930804                | 20090906 | 195//751651   |
| FREEHOLD             | 1995 <mark>1</mark> 010 | 20111223 | 1//787242     |
| FREEHOLD             | 19990823                | 20111223 | 67//1004747   |
| FREEHOLD             | 19930804                | 20041126 | 37//751655    |
| FREEHOLD             | 19940418                | 20041126 | 5//829137     |
| FREEHOLD             | 19930804                | 20041126 | 30//751655    |
| FREEHOLD             | 19970520                | 20041126 | 21//868170    |
| FREEHOLD             | 19960222                | 20041126 | 38//751655    |
| FREEHOLD             | 19970415                | 20041126 | 2//226790     |
| FREEHOLD             | 19970415                | 20041126 | 3//226790     |
| FREEHOLD             | 19930804                | 20041126 | 3//805024     |
| FREEHOLD             | 19970415                | 20041126 | 1//226790     |
| FREEHOLD             | 19930804                | 20041126 | 26//751655    |
| FREEHOLD             | 19930804                | 20041126 | 31//751655    |
| FREEHOLD             | 19930804                | 20041126 | 99//751655    |
| FREEHOLD             | 19950215                | 20041126 | 2//835651     |
| FREEHOLD             | 19970520                | 20041126 | 22//868170    |
| FREEHOLD             | 19930804                | 20090411 | 73//751651    |
| CROWN                | 19930804                | 20090829 | 129//751651   |
| CROWN                | 20100322                | 20100617 | 7318//1149348 |
| FREEHOLD             | 19930804                | 20100903 | 125//751651   |
| STATE FORESTS OF NSW | 19930804                | 20110313 | 201//751655   |
| STATE FORESTS OF NSW | 19930804                | 20110313 | 84//751655    |
| FREEHOLD             | 19940415                | 20041126 | 1//576152     |
| FREEHOLD             | 19930804                | 20041126 | 1//113040     |
| FREEHOLD             | 19930804                | 20041126 | 50//751655    |
| FREEHOLD             | 19930804                | 20041126 | 47//751655    |
| STATE FORESTS OF NSW | 19930804                | 20110313 | 35//751634    |
| STATE FORESTS OF NSW | 19930804                | 20110313 | 203//751655   |
| STATE FORESTS OF NSW | 19930804                | 20110313 | 52//751655    |
| STATE FORESTS OF NSW | 19930804                | 20110313 | 53//751655    |
| STATE FORESTS OF NSW | 19940810                | 20110313 | 51//751655    |
| STATE FORESTS OF NSW | 19930804                | 20110313 | 202//751655   |
| STATE FORESTS OF NSW | 19930804                | 20110313 | 54//751655    |



APPENDIX 2: DEVELOPMENT LAYOUT PLAN





Pit Top Surface Facility

# **APPENDIX 3: STATEMENT OF COMMITMENTS**

Statement of Commitments revised by Centennial Springvale - 16 April 2015.

| Desired Outcome  | Action  |
|--|---|
| 1. General   |   |
|  | Operations will be undertaken in accordance with the description provided in this EIS.  |
| All operations are undertaken<br>in a manner that will minimise<br>the environmental impacts<br>associated with the Project. | As the required exploration drill holes are determined, Centennial Angus Place<br>will undertake a series of due diligence assessments to consider key impacts as<br>relevant. The general approach of the due diligence assessments will be to<br>conduct site investigations to ensure that significant impacts are avoided.  |
|  | Centennial Springvale will develop Trigger Action Response Plans as part of the development of the certain management plans which will detail the response to be taken if mining induced impacts occur.   |
| 2. Development Phase   |   |
| All construction operations<br>are appropriately undertaken<br>to minimise potential impacts<br>to the environment.          | Six (6) months prior to construction of surface facilities on the Newnes Plateau, a Construction Environmental Management Plan will be developed in consultation with the Forestry Corporation of NSW. This plan will include noise management in accordance with the Project Specific Noise Criteria detailed in Section 10.6.3 of the EIS. A copy of the Construction Environmental Management Plan will be provided to Lithgow City Council for their consideration. |
| 3. Exploration   |   |
| All exploration activities are<br>appropriately undertaken to<br>minimise potential impacts to<br>the environment.           | Proposed exploration activities will be notified to DRE and where applicable to<br>the Forestry Corporation of NSW. All required approvals will be obtained prior to<br>the commencement of any exploration activities. Copies of any due diligence<br>assessments will also be provided to DRE and Forestry Corporation (where<br>applicable).   |
| 4. Hours of Operation  |   |
| All operations are undertaken within the approved operating hours.   | Operations will be undertaken 24 hours a day 7 days a week, 52 weeks per year.  |
| 5. Surface Water, Groundwate   | er, Geomorphology and Aquatic   |
|  | Within six (6) months of development consent, a Water Management Plan will be developed that includes the monitoring requirements identified in Section 10.2.5 of the EIS.  |
| All surface water groundwater  | The Water Management Plan will be developed in consultation with the NSW Office of Water.   |
| and aquatic impacts are<br>minimised to the greatest<br>extent possible.   | Groundwater models will be updated every 6 months and a review will be included in the Annual Review. Copies of the Annual Review will continue to be provided to NOW.  |
|  | Flow monitoring on drainage lines within 800m of the longwall voids from LW1008 will be installed to measure far field effects.   |
|  | Throughout the life of the Project, stygofauna will be monitored using standing water levels within one borehole in each aquifer where stygofauna are known to  |

| Desired Outcome               | Action  |
|-------------------------------|---|
|                               | occur (AQ4 to AQ6). Where available, monitoring of the deep aquifer system, AQ 1 to AQ3 will be undertaken to establish presence of stygofauna.   |
|                               | <ul> <li>Centennial Coal will undertake a regional stygofauna assessment which will:</li> <li>Collate existing available information on groundwater bores, water quality and characteristics in Centennial Coal's area of operations throughout the Western Coalfield.</li> <li>Use this information to form a prioritisation list of likely areas for GDE to occur.</li> <li>Use the prioritisation protocol to identify bores that can be sampled to provide data on the presence and significance of fauna both within and outside mine areas.</li> <li>Identify any stygofauna found to a minimum of Family level.</li> <li>Advise on the significance of the findings.</li> <li>Examine relationship between bore characteristics and presence of stygofauna.</li> </ul> |
|                               | <ul> <li>The following strategy will be adopted by Centennial Coal to secure water licenses required for the Project:</li> <li>Trade, within the constraints of the relevant Water Sharing Plan, with other Centennial Coal water license holders.</li> <li>Obtain, when available through controlled allocation orders under the relevant Water Sharing Plan, additional allocations.</li> <li>Review the hydrogeological model and predicted water inflows for the Project on a 6 monthly basis to ensure adequate accounting for water take and license requirements.</li> <li>Contribute to the 2016 Water Sharing Plan review process, as agreed with the NSW Office of Water.</li> </ul>  |
|                               | Springvale Coal will commit to notify NSW Fisheries if any monitoring detects significant impacts to third order drainage lines as a result of subsidence.  |
|                               | Centennial Springvale will undertake further investigations into the toxicity of LDP001 water discharge to identify the cause of the toxicity.  |
|                               | Centennial Springvale will commit to achieving a 700 $\mu S/cm$ to 900 $\mu S/cm$ limit at LDP009 by 31 December 2019.  |
|                               | Centennial Springvale will develop and implement a management program that includes:  |
|                               | <ul> <li>a) Water quality, macroinvertebrate and ecotoxicology monitoring across the Coxs River Catchment to measure the performance against the long term water quality objective and the impacts of change on the aquatic ecology and ecosystem health of the Coxs River.</li> <li>b) The water quality parameters to be monitored at all proposed Licenced Discharge Points, the frequency of monitoring and concentration limits focussed on those that have been identified as having potential to cause harm to the environment.</li> <li>c) A Trigger Action Response Plan should concentration limits be exceeded that focusses on the extent to which an exceedance of quality limits might affect aquatic ecology of the Coxs River catchment.</li> </ul>           |
| 6. Terrestrial and Aquatic Ec | ology   |
|                               | Within 12 months of development consent, the land to be used for offsetting the impacts of the Project, as identified in Chapter 10.3, will be implemented. Within 12 months of development consent a Research Strategy will be developed in consultation with the DPE, Forestry Corporation of NSW, Office of Environment and Heritage, National Parks and Wildlife Service and Federal Environment  |

| Desired Outcome   | Action   |  |
|---|--|--|
|   | Department. This research strategy will include the research and mitigation  |  |
|   | themes described in Section 10.3.  |  |
|   | Within two (2) years of development consent, a Biodiversity Management Plan will be developed and implemented. The Plan will be developed in consultation with DPE, OEH, DoE, Forestry Corporation of NSW, NPWS and will include the outcomes of the Research Strategy.  |  |
| 7. Aboriginal Heritage Manag  | ement  |  |
| Ensure that identified and<br>unidentified Aboriginal Sites<br>are appropriately managed. | Aboriginal Heritage will be monitored and managed in accordance with Table 8.2 of this EIS.  |  |
|   | Within 6 months of the date of approval, the Cultural Heritage Management Plan will be updated.  |  |
| 8. Traffic and Transport  |  |  |
| Project-related impacts on the road network are limited.                                  | Six months prior to the commencement of construction activities, a Construction<br>Traffic Management Plan will be developed and implemented. The Plan will be<br>developed in consultation with Lithgow City Council and Forestry Corporation of<br>NSW.  |  |
| 9. Noise and Vibration  | 9. Noise and Vibration   |  |
| All noise impacts are<br>minimised to the greatest<br>extent possible.                    | The existing Noise Management Plan will be updated to include the noise criteria for the Project and a noise monitoring programme for the sensitive receptors identified in <b>Figure 10.25</b> of the EIS. The noise monitoring programme will include continuous, unattended noise monitoring and operator attended quarterly noise monitoring.  |  |
| 10. Air Quality and Greenhou  | se Gas   |  |
| All air quality impacts are<br>minimised to the greatest                                  | Within six (6) months of development consent, the Air Quality Management Plan will be updated to include the mitigation measures identified in <b>Section 10.7</b> of the EIS.   |  |
| extent possible.  | An additional TEOM will be installed as part of a regional air quality monitoring programme that is currently being developed by Centennial Coal.  |  |
| 11. Soils and Land Capability   |  |  |
|   | Soil stripping will be undertaken in accordance with the soil stripping depths in the Soils and Land Capability Report appended to this EIS.   |  |
| All soil and land impacts are<br>minimised to the greatest<br>extent possible             | <ul> <li>The following topsoil management measures will be applied:</li> <li>topsoil will be stripped to depths in Table 10.44 of the EIS only when moist and stockpiled a maximum of 3 m high;</li> <li>topsoil stripping will immediately precede construction to minimise the time that bare subsoils are exposed;</li> <li>ameliorants for each soil type will be applied as per the Soils and Land Capability Report;</li> <li>topsoil that is to be stockpiled for longer than 3 months with be stabilised with an annual cover crop; and</li> <li>prior to re-spreading stockpiled topsoil, weeds will be removed.</li> </ul> |  |

| Desired Outcome  | Action   |  |
|--|--|--|
| 12. Life of Mine and Rehabilitation  |  |  |
| Rehabilitation of the<br>Springvale Coal Services Site<br>is conducted in accordance<br>with Industry Standards. | Progressive rehabilitation will be undertaken in accordance with the<br>Rehabilitation Strategy appended to this EIS.<br>Within 6 months of approval, the Mining Operations Plan will be updated to<br>include the rehabilitation requirements outlined in the Rehabilitation Strategy of<br>this EIS, |  |
| 13. Hazards  |  |  |
| Safety of the underground<br>personnel from the<br>underground strata will be<br>maintained.                     | The existing Hazard Plan, being part of the Strata Failure Management System, will be maintained and updated on an ongoing basis as required, in accordance with the Clause 28b (ii) of the <i>Coal Mine Health and Safety Regulation 2006</i> .   |  |

# Proposed Bore LW1017 TG Proposed Bore LW1014 TG Proposed Bore LW1012 TG Proposed Bo LW1011 TG Proposed APC Vent Site 3 Birds Ro Flora Rers Proposed Bore LW1007 TG NEWNES STATE FOREST Proposed Bore LW1006 TG INGUS PLACE APC Ventilation Site 2 Proposed Bore LW1004 TG Substation 1 Bore 940 Bore 6 Bore 8 Proposed Bore 9 Proposed duplication of Water Transfer Scheme Proposed Bore 10 SVC Ventila Shaft 3 idsdale Substation 4 LEGEND **⊕**<sup>S5</sup> APC Project Application Area Residenetial Receivers SVC Project Application Area NF3 **Recreational Receivers** Existing Infrastructure Proposed Infrastructure State Forest **River/Creek** National Park Main Roads DATE 25.03.2015 CENTENNIAL ANGUS PLACE PTY, LTD THIS DRAWING IS COPYRIGH SEAM LITHGOW Centennial Coal Angus Place & Springvale IN ANY FORM OR BY SCALE DIAGRAM ONLY Mine Extension Projects Angus Place DRAWN A.D. ME CHECKED by A.D.M. A.D. MELLOR Noise Sensitive Receptor Locations DRG. No. AP7576 A2 REFERENCE NUSHWREDOW

# APPENDIX 4: NOISE RECEIVER LOCATION PLAN

# APPENDIX 5 NOISE COMPLIANCE ASSESSMENT

#### **Applicable Meteorological Conditions**

- 1. The noise criteria in Tables 3 and 4 in Schedule 4 are to apply to a receiver under all meteorological conditions except under:
  - (a) wind speeds greater than 3 m/s at 10 m above ground level; or
  - (b) temperature inversion conditions between 1.5°C and 3°C/100 m and wind speed greater than 2 m/s at 10 m above ground level; or
  - (c) temperature inversion conditions greater than 3°C/100 m.

# **Determination of Meteorological Conditions**

2. Except for wind speed at microphone height, the data to be used for determining meteorological conditions shall be that recorded by the meteorological station required under condition 8 of Schedule 4.

#### **Compliance Monitoring**

- 3. Attended monitoring is to be used to evaluate compliance with the relevant conditions of this consent.
- 4. This monitoring must be carried out at least 4 times in each calendar year (ie at least once in every quarter), unless the Secretary directs otherwise.
- 5. Unless the Secretary agrees otherwise, this monitoring is to be carried out in accordance with the relevant requirements for reviewing performance set out in the *NSW Industrial Noise Policy* (as amended from time to time), in particular the requirements relating to:
  - (a) monitoring locations for the collection of representative noise data;
  - (b) equipment used to collect noise data, and conformity with Australian Standards relevant to such equipment;
  - (c) modifications to noise data collected, including for the exclusion of extraneous noise and/or penalties for modifying factors apart from adjustments for duration; and
  - (d) the use of an appropriate modifying factor for low frequency noise to be applied during compliance testing at any individual residence if low frequency noise is present (in accordance with the INP) and before comparison with the specified noise levels in the consent.

#### **APPENDIX 6: ABORIGINAL HERITAGE SITES**

