



# Springvale Water Treatment Project

State Significant Development 7592  
Environmental Impact Statement  
Volume 2 Part 1 - Appendices A

September 2016



**EnergyAustralia**



**Centennial Coal**

# **Appendix A – SEARS**



**Table A.1 Secretary's Environmental Assessment Requirements**

| Category             | Secretary's requirements                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Where it is addressed in the EIS                                                                                         |
|----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|
| General Requirements | The Environmental Impact Statement (EIS) for the development must comply with the requirements in Clauses 6 and 7 of Schedule 2 of the Environmental Planning and Assessment Regulation 2000.<br>In particular, the EIS must include:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | EIS has been prepared in accordance with the requirements for form and content of an EIS                                 |
|                      | Full description of the development, including:<br>details of construction, operation and rehabilitation;<br>a site plan showing all surface infrastructure and facilities (including any infrastructure that would be required for the development, but the subject of a separate approvals process);<br>a water management plan, having regard to the requirements and recommendations from EPA, WaterNSW and DPI Water;<br>the likely interactions between the development and any other existing, approved or proposed development in the vicinity of the site;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Chapter 5<br>Chapter 5<br><br>Chapters 5 and 10<br><br>Chapter 3                                                         |
|                      | Analysis of any feasible alternatives to the carrying out of the development and justification as to why they have been rejected in the proposal                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Chapter 4                                                                                                                |
|                      | A list of any approvals that must be obtained before the development may commence;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Chapter 6                                                                                                                |
|                      | An assessment of the likely impacts of the development on the environment, focusing on the specific issues identified below, including:<br>a description of the existing environment likely to be affected by the development, using sufficient baseline data;<br>an assessment of the likely impacts of all stages of the development, including any cumulative impacts, taking into consideration any relevant legislation, environmental planning instruments, guidelines, policies, plans and industry codes of practice;<br>a description of the measures that would be implemented to mitigate and/or offset the likely impacts of the development, and an assessment of:<br>whether these measures are consistent with industry best practice, and represent the full range of reasonable and feasible mitigation measures that could be implemented;<br>the likely effectiveness of these measures, including performance measures where relevant; and<br>whether contingency plans would be necessary to manage any residual risks;<br>a description of the measures that would be implemented to monitor and report on the environmental performance of the development if it is approved; | Chapter 2 and Chapters 9 – 15<br><br>Chapters 9 – 15<br><br>Chapter 16<br><br><br><br><br><br><br><br><br><br>Chapter 16 |
|                      | A consolidated summary of all the proposed environmental management and monitoring measures, identifying all the commitments in the EIS;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Chapter 16                                                                                                               |

| Category        | Secretary's requirements                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Where it is addressed in the EIS |
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|                 | Consideration of the development against all relevant environmental planning instruments; and                                                                                                                                                                                                                                                                                                                                                                                                                                           | Chapter 6                        |
|                 | The reasons why the development should be approved, having regard to biophysical, economic and social considerations, including the principles of ecologically sustainable development.                                                                                                                                                                                                                                                                                                                                                 | Chapter 17                       |
|                 | In addition to the matters set out in Schedule 1 of the Environmental Planning and Assessment Regulation 2000, the development application must be accompanied by a signed report from a suitably qualified and experienced person that includes an accurate estimate of the capital investment value (as defined in Clause 3 of the Environmental Planning and Assessment Regulation 2000) of the development, including details of all the assumptions and components from which the capital investment value calculation is derived. | Appendix I                       |
| Specific Issues | The EIS must address the following specific issues:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                  |
| Water           | Assess the likely impacts of the development on the quantity and quality of the region's surface and groundwater resources, particularly having regard to State Environmental Planning Policy (Sydney Drinking Water Catchment) 2011 and the requirements and recommendations from EPA, DPI, OEH and WaterNSW                                                                                                                                                                                                                           | Chapter 10 and Appendix B        |
| Noise           | Assess the construction noise impacts of the development in accordance with the Interim Construction Noise Guideline (ICNG) and water treatment plant noise impacts in accordance with the NSW Industrial Noise Policy (INP)                                                                                                                                                                                                                                                                                                            | Chapter 13 and Appendix E        |
| Biodiversity    | Assess the likely biodiversity impacts of the development, in accordance with the Framework for Biodiversity Assessment, by a person accredited in accordance with s142(B)(1)(c) of the Threatened Species Conservation Act 1995, and having regard to requirements and recommendations from OEH and DPI                                                                                                                                                                                                                                | Chapter 11 and Appendix C        |
| Land            | Assess the compatibility of the development with other land uses in the vicinity of the development in accordance with the requirements from DRE, paying particular attention to the agricultural and forestry and future exploration land uses in the region                                                                                                                                                                                                                                                                           | Chapters 2 and 15                |
| Heritage        | Assess the likely Aboriginal and historic heritage (cultural and archaeological) impacts of the development, having regard to requirements from the OEH                                                                                                                                                                                                                                                                                                                                                                                 | Chapter 12 and Appendix D        |
| Transport       | Assess the likely construction traffic impacts of the development on the capacity, condition, safety and efficiency of the local and State road network, having regard to requirements from Transport for NSW and RMS                                                                                                                                                                                                                                                                                                                   | Chapter 14 and Appendix F        |
| Waste           | Assess the likely impacts associated with disposal of the additional brine and residuals produced and whether existing infrastructure at MPPS has sufficient capacity to store the waste;                                                                                                                                                                                                                                                                                                                                               | Chapters 3 and 15                |

| Category     | Secretary's requirements                                                                                                                                                                                                                                                                                                                                          | Where it is addressed in the EIS |
|--------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|
| Visual       | Assess the likely visual impacts of the development on private landowners in the vicinity of the development and key vantage points in the public domain;                                                                                                                                                                                                         | Chapter 15                       |
| Air          | Assess the likely air quality impacts of the development, having regard to requirements from the EPA                                                                                                                                                                                                                                                              | Chapter 15                       |
| Consultation | During the preparation of the EIS, you must consult with relevant local, State or Commonwealth Government authorities, service providers, community groups and affected landowners. The EIS must describe the consultation that was carried out, identify the issues raised during this consultation, and explain how these issues have been addressed in the EIS | Chapter 7                        |

**Table A.2 Government Agency correspondence**

| Category                                        | Agency requirements                                                                                                                                                                                                                                                                            | Where it is addressed in the EIS                                                                                                                          |
|-------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Department of Primary Industries – Water</b> |                                                                                                                                                                                                                                                                                                |                                                                                                                                                           |
| Water                                           | Annual volumes of surface water and groundwater proposed to be taken by the activity (including through inflow and seepage) from each surface and groundwater source as defined by the relevant water sharing plan.                                                                            | Chapters 3, 10 and Appendix B                                                                                                                             |
|                                                 | Assess any volumetric water licensing requirements (including those for ongoing water take following completion of the project).                                                                                                                                                               | Chapters 6 and 10                                                                                                                                         |
|                                                 | Identify an adequate and secure water supply for the life of the project. Confirmation that water can be sourced from an appropriately authorised and reliable supply. This is to include an assessment of the current market depth where water entitlement is required to be purchased.       | Chapters 3 and 10                                                                                                                                         |
|                                                 | A detailed and consolidated site water balance.                                                                                                                                                                                                                                                | Chapter 10 and Appendix B                                                                                                                                 |
|                                                 | A detailed assessment against the NSW Aquifer Interference Policy (2012) using DPI Water's assessment framework.                                                                                                                                                                               | Chapter 10 and Appendix B                                                                                                                                 |
|                                                 | Assess impacts on surface and ground water sources (both quality and quantity), related infrastructure, adjacent licensed water users, basic landholder rights, watercourses, riparian land, and groundwater dependent ecosystems, and measures proposed to reduce and mitigate these impacts. | Chapter 10 and Appendix B                                                                                                                                 |
|                                                 | Full technical details and data of all surface and groundwater modelling, and an independent peer review.                                                                                                                                                                                      | Appendix B. Water balance model included mine inflow projections from hydrogeological modelling undertaken by CSIRO which has been subject to peer review |
|                                                 | Proposed surface and groundwater monitoring activities and methodologies.                                                                                                                                                                                                                      | Chapter 10 and Appendix B                                                                                                                                 |
|                                                 | Proposed management and disposal of produced or incidental water.                                                                                                                                                                                                                              | Chapters 5, 10 and Appendix B                                                                                                                             |
|                                                 | Details of the final landform of the site, including final void management (where relevant) and rehabilitation measures.                                                                                                                                                                       | Chapter 5                                                                                                                                                 |
|                                                 | Assess any potential cumulative impacts on water resources, and any proposed options to manage the cumulative impacts.                                                                                                                                                                         | Chapter 10 and Appendix B                                                                                                                                 |
|                                                 | Consider relevant policies and guidelines.                                                                                                                                                                                                                                                     |                                                                                                                                                           |

| Category                                                          | Agency requirements                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Where it is addressed in the EIS                                                                                                                                |
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|                                                                   | A statement of where each element of the SEARs is addressed in the EIS (i.e. in the form of a table).                                                                                                                                                                                                                                                                                                                                                                                                     | Chapter 7 and Appendix B                                                                                                                                        |
| <b>Department of Primary Industries Water – Detailed comments</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                 |
| Water                                                             | The EIS should take into account the objects and regulatory requirements of the Water Act 1912 (WA 1912) and Water Management Act 2000 (WMA 2000), and associated regulations and instruments, as applicable.                                                                                                                                                                                                                                                                                             | Chapters 6, 10 and Appendix B                                                                                                                                   |
| Water Sharing Plans                                               | Demonstrate consistency with the relevant rules of the Water Sharing Plan including rules for access licences, distance restrictions for water supply works and rules for the management of local impacts in respect of surface water and groundwater sources, ecosystem protection (including groundwater dependent ecosystems), water quality and surface-groundwater connectivity.                                                                                                                     | The Project will not alter water take or existing operations in accordance with current water access licences.<br>Described in Chapter 3, 6, 10 and Appendix B. |
|                                                                   | Describe any site water use (amount of water to be taken from each water source) and management including all sediment dams, clear water diversion structures with detail on the location, design specifications and storage capacities for all the existing and proposed water management structures.                                                                                                                                                                                                    | The Project will not alter water take under existing water access licences. The use of water is described in Chapter 5, 10 and Appendix B                       |
|                                                                   | Analyse the proposed water supply arrangements against the rules for access licences and other applicable requirements of any relevant WSP, including:<br>Sufficient market depth to acquire the necessary entitlements for each water source.<br>Ability to carry out a “dealing” to transfer the water to relevant location under the rules of the WSP.<br>Daily and long-term access rules.<br>Account management and carryover provisions.<br>Provide a detailed and consolidated site water balance. | Not applicable - The Project will not alter the water take under existing water access licences. The use of water is described in Chapter 5, 10 and Appendix B  |

| Category                 | Agency requirements                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Where it is addressed in the EIS                              |
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| Licensing Considerations | <p>Identify water requirements for the life of the project in terms of both volume and timing (including predictions of potential ongoing groundwater take following the cessation of operations at the site – such as evaporative loss from open voids or inflows).</p> <p>Details of the water supply source(s) for the proposal including any proposed surface water and groundwater extraction from each water source as defined in the relevant Water Sharing Plan/s and all water supply works to take water.</p> <p>Explanation of how the required water entitlements will be obtained (i.e. through a new or existing licence/s, trading on the water market, controlled allocations etc.).</p> <p>Information on the purpose, location, construction and expected annual extraction volumes including details on all existing and proposed water supply works which take surface water, (pumps, dams, diversions, etc).</p> <p>Details on all bores and excavations for the purpose of investigation, extraction, dewatering, testing and monitoring. All predicted groundwater take must be accounted for through adequate licensing.</p> <p>Details on existing dams/storages (including the date of construction, location, purpose, size and capacity) and any proposal to change the purpose of existing dams/storages</p> <p>Details on the location, purpose, size and capacity of any new proposed dams/storages.</p> <p>Applicability of any exemptions under the Water Management (General) Regulation 2011 to the project.</p> <p>Water allocation account management rules, total daily extraction limits and rules governing environmental protection and access licence dealings also need to be considered.</p> | The use of water is described in Chapter 5, 10 and Appendix B |



| Category                 | Agency requirements                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Where it is addressed in the EIS |
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| Surface Water Assessment | <p>The predictive assessment of the impact of the proposed project on surface water sources should include the following:</p> <ul style="list-style-type: none"> <li>– Identification of all surface water features including watercourses, wetlands and floodplains transected by or adjacent to the proposed project.</li> <li>– Identification of all surface water sources as described by the relevant water sharing plan.</li> <li>– Detailed description of dependent ecosystems and existing surface water users within the area, including basic landholder rights to water and adjacent/downstream licensed water users.</li> <li>– Description of all works and surface infrastructure that will intercept, store, convey, or otherwise interact with surface water resources.</li> <li>– Assessment of predicted impacts on the following: <ul style="list-style-type: none"> <li>▪ flow of surface water, sediment movement, channel stability, and hydraulic regime,</li> <li>▪ water quality,</li> <li>▪ flood regime,</li> <li>▪ dependent ecosystems,</li> <li>▪ existing surface water users, and</li> <li>▪ planned environmental water and water sharing arrangements prescribed in the relevant water sharing plans.</li> </ul> </li> </ul> | Chapter 10 and Appendix B        |

| Category               | Agency requirements                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Where it is addressed in the EIS |
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| Groundwater Assessment | <p>Include adequate details to assess the impact of the project on all groundwater sources including:</p> <ul style="list-style-type: none"> <li>– Works likely to intercept, connect with or infiltrate the groundwater sources.</li> <li>– Any proposed groundwater extraction, including purpose, location and construction details of all proposed bores and expected annual extraction volumes.</li> <li>– Bore construction information is to be supplied to DPI Water by submitting a “Form A” template. DPI Water will supply “GW” registration numbers (and licence/approval numbers if required) which must be used as consistent and unique bore identifiers for all future reporting.</li> <li>– A description of the watertable and groundwater pressure configuration, flow directions and rates and physical and chemical characteristics of the groundwater source (including connectivity with other groundwater and surface water sources).</li> <li>– Sufficient baseline monitoring for groundwater quantity and quality for all aquifers and GDEs to establish a baseline incorporating typical temporal and spatial variations.</li> <li>– The predicted impacts of any final landform on the groundwater regime.</li> <li>– The existing groundwater users within the area (including the environment), any potential impacts on these users and safeguard measures to mitigate impacts.</li> <li>– An assessment of groundwater quality, its beneficial use classification and prediction of any impacts on groundwater quality.</li> <li>– An assessment of the potential for groundwater contamination (considering both the impacts of the proposal on groundwater contamination and the impacts of contamination on the proposal).</li> <li>– Measures proposed to protect groundwater quality, both in the short and long term.</li> <li>– Measures for preventing groundwater pollution so that remediation is not required.</li> <li>– Protective measures for any groundwater dependent ecosystems (GDEs).</li> <li>– Proposed methods of the disposal of waste water and approval from the relevant authority.</li> <li>– The results of any models or predictive tools used.</li> </ul> | Chapter 10 and Appendix D        |

| Category                         | Agency requirements                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Where it is addressed in the EIS |
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|                                  | <p>Where potential impact/s are identified the assessment will need to identify limits to the level of impact and contingency measures that would remediate, reduce or manage potential impacts to the existing groundwater resource and any dependent groundwater environment or water users, including information on:</p> <ul style="list-style-type: none"> <li>– Any proposed monitoring programs, including water levels and quality data.</li> <li>– Reporting procedures for any monitoring program including mechanism for transfer of information.</li> <li>– An assessment of any groundwater source/aquifer that may be sterilised from future use as a water supply as a consequence of the proposal.</li> <li>– Identification of any nominal thresholds as to the level of impact beyond which remedial measures or contingency plans would be initiated (this may entail water level triggers or a beneficial use category).</li> <li>– Description of the remedial measures or contingency plans proposed.</li> <li>– Any funding assurances covering the anticipated post development maintenance cost, for example on-going groundwater monitoring for the nominated period.</li> </ul> | Chapter 10 and Appendix D        |
| Groundwater Dependent Ecosystems | <p>The EIS must consider the potential impacts on any Groundwater Dependent Ecosystems (GDEs) at the site and in the vicinity of the site and:</p> <ul style="list-style-type: none"> <li>– Identify any potential impacts on GDEs as a result of the proposal including:</li> <li>– the effect of the proposal on the recharge to groundwater systems;</li> <li>– the potential to adversely affect the water quality of the underlying groundwater system and adjoining groundwater systems in hydraulic connections; and</li> <li>– the effect on the function of GDEs (habitat, groundwater levels, connectivity).</li> <li>– Provide safeguard measures for any GDEs.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Chapter 10 and Appendix D        |

| Category                                     | Agency requirements                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Where it is addressed in the EIS |
|----------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|
| Watercourses, Wetlands and Riparian Land     | <p>The EIS should address the potential impacts of the project on all watercourses likely to be affected by the project, existing riparian vegetation and the rehabilitation of riparian land. It is recommended the EIS provides details on all watercourses potentially affected by the proposal, including:</p> <p>Scaled plans showing the location of:</p> <ul style="list-style-type: none"> <li>– wetlands/swamps, watercourses and top of bank;</li> <li>– riparian corridor widths to be established along the creeks;</li> <li>– existing riparian vegetation surrounding the watercourses (identify any areas to be protected and any riparian vegetation proposed to be removed);</li> <li>– the site boundary, the footprint of the proposal in relation to the watercourses and riparian areas; and</li> <li>– proposed location of any asset protection zones.</li> <li>– photographs of the watercourses/wetlands and a map showing the point from which the photos were taken.</li> <li>– a detailed description of all potential impacts on the watercourses/riparian land.</li> <li>– a detailed description of all potential impacts on the wetlands, including potential impacts to the wetlands hydrologic regime; groundwater recharge; habitat and any species that depend on the wetlands.</li> <li>– a description of the design features and measures to be incorporated to mitigate potential impacts.</li> <li>– geomorphic and hydrological assessment of water courses including details of stream order (Strahler System), river style and energy regimes both in channel and on adjacent floodplains.</li> </ul> | Chapter 10 and Appendix D        |
| Drill Pad, Well and Access Road Construction | <p>Any construction activity within 40 m of a watercourse, should be designed by a suitably qualified person, consistent with the NSW Guidelines for Controlled Activities on Waterfront Land (July 2012).</p> <p>Construction of all wells must be undertaken in accordance with the Minimum Construction Requirements for Water Bores in Australia (3rd edition 2012) by a driller holding a bore drillers' licence valid in New South Wales.</p> <p>The length of time that a core hole is maintained as an open hole should be minimised.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Chapter 5, 10 and Appendix B     |



| Category                                        | Agency requirements                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Where it is addressed in the EIS                                                    |
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| Landform rehabilitation                         | <p>Where significant modification to landform is proposed, the EIS must include:</p> <ul style="list-style-type: none"> <li>– justification of the proposed final landform with regard to its impact on local and regional surface and groundwater systems;</li> <li>– a detailed description of how the site would be progressively rehabilitated and integrated into the surrounding landscape;</li> <li>– outline of proposed construction and restoration of topography and surface drainage features if affected by the project;</li> <li>– detailed modelling of potential groundwater volume, flow and quality impacts of the presence of an inundated final void (where relevant) on identified receptors specifically considering those environmental systems that are likely to be groundwater dependent;</li> <li>– an outline of the measures to be put in place to ensure that sufficient resources are available to implement the proposed rehabilitation; and</li> <li>– the measures that would be established for the long-term protection of local and regional aquifer systems and for the ongoing management of the site following the cessation of the project.</li> </ul> | <p>Not applicable.</p> <p>Chapter 5 describes proposed rehabilitation measures.</p> |
| <b>Department of Primary Industries – Lands</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                     |
| Land                                            | The proponent should identify any Crown land affected by the proposal. Prior to preparation of the EIS it is recommended that the proponent undertake a Crown Land Status search available through Crown Lands.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Chapter 2                                                                           |
| <b>Environment Protection Authority</b>         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                     |
| General                                         | <p>It is the expectation of the EPA that Springvale Coal Pty Ltd will meet these respective deadlines for reductions in salinity, and the elimination of toxicity by 30 June 2017, as required by EPL 3607.</p> <p>The EA needs to provide a timetable for works for Package 1 (Transfer System) and Package 2 (Water Treatment System) to ensure compliance with Development Consent Condition 12 - Water Management Performance Measures.</p> <p>Similarly, the abovementioned timetable for works for Package 1 (Transfer System) and Package 2 (Water Treatment System) is also required to ensure compliance with Condition U1 (U1 .1) - Pollution Studies and Reduction programs of EPL 3607.</p> <p>Compliance with Condition U (U 1.1) is required to achieve the salinity concentrations of the discharge from the Springvale Delta Mine Water Transfer Scheme (SDMWTS) specified by that condition by 30 June 2017 and 30 June 2019, respectively. This licence condition also requires the elimination of the toxicity of the mine water discharge from Licensed Discharge Point (LDP009) by 30 June 2017.</p>                                                                       | Chapter 1 and Chapter 5                                                             |

| Category | Agency requirements                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Where it is addressed in the EIS                                                               |
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| Water    | <ul style="list-style-type: none"> <li>– The current quality of the discharge from LDP006 and the concentrations of water quality parameters.</li> <li>– The characteristics of toxicity from the current discharge of LDP006.</li> <li>– The concentration of water quality parameters and quality of the treated water to be directed to LDP006.</li> <li>– The toxic characteristics of the treated water.</li> <li>– The concentration of water quality parameters, quality and toxic characteristics of the blend of treated mine water with groundwater seepage and rainfall runoff that will be discharged through LDP006.</li> <li>– Potential impacts on the aquatic ecology of Wangcol Creek and the upper Coxs River of (a) the blend of the water sources and (b) when the discharge is only groundwater seepage and/or with rainfall runoff.</li> <li>– An assessment of the groundwater and groundwater seepage that may be occurring within the general area of the Western Coal Services site and the Mt Piper ash emplacement area, that is not captured and discharged through LDP006, and has the potential to disperse off-site within the upper Coxs River catchment and impact on the aquatic ecology of Wang col Creek and the upper Coxs River.</li> <li>– Address the need to implement a reliable groundwater monitoring program between the Western Coal Services site and Wangcol Creek.</li> <li>– For the water quality parameters list above, they should be assessed, and expressed in both Total and Acid Extractable concentrations, for the following: <ul style="list-style-type: none"> <li>▪ Total suspended solids, turbidity, pH, salinity {Electrical Conductivity - EC}, total oil and grease.</li> <li>▪ Fluoride.</li> <li>▪ Elements and metals: aluminium, arsenic, barium, beryllium, boron, cadmium, calcium, chromium (III and VI), cobalt, copper, iron, lead, magnesium, manganese, mercury, molybdenum, nickel, potassium, selenium, sodium, sulphur, uranium, zinc.</li> <li>▪ Anions: chloride, sulphate.</li> <li>▪ Alkalinity (carbonate, bicarbonate and total).</li> <li>▪ Nitrogen and phosphorus: total nitrogen, total Kjeldahl nitrogen, nitrite, nitrate, total ammonium N, total phosphorus.</li> <li>▪ Phenolic compounds (total).</li> </ul> </li> </ul> | <p>Chapter 10 and Appendix B</p> <p>Aquatic ecology addressed in Chapter 15 and Appendix H</p> |
|          | Compare the various proposed combinations of discharges from LDP006 with the ecosystem protection levels of the Australian and New Zealand Guidelines for Fresh and Marine Water Quality (Australian and New Zealand Environment and Conservation Council 2000 -ANZECC 2000).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Chapter 10 and Appendix B                                                                      |

| Category                      | Agency requirements                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Where it is addressed in the EIS |
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| Volume of Mine Water          | <p>The Development Consent for the Springvale Mine Extension Project does not allow the duplication of pipelines or an increase in capacity of the SDWTS, effectively limiting the capacity at 30 ML/d.</p> <p>Provide the reasons why the volume of the pipeline needs to be increased to 36 ML/d, and the source of the additional mine water directed to the SDWTS. For example, is the additional capacity required to include sources such as mine water from Angus Place Colliery, and mine water from the Renoun Workings which is currently discharged through LDP001 of EPL 3607.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Chapter 4 and 5                  |
| Sludge Disposal               | <p>Provide the following details of the sludge from the proposed water treatment process intended for disposal in the tailings dams at the Springvale coal services site:</p> <ul style="list-style-type: none"> <li>– quantities of sludge to be disposed per annum</li> <li>– chemical composition of the sludge</li> <li>– classification of the sludge under the Protection of the Environment Operations Act 1997 (Waste Act and Regulations 2014)</li> <li>– suitability for co-disposal with tailings.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Chapters 5 and 15                |
| Brine Management and Disposal | <p>Address brine management and disposal and specifically the points set out below:</p> <ul style="list-style-type: none"> <li>– volume of brine concentrate/crystals to be directed annually to the MPPS ash emplacement area.</li> <li>– potential the leakage of saline water from the MPPS ash emplacement area to link with the groundwater below this facility, and for dispersal via subsurface groundwater plumes towards the Coxs River.</li> <li>– need for a reliable groundwater monitoring program around the current ash dam (ie multiple piezometers with groundwater quality testing in between the ash dam wall and Coxs River).</li> <li>– need to include proper monitoring/estimation of wet weather flows with the potential to transport salt and ash over the dam wall.</li> <li>– assess the potential for prolonged, heavy rainfall to cause the capacity of the MPPS ash emplacement area to be exceeded, with the potential for brine concentrate and ash to be flushed into the Coxs River.</li> <li>– impact of the disposal of this additional brine concentrate on the capacity, and life, of the MPPS ash emplacement area.</li> <li>– leakage of salt from the salt ponds into the local groundwater.</li> <li>– measures to achieve compaction to prevent the leakage of salt to the local groundwater</li> </ul> | Chapter 5, 10 and 15             |
| Amenity                       | <p>Include information about the construction of the pipelines to ensure the amenity of the local residents of Lidsdale, Wallerawang and Blackman's Flat is not impacted by either air (dust, fumes) or noise pollution.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Chapter 13, 15 and Appendix E    |

| Category                             | Agency requirements                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Where it is addressed in the EIS |
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| Construction of the Pipelines        | Provide information on the sediment and erosion control measures that will be implemented during the construction of the pipelines.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Chapter 15 and Appendix B        |
|                                      | Assess the potential for an increase in noise emissions from Mt Piper Power Station associated with the water treatment process.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Chapter 13 and Appendix E        |
|                                      | Address the management strategies to be followed when there is either routine maintenance of the pipeline or water treatment system, or a failure of either system.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Chapter 5                        |
|                                      | Clearly address the procedures being proposed to handle untreated mine water in the case of either routine maintenance or an emergency situation, to avoid the discharge of untreated mine water into the upper Coxs River or other local surface waters within the catchment. Given the environmental gains that would be made by using the mine water at MPPS, the discharge of untreated mine water needs to be avoided.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Chapter 5                        |
| Consideration of Alternative Options | It is conventional for EAs/EISs to include the consideration of alternatives to the one being proposed, indicating why they were rejected. The EA/EIS needs to consider alternative options for ways of managing the mine water, still based on a treatment to remove salts (and by association other pollutants) and using the treated mine water for industrial purposes at MPPS. Two options which should-be considered in the EA are set out below.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Chapter 4                        |
| Use of Thompson's Creek Dam          | <p>Consider options such as treating the mine water elsewhere and then delivering treated water to MPPS. One option is to treat the mine water at the former Wallerawang Power Station site, utilising the existing infrastructure for Reverse Osmosis (RO) and then:</p> <ul style="list-style-type: none"> <li>– transferring the brine slurry using the existing pipeline to the Mt Piper brine concentrator; and,</li> <li>– transferring the treated water via a pipeline to Thompson's Creek Dam, from where it can be transferred to the MPPS.</li> </ul> <p>A benefit of this option is that by utilising Thompson's Creek Dam, the operators overcome the management constraints caused by the predicted variations to water demand at the MPPS thereby eliminating the need for a discharge of excess treated water to Wangcol Creek at the Western Coal Services site (LDP006), because water in excess to demand can remain stored in Thompson's Creek Dam, and be available for later use.</p> <p>Furthermore, Thompson's Creek Dam would also act as storage during times of scheduled maintenance or malfunction of the system, avoiding the short-term need to potentially discharge untreated mine water into the upper Coxs River. This would represent an acceptable environmental outcome.</p> | Chapter 4                        |

| Category                                                 | Agency requirements                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Where it is addressed in the EIS                                                                                     |
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| Use of De-alkalisation                                   | Consider de-alkalisation as an alternative to RO as a treatment option. The Springvale mine water has a high salinity because of the high sodium bicarbonate concentration of the mine water. It is understood that treatment to alter the water chemistry to reduce the sodium bicarbonate load which in turn lowers the salinity, instead of using micro-filtration of the mine water, can substantially reduce the amount of brine waste produced. Management of the brine waste is a key consideration of the Project. | Chapter 4                                                                                                            |
| <b>NSW Department of Industry – Resources and Energy</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                      |
| Mining                                                   | Assess potential impacts on any significant mineral resources, including:<br>Any operating mines, extractive industries or known mineral or petroleum resources.<br>Exploration activities in the vicinity of the proposed development.<br>Access for future exploration in the area.                                                                                                                                                                                                                                      | Chapter 2 and 15                                                                                                     |
|                                                          | The proponent should consult with the operator of ML1637 (Enhance Place Pty Ltd) regarding potential impacts associated with the proposal, with a record of consultation included in the EIS.                                                                                                                                                                                                                                                                                                                              | Chapter 7                                                                                                            |
| <b>Lithgow City Council</b>                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                      |
| PEA                                                      | PEA describes the project in general terms and Council has no objection to submission of the DA for the Project.                                                                                                                                                                                                                                                                                                                                                                                                           | Noted                                                                                                                |
|                                                          | Council would like to reserve the right to enter into discussions with the applicant to enter into a Voluntary Planning Agreement                                                                                                                                                                                                                                                                                                                                                                                          | Noted – VPA agreed as part of Springvale MEP SSD consent and Project is not considered to trigger need for a new VPA |
| <b>Office of Environment and Heritage requirements</b>   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                      |
| Biodiversity                                             | Biodiversity impacts are to be assessed and documented in accordance with the <a href="#">Framework for Biodiversity Assessment</a> , unless otherwise agreed by OEH, by a person accredited in accordance with s142B(1)(c) of the <i>Threatened Species Conservation Act 1995</i> .                                                                                                                                                                                                                                       | Chapter 11 and Appendix C                                                                                            |



| Category                     | Agency requirements                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Where it is addressed in the EIS |
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|                              | <p>Impacts on the species/populations/ecological communities listed below will require further consideration and provision of the information specified in s9.2 of the Framework for Biodiversity Assessment.</p> <ul style="list-style-type: none"> <li>– Blue Mountains Swamps in the Sydney Basin Bioregion</li> <li>– Montane Peatlands and Swamps of the New England Tableland, NSW North Coast, Sydney Basin, South East Corner, South Eastern Highlands and Australian Alps bioregions</li> <li>– Newnes Plateau Shrub Swamp in the Sydney Basin Bioregion</li> <li>– White Box Yellow Box Blakely's Red Gum Woodland</li> <li>– <i>Anthochaera Phrygia</i>, Regent Honeyeater</li> <li>– <i>Hoplocephalus bungaroides</i>, Broad-headed Snake</li> <li>– <i>Petalura gigantean</i>, Giant Dragonfly</li> <li>– <i>Caesia parviflora</i> var. <i>minor</i>, Small Pale Grass-lily</li> <li>– <i>Eucalyptus aggregate</i>, Black Gum</li> <li>– <i>Eucalyptus pulverulenta</i>, Silver-leafed Gum</li> <li>– <i>Leucopogon fletcheri</i> subsp. <i>fletcheri</i>, <i>Prasophyllum fuscum</i>, Slaty Leek Orchid</li> </ul> | Chapter 11 and Appendix C        |
|                              | <p>In the case of a project that adjoins, is in the immediate vicinity of a park or upstream, the assessment of impacts must address the matters to be considered outlined in the Guidelines for developments adjoining land and water managed by DECCW (DECCW 2010) and include the:</p> <ul style="list-style-type: none"> <li>– nature of the impacts, including direct and indirect impacts.</li> <li>– extent of the direct and indirect impacts.</li> <li>– duration of the direct and indirect impacts.</li> <li>– objectives of the reservation of the land.</li> <li>– measures proposed to prevent, control, abate, minimise and manage the direct and indirect impacts including an evaluation of the effectiveness and reliability of the proposed measures.</li> <li>– residual impacts.</li> </ul>                                                                                                                                                                                                                                                                                                                 | Chapter 11 and Appendix C        |
| Aboriginal cultural heritage | <p>Identify and describe the tangible and intangible Aboriginal cultural heritage values that exist across the whole area that will be affected by the Springvale Water Treatment Pipeline and document these in the EIS. This may include the need for surface survey and test excavation. The identification of cultural heritage values should be guided by the Guide to <a href="#">investigating, assessing and reporting on Aboriginal Cultural Heritage in NSW (DECCW, 2011)</a> and consultation with OEH regional officers.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Chapter 12 and Appendix D        |

| Category        | Agency requirements                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Where it is addressed in the EIS |
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|                 | Where Aboriginal cultural heritage values are identified, consultation with Aboriginal people must be undertaken and documented in accordance with the <a href="#">Aboriginal cultural heritage consultation requirements for proponents 2010 (DECCW)</a> . The significance of cultural heritage values for Aboriginal people who have a cultural association with the land must be documented in the EIS.                                                               | Chapter 12 and Appendix D        |
|                 | Impacts on Aboriginal cultural heritage values are to be assessed and documented in the EIS. The EIS must demonstrate attempts to avoid impact upon cultural heritage values and identify any conservation outcomes. Where impacts are unavoidable, the EIS must outline measures proposed to mitigate impacts. Any objects recorded as part of the assessment will be documented and notified to OEH.                                                                    | Chapter 12 and Appendix D        |
|                 | The assessment of cultural heritage values must include a surface survey undertaken by a qualified archaeologist in areas with potential for subsurface Aboriginal deposits. The result of the surface survey is to inform the need for targeted test excavation to better assess the integrity, extent, distribution, nature and overall significance of the archaeological record. The results of surface surveys and test excavations are to be documented in the EIS. | Chapter 12 and Appendix D        |
|                 | Outline procedures to be followed if Aboriginal objects are found at any stage of the life of the Springvale Water Treatment Pipeline to formulate appropriate measures to manage unforeseen impacts.<br><br>Outline procedures to be followed in the event Aboriginal burials or skeletal material is uncovered during construction to formulate appropriate measures to manage the impacts to this material.                                                            | Chapter 12 and Appendix D        |
| Water and soils | Map the following features relevant to water and soils including: <ul style="list-style-type: none"> <li>– Acid sulfate soils (Class 1, 2, 3 or 4 on the Acid Sulfate Soil Planning Map).</li> <li>– Rivers, streams, wetlands, estuaries (as described in Appendix 2 of the Framework for Biodiversity Assessment).</li> <li>– Groundwater.</li> <li>– Groundwater dependent ecosystems.</li> <li>– Proposed intake and discharge locations.</li> </ul>                  | Chapter 10 and Appendix B        |

| Category | Agency requirements                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Where it is addressed in the EIS       |
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|          | <p>Describe background conditions for any water resource likely to be affected by the Springvale Water Treatment Pipeline, including:</p> <p>Existing surface and groundwater.</p> <p>Hydrology, including volume, frequency and quality of discharges at proposed intake and discharge locations.</p> <p>Water Quality Objectives (as endorsed by the NSW Government <a href="http://www.environment.nsw.gov.au/ieo/index.htm">http://www.environment.nsw.gov.au/ieo/index.htm</a>) including groundwater as appropriate that represent the community's uses and values for the receiving waters.</p> <p>Indicators and trigger values/criteria for the environmental values identified above in accordance with the <a href="#">ANZECC (2000) Guidelines for Fresh and Marine Water Quality</a> and/or local objectives, criteria or targets endorsed by the NSW Government.</p>                                                                                                                                                                                                                                        | Chapter 10 and Appendix B              |
|          | <p>Assess the impacts of the Springvale Water Treatment Pipeline on water quality, including:</p> <ul style="list-style-type: none"> <li>– The nature and degree of impact on receiving waters for both surface and groundwater, demonstrating how the Springvale Water Treatment Pipeline protects the Water Quality Objectives where they are currently being achieved, and contributes towards achievement of the Water Quality Objectives over time where they are currently not being achieved. This should include an assessment of the mitigating effects of proposed stormwater and wastewater management during and after construction.</li> <li>– Identification of proposed monitoring of water quality.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                            | Chapter 10 and Appendix B              |
|          | <p>Assess the impact of the Springvale Water Treatment Pipeline on hydrology, including:</p> <ul style="list-style-type: none"> <li>– Water balance including quantity, quality and source.</li> <li>– Effects to downstream rivers, wetlands, estuaries, marine waters and floodplain areas.</li> <li>– Effects to downstream water-dependent fauna and flora including groundwater dependent ecosystems.</li> <li>– Impacts to natural processes and functions within rivers, wetlands, estuaries and floodplains that affect river system and landscape health such as nutrient flow, aquatic connectivity and access to habitat for spawning and refuge (e.g. river benches).</li> <li>– Changes to environmental water availability, both regulated/licensed and unregulated/rules- based sources of such water.</li> <li>– Mitigating effects of proposed stormwater and wastewater management during and after construction on hydrological attributes such as volumes, flow rates, management methods and re-use options.</li> <li>– Identification of proposed monitoring of hydrological attributes.</li> </ul> | Chapters 10 and 15<br>Appendix B and H |

| Category | Agency requirements                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Where it is addressed in the EIS |
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| Flooding | <p>The EIS must map the following features relevant to flooding as described in the Floodplain Development Manual 2005 (NSW Government 2005) including:</p> <ul style="list-style-type: none"> <li>– Flood prone land</li> <li>– Flood planning area, the area below the flood planning level.</li> <li>– Hydraulic categorisation (floodways and flood storage areas).</li> </ul>                                                                                                                                                                              | Chapter 10 and Appendix B        |
|          | Describe flood assessment and modelling undertaken in determining the design flood levels for events, including a minimum of the 1 in 10 year, 1 in 100 year flood levels and the probable maximum flood, or an equivalent extreme event.                                                                                                                                                                                                                                                                                                                       | Chapter 10 and Appendix B        |
|          | <p>Model the effect of the proposed Springvale Water Treatment Pipeline (including fill) on the flood behaviour under the following scenarios:</p> <ul style="list-style-type: none"> <li>– Current flood behaviour for a range of design events as identified above.</li> <li>– The 1 in 200 and 1 in 500 year flood events as proxies for assessing sensitivity to an increase in rainfall intensity of flood producing rainfall events due to climate change.</li> </ul>                                                                                     | Chapter 10 and Appendix B        |
|          | <p>Modelling must consider and document:</p> <ul style="list-style-type: none"> <li>– The impact on existing flood behaviour for a full range of flood events including up to the probable maximum flood.</li> <li>– Impacts of the development on flood behaviour resulting in detrimental changes in potential flood affection of other developments or land. This may include redirection of flow, flow velocities, flood levels, hazards and hydraulic categories.</li> <li>– Relevant provisions of the NSW Floodplain Development Manual 2005.</li> </ul> | Chapter 10 and Appendix B        |

| Category           | Agency requirements                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Where it is addressed in the EIS       |
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|                    | <p>Assess the impacts on the proposed Springvale Water Treatment Pipeline on flood behaviour, including:</p> <ul style="list-style-type: none"> <li>– Whether there will be detrimental increases in the potential flood affectation of other properties, assets and infrastructure.</li> <li>– Consistency with Council floodplain risk management plans.</li> <li>– Compatibility with the flood hazard of the land.</li> <li>– Compatibility with the hydraulic functions of flow conveyance in floodways and storage in flood storage areas of the land.</li> <li>– Whether there will be adverse effect to beneficial inundation of the floodplain environment, on, adjacent to or downstream of the site.</li> <li>– Whether there will be direct or indirect increase in erosion, siltation, destruction of riparian vegetation or a reduction in the stability of river banks or watercourses.</li> <li>– Any impacts the development may have upon existing community emergency management arrangements for flooding. These matters are to be discussed with the SES and Council.</li> <li>– Whether the proposal incorporates specific measures to manage risk to life from flood. <ul style="list-style-type: none"> <li>i. Emergency management, evacuation and access, and contingency measures for the development considering the full range of flood risk (based upon the probable maximum flood or an equivalent extreme flood event). These matters are to be discussed with and have the support of Council and the SES.</li> </ul> </li> <li>– Any impacts the development may have on the social and economic costs to the community as consequence of flooding</li> </ul> | Chapter 10 and Appendix B              |
| Cumulative Impacts | <p>The cumulative impacts from all clearing activities and operations, associated edge effects and other indirect impacts on cultural heritage, biodiversity and OEH Estate need to be comprehensively assessed in accordance with the Environmental Planning and Assessment Act 1979. This should include the cumulative impact of the proponent's existing and proposed development and associated infrastructure (such as access tracks etc) as well as the cumulative impact of other developments located in the vicinity. This assessment should include consideration of both construction and operational impacts.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Chapter 11 and 12 and Appendix C and D |

| Category                           | Agency requirements                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Where it is addressed in the EIS |
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| <b>Roads and Maritime Services</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                  |
| Roads                              | <p>A traffic impact study prepared in accordance with the methodology set out in Section 2 of the RTA's Guide to Traffic Generating Developments 2002 and including:</p> <p>For the construction of the treatment plant and associated infrastructure, road transport volumes and vehicle types broken down into:</p> <ul style="list-style-type: none"> <li>– origin and destination</li> <li>– travel routes, including travel on both private and public roads.</li> <li>– peak hours.</li> </ul> <p>The study is to provide details of projected transport operations including:</p> <ul style="list-style-type: none"> <li>– traffic volumes</li> <li>– materials to be transported and vehicle types used for transport</li> <li>– physical constraints on the haulage route</li> <li>– access points to and from the Castlereagh Highway.</li> <li>– measures to be put in place to ensure a high level of safety for all road users interacting with construction traffic.</li> </ul> <p>Any over size and over mass vehicles and loads expected for the construction and operation of the project. The shortest and least trafficked route should be given priority for the movement of construction materials and machinery to minimise the risk and impact to other motorists so far as is reasonably practicable.</p> <p>Temporary and permanent staff numbers (including employees and contractors) and staff parking arrangements during construction and operation of the project.</p> <p>Measures to be employed to ensure traffic efficiency and safety on the public road network during construction and operation of the project.</p> | Chapter 14 and Appendix F        |
|                                    | Access locations and treatments need to be identified and in accordance with Austroads Guide to Road Design and Roads and Maritime supplements, including safe intersection sight distance.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Chapter 14 and Appendix F        |
|                                    | Details of proposed new pipe crossings under the Castlereagh Highway. Any new work beneath the Castlereagh Highway will, in accordance with section 138(2) of the Roads Act 1993, require the concurrence of Roads and Maritime.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Chapter 5 and 6                  |
|                                    | Details of discharge of treated water into Wangcol Creek and identification of any impacts discharge will have on the existing stormwater management system adjoining the Castlereagh Highway.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Chapter 10 and Appendix B        |



| Category                     | Agency requirements                                                                                                                                                                                                                                                                                                                                                                 | Where it is addressed in the EIS |
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| <b>WaterNSW requirements</b> |                                                                                                                                                                                                                                                                                                                                                                                     |                                  |
| Water                        | Assess the project for consistency with the aims of State Environmental Planning Policy (Sydney Drinking Water Catchment) 2011 and demonstrate compliance with clauses 9 and 10 of the SEPP. In particular the assessment must describe how the project would have a neutral or beneficial effect on water quality during the construction, operational and decommissioning stages. | Chapter 6, 10 and Appendix B     |
|                              | How will the project achieve 'improved environmental outcomes for the catchment and meet the water quality performance measures for salinity for mine water discharges required under the Springvale MEP SSD Consent (SSD 5594).                                                                                                                                                    | Chapter 10 and Appendix B        |
|                              | Outline the expected water quality within the Coxs River downstream of Lake Lyell and in Lake Burragorang as result of the project and in comparison with the expected quality at these locations if the permitted discharges under the Springvale MEP SSD Consent (SSD 5594) occurred                                                                                              | Chapter 10 and Appendix B        |
|                              | Identify whether the construction of new salt ponds, Water Treatment Plant, installation of a crystalliser and any other infrastructure and disposal of additional brine at the MPPS site and increased impacts on groundwater will trigger a modification to the MPPS existing consent.                                                                                            | Chapter 3                        |
|                              | Identify if treated water discharges to Wangcol Creek will be directed to LDP006 or whether a new licenced discharge point will need to be approved, and                                                                                                                                                                                                                            | Chapter 5, 10 and Appendix B     |
|                              | Determine if a variation to the existing Springvale Mine Environment Protection Licence (EPL 3607) would be required for the changes to discharges at LDP006 (or new discharge point along Wangcol Creek) and LDP009.                                                                                                                                                               | Chapter 3, 6, 10 and Appendix B  |

| Category | Agency requirements                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Where it is addressed in the EIS                                                                                                                                                                                                            |
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| General  | <p>The detailed description of the project should also address the following:</p> <ul style="list-style-type: none"> <li>– aspects of the project which have the potential to impact on the environment and should also address the quality and quantity of surface and ground waters at and adjacent to the project</li> <li>– location, mapping and geomorphology of all creeks and water resources in close proximity to the proposed discharge points</li> <li>– location, sizing and description of all existing and proposed water management measures including the proposed salt ponds at the MPPS site, and details of the existing structures, structural stability, integrity and ongoing maintenance and monitoring of all site water management measures over the life of the project</li> <li>– specific details of the water treatment plant processes and the proposed quality of treated water including details of how the plant will achieve water quality improvements including salinity concentrations of 500us/cm EC (90%ile)</li> <li>– specific details of the quantity and quality of the sludge, brine and other waste material generated from the water treatment process annually</li> <li>– disposal of sludge, brine and other waste material from the water treatment process. In particular, the volume of sludge, brine and any other waste material proposed to be disposed of annually and justification that the existing and proposed infrastructure has capacity to receive this material</li> <li>– consideration of alternative options and justification as to why they have been rejected in the proposal. Alternative options may include: <ul style="list-style-type: none"> <li>▪ all treated water that is not received by the MPPS (where the power station is operating at reduced capacity) is directed to a discharge point located outside of the Sydney drinking water catchment or to the Thompson Creek Reservoir, with no treated water discharges to Wangcol Creek, and</li> <li>▪ all of the existing water discharges to LDP006 also redirected to the MPPS for treatment and reuse</li> </ul> </li> <li>– location, management and storage of any chemicals and hazardous materials.</li> </ul> | <p>Chapter 10 and Appendix B</p> <p>Chapter 10 and Appendix B</p> <p>Chapter 5, 10 and Appendix B</p> <p>Chapter 5, 10 and Appendix B</p> <p>Chapter 10, 15 and Appendix B</p> <p>Chapter 3, 5 and 15</p> <p>Chapter 4</p> <p>Chapter 5</p> |

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|  | <p>Address the following within the water balance assessment:</p> <ul style="list-style-type: none"> <li>– predictions of the frequency, quantity and quality of mine water transfers to the proposed water treatment plant</li> <li>– predictions of the frequency, quantity and quality of treated water being transferred for use by the MPPS and predictions of the frequency and quantity of any water extractions from local waterways to meet additional make-up water demand at the MPPS when the treated water volumes are not enough</li> <li>– predictions of the frequency, quantity and quality of treated water being discharged to Wangcol Creek when the MPPS is operating at reduced capacity and is unable to take some or all of the treated water from the water treatment plant</li> <li>– predictions of the frequency, quantity and quality of mine water if and when it is not feasible to transfer to the water treatment plant including additional 6ML proposed to be transferred than the existing discharges of 30ML allowed in EPL for LDP009 and describe the scenarios and likelihood when this may occur</li> <li>– details of the measures to manage site water associated with transferring and treating mine water, general stormwater runoff and any human activities likely to affect water quality at the site, and how the neutral of beneficial effect on water quality test will be assessed and applied within the surface water assessment:</li> <li>– comparison of the pre and post development volumes of water extracted from and mine water discharged to the Coxs River catchment (treated and untreated)</li> <li>– provide estimates of the volume; quality and pollutant loads of discharges into the Coxs River catchment annually and shall make clear statement as to whether the project would have a neutral of beneficial effect on water quality</li> <li>– specific comparison of the quality and quantity of water currently being discharged from LDP006 with the total quality and quantity of discharges post development including from the Water Treatment Plant</li> <li>– the potential impacts of any discharges on the water quality of receiving waters and whether there would be any consequences on geomorphology or ecology (flora and fauna) of the receiving watercourses</li> <li>– the potential impacts to receiving waters from LDP009 (or any other discharge location) when mine water is not feasible to transfer to the water treatment plant and whether water quality performance measures required by the Springvale Mine Extension Project will be achieved if this does occur</li> <li>– clarification of the timeframes for the project with respect to meeting the timeframes for pollution reduction contained in the consent for the Springvale Mine Extension Project.</li> <li>– impacts of increased brine and sludge production and disposal at MPPS on groundwater and whether existing infrastructure has capacity to receive and store the additional brine and sludge produced and the proposed management measures</li> </ul> | Chapter 10 and Appendix B |
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| Category | Agency requirements                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Where it is addressed in the EIS |
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|          | <ul style="list-style-type: none"> <li>– the location and description of all water monitoring points (surface and ground waters) including details of proposed monitoring of surface water flows, groundwater and surface water quality, along with information as to how the proposed monitoring will be used to monitor and, if necessary, mitigate impacts on surface water and groundwater resources beyond those predicted</li> <li>– details of measures proposed to be adopted to offset impacts associated with construction activities e.g. earthworks, vegetation clearing, transfer pipeline construction etc.</li> </ul>                                                                                                                                                                                   |                                  |
|          | <p>Include concept plans, protocols and/or procedures for the following:</p> <ul style="list-style-type: none"> <li>– Water Management Plan including surface water management plan, groundwater management plan and surface and ground water monitoring programs</li> <li>– Soil and Water Management Plan which shall consider the principles outlined in the Managing Urban Stormwater - Soils and Construction - Installation of Services Manual prepared by the Department of Environment and Climate Change (2008)</li> <li>– Details of the practices proposed to ensure mine water and waste materials transported to and from the sites do not spill or otherwise cause soil or water pollution</li> <li>– Procedures for managing spills and emergency situations</li> <li>– Rehabilitation Plan.</li> </ul> | Chapter 10, 16 and Appendix B    |