

Appendix A

**Secretary's environmental assessment
requirements**

DPE issued SEARs for the project on 13 September 2021. These SEARs are listed in Table A.1 along with a section reference to the location in the EIS where each SEAR has been addressed.

Table A.1 Compliance with SEARs for application number SSI-24937520

Category	SEARs requirements	Section addressed*
General Requirements	The Environmental Impact Statement (EIS) must comply with the requirements in Schedule 2 of the Environmental Planning and Assessment Regulation 2000 (EP&A Regulation). In particular, the EIS must include, but not necessarily be limited to, the following: – a stand-alone executive summary; – a full description of the project, including: – all components, materials and activities required to construct the project; – site plans and maps at an adequate scale showing: – the location and dimensions of all project components; and – existing infrastructure, land use, and environmental features in the vicinity of the project (including any other existing, approved or proposed infrastructure in the region); – likely staging or sequencing of the project, including demolition and rehabilitation; – the likely interactions between the project and any other existing, approved or proposed projects in the vicinity of the site; – a description of any infrastructure that would be required for the project that is the subject of a separate approval process; – strategic context of the project in regard to the Australian electricity market and land use transition within the region; – a justification for the proposed project as opposed to other alternatives; – statutory context for the project, including: – how the project meets the provisions and objectives of the <i>Environmental Planning and Assessment Act 1979</i> (EP&A Act) and EP&A Regulation; – consideration of the project against all relevant environmental planning instruments; and – any approvals that must be obtained before the project can commence; – an assessment of the likely impacts of the project on the environment, focusing on the specific issues identified below, including: – a description of the existing environment likely to be affected by the project using sufficient baseline data; – a description of how the project has been designed to avoid and minimise impacts; and – an assessment of the potential impacts of the project, including any cumulative impacts, and taking into consideration relevant guidelines, policies, plans and industry codes of practice; – a consolidated summary of all the proposed environmental management and monitoring measures, identifying all the commitments in the EIS; – detailed reconciliation of conditions that remain active under the existing development consents proposed to be surrendered that would require to be incorporated into a consolidated consent, including any supporting evidence; – an evaluation of the project as a whole having regard to: – relevant matters for consideration under the EP&A Act including ecologically sustainable development; – the strategic need and justification for the project; – feasible alternatives to the project (and its key components), including the consequences of not carrying out the project; and – the biophysical, economic and social costs and benefits of the project.	Executive summary

Category	SEARs requirements	Section addressed*
	The EIS must also be accompanied by a report from a qualified quantity surveyor providing: – a detailed calculation of the capital investment value (CIV) (as defined in clause 3 of the Regulation) of the proposal, including details of all assumptions and components from which the CIV calculation is derived. The report shall be prepared on company letterhead and indicate applicable GST component of the CIV; – an estimate of jobs that will be created during the construction and operational phases of the proposed development; and – certification that the information provided is accurate at the date of preparation.	
	a full description of the project, including: – all components, materials and activities required to construct the project; – site plans and maps at an adequate scale showing: – the location and dimensions of all project components; and – existing infrastructure, land use, and environmental features in the vicinity of the project (including any other existing, approved or proposed infrastructure in the region); – likely staging or sequencing of the project, including demolition and rehabilitation; – the likely interactions between the project and any other existing, approved or proposed projects in the vicinity of the site;	Site location is detailed in Section 2.1 and Section 2.2 A full project description is provided in Section 5
	a description of any infrastructure that would be required for the project that is the subject of a separate approval process;	Project overview is provided in Section 5
	strategic context of the project in regard to the Australian electricity market and land use transition within the region;	Section 3
	a justification for the proposed project as opposed to other alternatives;	Section 10.1
	statutory context for the project, including: how the project meets the provisions and objectives of the Environmental Planning and Assessment Act 1979 (EP&A Act) and EP&A Regulation; consideration of the project against all relevant environmental planning instruments; and any approvals that must be obtained before the project can commence;	Section 6
	an assessment of the likely impacts of the project on the environment, focusing on the specific issues identified below, including: a description of the existing environment likely to be affected by the project using sufficient baseline data; a description of how the project has been designed to avoid and minimise impacts; and an assessment of the potential impacts of the project, including any cumulative impacts, and taking into consideration relevant guidelines, policies, plans and industry codes of practice;	Section 8
	a consolidated summary of all the proposed environmental management and monitoring measures, identifying all the commitments in the EIS;	Section 9.2
	detailed reconciliation of conditions that remain active under the existing development consents proposed to be surrendered that would require to be incorporated into a consolidated consent, including any supporting evidence;	Section 5.3
	an evaluation of the project as a whole having regard to: relevant matters for consideration under the EP&A Act including ecologically sustainable development; the strategic need and justification for the project; feasible alternatives to the project (and its key components), including the consequences of not carrying out the project; and the biophysical, economic and social costs and benefits of the project.	Section 10

Category	SEARs requirements	Section addressed*
	The EIS must also be accompanied by a report from a qualified quantity surveyor providing: – a detailed calculation of the capital investment value (CIV) (as defined in clause 3 of the Regulation) of the proposal, including details of all assumptions and components from which the CIV calculation is derived. The report shall be prepared on company letterhead and indicate applicable GST component of the CIV; – an estimate of jobs that will be created during the construction and operational phases of the proposed development; and – certification that the information provided is accurate at the date of preparation.	Capital investment is provided in Section 5.4
Key Issues	The level of assessment of likely impacts should be commensurate with the significance or degree or extent of impact within the context of the proposed location and surrounding environment, and having regard to applicable NSW Government policies and guidelines. In particular, the EIS must address the following matters:	Likely impacts are discussed in Section 8
	Future Land Use – including: – evaluation of potential future land uses on the site considering local and regional strategic plans and opportunities to maximise the range of possible future uses through remediation and rehabilitation of the site; – justification for selection of the remediation methodology and rehabilitation strategy and the suitability of the proposed remedial and rehabilitation strategies for achieving the preferred final land use(s); – details of any restrictions on future development of the land and liabilities for on-going management of residual contamination or discharges from site; – if relevant, details of the long-term strategy for funding the maintenance of any residual contamination or discharges; – details of engagement with the local community in selecting the preferred final land use.	Section 8.1
	Soils and Contamination – including: – characterisation of the nature and extent of contaminated soil and groundwater, informed by sampling in accordance with relevant guidelines for areas accessible prior to the commencement of construction; – provision of sufficient information / evidence to allow consideration of contamination and remediation of the site as required under clause 7 of State Environmental Planning Policy No. 55 – Remediation of Land; – a strategy to identify the nature and extent of contaminated soil and groundwater for areas not accessible prior to the commencement of construction – details of the asbestos disposal facility design and integrity in accordance with best practice industry standard guidelines such as the EPA's Environmental Guidelines: Solid Waste Landfills and management of asbestos waste as required under the Protection of the Environment Operations (Waste) Regulation 2014 – an assessment of potential impacts to soil and land resources (including erosion risks or hazards); and – a description of the measures that would be implemented to avoid or mitigate impacts	Section 8.3
	Demolition management – including a description of all demolition activities proposed during each stage of the development. This must: – provide details of the proposed demolition process and techniques, structures to be demolished, a program for the sequencing of demolition, and details of materials handling and management; – detail any hazardous materials or contaminants of concern contained within all structures proposed for demolition and how these materials will be appropriately managed; and	Section 8.6

Category	SEARs requirements	Section addressed*
	– address contamination, human health, air quality, noise and vibration, traffic management, heritage, soil and water and waste impacts and how these impacts will be mitigated and managed.	
	Rehabilitation and Final Landform – including a Rehabilitation Strategy providing: – rehabilitation objectives for the development; – a detailed description of how the site would be progressively rehabilitated, revegetated and integrated into the surrounding landscape; – a conceptual final landform design that is free draining, safe, stable and non-polluting; and – a justification for the proposed final landform and use, taking into consideration any relevant strategic land use planning.	Section 8.7
	Hazards and Risks – including: – a preliminary risk screening completed in accordance with State Environmental Planning Policy No. 33 – Hazardous and Offensive Development and Applying SEPP 33 (DoP, 2011), with a clear indication of class, quantity and location of all dangerous goods and hazardous materials associated with the development. Should preliminary screening indicate that the development is “potentially hazardous” a preliminary hazard analysis (PHA) must be prepared in accordance with Hazardous Industry Planning Advisory Paper No. 6 – Guidelines for Hazard Analysis (DoP, 2011) and Multi-Level Risk Assessment (DoP, 2011); – an assessment of bushfire risk.	Section 8.16
	Water – including: – a detailed description of baseline surface and groundwater conditions – Identify relevant NSW Water Quality Objectives for surface and groundwater – an assessment of the potential impacts of the development on the quantity and quality of the region’s ground and surface water resources, connectivity between water sources, water-dependent assets, water-related infrastructure, other water users and flooding; – Describe the proposed management and use of water by the development, including: – a detailed and consolidated site water balance; – control of clean water, including details of any clean water diversion structures; – management of stormwater and any water which is excess to the consumptive requirements of the development; – management of any leachate – details of water storage facilities, volume estimates and fit-for-purpose water reuse potential; – procedures for responding to incidents, including identification of trigger values; and – identification of discharge points, anticipated frequency, volume and characterisation of water discharged (including pollutants) – identify any water licensing requirements under the Water Act 1912 or Water Management Act 2000.	Section 8.8
	Biodiversity – including: – an assessment of the biodiversity values and the likely biodiversity impacts of the project in accordance with the NSW Biodiversity Conservation Act 2016, the Biodiversity Assessment Method (BAM 2020) and documented in a Biodiversity Development Assessment Report (BDAR); and – the BDAR must document the application of the avoid, minimise and offset framework including assessing all direct, indirect and prescribed impacts in accordance with the BAM.	Section 8.2

Category	SEARs requirements	Section addressed*
	Heritage – including: – an assessment of the likely Aboriginal impacts of the project in accordance with the Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales (DECCW, 2010), including adequate consultation with Aboriginal stakeholders having regard to the Aboriginal Cultural Heritage Consultation Requirements for Proponents (OEH, 2010); – an assessment of likely non-Aboriginal heritage impacts of the project.	Section 8.4
	Air Quality – including: – an assessment of the likely air quality impacts of the project in accordance with the Approved Methods for the Modelling and Assessment of Air Pollutants in NSW (EPA, 2016), including an assessment of scenarios where the project operates on diesel fuel. Demonstration of compliance with the relevant regulatory framework, specifically the Protection of the Environment Operations Act 1997 and the Protection of the Environment Operations (Clean Air) Regulation 2010; and – an assessment of the likely greenhouse gas impacts of the project.	Section 8.9
	Noise and Vibration – including: – assessment of the likely construction noise impacts of the project under the Interim Construction Noise Guideline (DECCW, 2009); – an assessment of the likely operational noise impacts of the project under the NSW Noise Policy for Industry (EPA, 2017); – an assessment of the likely road noise impacts of the project under the NSW Road Noise Policy (EPA, 2011); and – an assessment of the likely vibration amenity and structural impacts of the project under Assessing Vibration: A Technical Guideline (DEC, 2006) and German Standard DIN 4150-3 Structural Vibration – effects of vibration on structures.	Section 8.10
	Transport – including: – an assessment of the transport impacts of the project on the capacity, condition, safety and efficiency of the local and State road network; – an assessment of the likely transport impacts to the site access route and site access point having regard to Oversized or Over mass vehicles (if required); – a description of the measures that would be implemented to mitigate any impacts during construction; and – a description of any proposed road upgrades developed in consultation with the relevant road authorities (if required).	Section 8.11
	Waste – including estimates of the quantity and nature of the waste streams that would be generated by the project and any measures that would be implemented to minimise, manage or dispose of these waste streams.	Section 8.14
	Visual – including an assessment of the likely visual and landscape character impacts of the project on the amenity of the surrounding area and private residences in the vicinity of the project.	Section 8.12
	Socio-Economic – an assessment of the social impacts of the project, prepared in accordance with the Department's Social Impact Assessment Guideline For State Significant Developments (July 2021) (subject to transitional arrangements), including the likely impacts on the local community, demands on Council infrastructure and consideration of construction workforce accommodation.	Section 8.13
Plans and Documents	The EIS must include all relevant plans, architectural drawings, diagrams and relevant documentation required under Schedule 1 of the Regulation. Provide these as part of the EIS rather than as separate documents.	Throughout this EIS
Consultation	During the preparation of the EIS, you must consult with the relevant local, State and Commonwealth Government authorities, infrastructure and 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 have been considered and addressed	Section 7

Category	SEARs requirements	Section addressed*
Expiry Date	If you do not lodge a Development Application and EIS for the development within 2 years of the issue date of these SEARs, your SEARs will expire. If an extension to these SEARs will be required, please consult with the Planning Secretary 3 months prior to the expiry date.	Noted
References	The assessment of the key issues listed above must take into account relevant guidelines, policies, and plans as identified. While not exhaustive, the following attachment contains a list of some of the guidelines, policies, and plans that may be relevant to the environmental assessment of this proposal.	Section 11

*References to sections includes reference to the appendices referred to in those section which contain detailed assessments.

On 22 November 2022, the Commonwealth Department of Climate Change, Energy, the Environment and Water (DCCEEW) determined that the modification is a controlled action under the *Environment Protection Biodiversity Conservation Act 1999* (EPBC Act) (EPBC 2022/09330). Advice from DPE on 17 January 2023 confirmed that the controlled action would be assessed by the NSW Government under its bilateral agreement with the Commonwealth. This advice was accompanied by supplementary SEARs to be addressed by the EIS to enable assessment of the controlled action. These supplementary SEARs are listed in Table A.2 along with a section reference to the location in the EIS where each supplementary SEAR has been addressed.

Table A.2 Compliance with supplementary SEARs for assessment of controlled action EPBC 2022/09330

SEARs requirements	Section addressed*
Introduction	-
– 1. On 22 November 2022, a delegate of the Federal Minister for the Department of Climate Change, Energy, the Environment and Water (DCCEEW) determined that the Liddell Future Land Use and Enabling Works Project was a controlled action under section 75 of the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act). The EPBC Act controlling provisions for the proposed action are: i. Listed threatened species and communities (sections 18 and 18A).	Noted
– 2. The proposed action will be assessed in accordance with the bilateral assessment agreement between the Australian and NSW governments (Amending Agreement No.1, 2020). The assessment documentation must include:	Noted
– i. an assessment of all impacts that the action is likely to have on each matter protected by a provision of Part 3 of the EPBC Act;	Section 8.2 and Appendix D.
– ii. enough information about the proposal and its relevant impacts to allow the Federal Minister to make an informed decision on whether or not to approve; and	Section 8.2 and Appendix D.
– iii. information addressing the matters outlined in Schedule 4 of the Environment Protection and Biodiversity Conservation Regulations 2000 (EPBC Regulations).	Section 8.2 and Appendix D.
– 3. The Applicant must undertake an assessment of all protected matters that may be impacted by the development under the controlling provisions identified in paragraph 1. DAWE considers that there is likely to be a significant impact on the following:	-
– i. Central Hunter Valley Eucalypt Forest and Woodland (CHVEFW) – Critically Endangered;	Section 8.2 and Appendix D.
– ii. Striped Legless Lizard (<i>Delma impar</i>) – Vulnerable; and	Section 8.2 and Appendix D.
– iii. Green and Golden Bell Frog (<i>Litoria aurea</i>) – Vulnerable	Section 8.2 and Appendix D.
– 4. Based on DAWE's Reporting Tool and information provided by the Species Profiles and Threats Database (SPRAT), DAWE also considers that the proposed action may result in significant impacts to the following species:	-
– i Regent Honeyeater (<i>Anthochaera Phrygia</i>) – Critically Endangered;	Section 8.2 and Appendix D.
– ii. Swift Parrot (<i>Lathamus discolor</i>) – Critically Endangered;	
– iii. Spotted-tailed Quoll (<i>Dasyurus maculatus</i>) – Endangered;	

SEARs requirements	Section addressed*
– iv. Koala (<i>Phascolarctos cinereus</i>) – Vulnerable; – v. South-eastern Glossy Black-Cockatoo (<i>Calyptrorhynchus lathami lathami</i>); Vulnerable; – vi. Grey-headed Flying-fox (<i>Pteropus poliocephalus</i>) – Vulnerable; – vii. White-throated Needletail (<i>Hirundapus caudacutus</i>) – Vulnerable; – viii. Salty Red Gum (<i>Eucalyptus glaucina</i>) – Vulnerable; – ix. Pink-tailed Worm-lizard (<i>Aprasia parapulchella</i>) – Vulnerable; and – x. Painted Honeyeater (<i>Grantiella picta</i>) – Vulnerable. – These species require further assessment, surveys and analysis to determine whether they are likely to be significantly impacted. Note that this may not be a complete list and it is the responsibility of the Applicant to ensure any protected matters under this controlling provision are assessed for the Commonwealth decision-makers consideration.	
– 5. The Applicant must consider each of the protected matters under the triggered controlling provisions that may be impacted by the action. Note that this may not be a complete list and it is the responsibility of the Applicant to undertake an analysis of the significance of the relevant impacts and ensure that all protected matters that are likely to be significantly impacted are assessed for the Commonwealth Minister's consideration.	Section 8.2 and Appendix D.
– General requirements	-
– Relevant Regulations	-
– 6. The Environmental Impact Statement (EIS) must address the matters outlined in Schedule 4 of the EPBC Regulations and the matters outlined below in relation to the controlling provisions.	Section 8.2 and Appendix D.
– Project Description	-
– 7. The title of the action, background of the action and current status	Section 5
– 8. The precise location and description of all works to be undertaken (including associated offsite works and infrastructure), structures to be built or elements of the action that may have impacts on Matters of National Environmental Significance (MNES)	Section 5
– 9. How the action relates to any other actions that have been, or are being taken in the region affected by the action.	Section 8.17
– 10. How the works are to be undertaken and design parameters for those aspects of the structures or elements of the action that may have relevant impacts on MNES.	Section 6.2.2. and Section 8.2
– Impacts	-
– 11. The EIS must include an assessment of the relevant impacts of the action on the matters protected by the controlling provisions, including: – i. a description and detailed assessment of the nature and extent of the likely direct, indirect and consequential impacts, including short term and long-term relevant impacts – ii. a statement whether any relevant impacts are likely to be unknown, unpredictable or irreversible – iii analysis of the significance of the relevant impacts; and – iv. any technical data and other information used or needed to make a detailed assessment of the relevant impacts	Section 8.2 and Appendix D.
– Avoidance, mitigation and offsetting	Section 8.2.4
– 12. For each of the relevant matters protected that are likely to be significantly impacted by the action, the EIS must provide information on proposed avoidance and mitigation measures to manage the relevant impacts of the action including: – i. a description, and an assessment of the expected or predicted effectiveness of the mitigation measures, – ii. any statutory policy basis for the mitigation measures; – iii. the cost of the mitigation measures; iv. an outline of an environmental management plan that sets out the framework for continuing management, mitigation and monitoring programs for the relevant impacts of the action, including any provisions for independent environmental auditing; v. the name of the agency responsible for endorsing or approving each mitigation measure or monitoring program.	Section 8.2 and Appendix D.

SEARs requirements	Section addressed*
– 13. Where a significant residual adverse impact to a relevant protected matter is considered likely, the EIS must provide information on the proposed offset strategy, including discussion of the conservation benefit associated with the proposed offset strategy.	Section 8.2 and Appendix D.
– 14. For each of the relevant matters likely to be impacted by the action the EIS must provide reference to, and consideration of, relevant Commonwealth guidelines and policy statements including any: i. conservation advice or recovery plan for the species or community; ii. relevant threat abatement plan for a process that threatens the species or community; iii. wildlife conservation plan for the species; and iv. any strategic assessment.	Section 8.2 and Appendix D.
– Key Issues Biodiversity – (threatened species and communities and migratory species)	-
– Comments	-
– 15. Key risks associated with the proposed action from the Commonwealth perspective include potential impacts to EPBC listed threatened species and ecological communities resulting from vegetation clearing and disturbance. The department believes the proposed action will impact suitable habitat that is critical to the survival of threatened species and reduce the extent of the ecological community present within the proposed action area. Specific risks include impacts to the following: – i. 33.7 ha of Central Hunter Valley Eucalypt Forest and Woodland. – ii. Potential habitat for the Striped Legless Lizard including the Central Hunter Valley Eucalypt Forest and Woodland and grassland at the proposed borrow pit area. – iii. Potential habitat for the Green and Gold Bell Frog, including the wetlands surrounding the Liddell Ash Dam and LPS infrastructure (such as polishing ponds).	Section 8.2 and Appendix D.
– Assessment requirements	-
– For each of the EPBC Act listed species predicted to occur in the project site, and each of the EPBC Act listed ecological communities likely to be significantly impacted, the EIS must provide:	Section 8.2 and Appendix D.
– 16. Survey results, including details of the scope, timing and methodology for studies or surveys used and how they are consistent with (or justification for divergence from) published Commonwealth guidelines and policy statements. For ecological communities, this includes any condition thresholds provided in the listing advice or approved conservation advice.	Section 8.2 and Appendix D.
– 17. A description and quantification of habitat in the study area (including suitable breeding habitat, suitable foraging habitat, important populations and habitat critical for survival), with consideration of, and reference to, any relevant Commonwealth guidelines and policy statements including species and communities listing advice, conservation advice, recovery plans and threat abatement plans.	Section 8.2 and Appendix D.
– 18. Maps displaying the above information (specific to EPBC matters) overlaid with the proposed action. It is acceptable, where possible, to use the mapping and assessment of Plant Community Types (PCTs) and the species surveys prescribed by the BAM as the basis for identifying EPBC Act-listed species and communities. The EIS must clearly identify which PCTs are considered to align with habitat for the relevant EPBC Act-listed species or communities and provide individual maps for each species or community.	Section 8.2 and Appendix D.
– 19. A description of the nature, geographic extent, magnitude, timing and duration of any likely direct, indirect and consequential impacts on any relevant EPBC Act-listed species and communities. It must clearly identify the location and quantify the extent of all impact areas to each relevant EPBC Act listed species or community	Section 8.2 and Appendix D.
– 20. Information on proposed avoidance and mitigation measures to deal with the impacts of the action, and a description of the predicted effectiveness and outcomes that the avoidance and mitigation measures will achieve.	Section 8.2 and Appendix D.
– 21. Quantification of the offset liability for each species and community significantly impacted, and information on the proposed offset strategy, including discussion of the conservation benefit for each species and community, how offsets will be secured, and the timing. It is a requirement that offsets directly contribute to the ongoing viability of the specific protected matter impacted by a proposed action i.e., 'like-for-like'.	Section 8.2 and Appendix D.

SEARs requirements	Section addressed*
i. Like-for-like includes protection of native vegetation that is the same ecological community or habitat being impacted (preferably in the same region where the impact occurs), or funding to provide a direct benefit to the matter being impacted e.g., threat abatement, breeding and propagation programs or other relevant conservation measures.	
Other approvals and conditions	-
22. Information in relation to any other approvals or conditions required must include the information prescribed in Schedule 4 Clause 5 (a) (b) (c) and (d) of the EPBC Regulations.	Section 5.3, Appendix B and Table C.1 in Appendix C.
Environmental Record of person proposing to take the action	-
23. Information in relation to the environmental record of a person proposing to take the action must include details as prescribed in Schedule 4 Clause 6 of the EPBC Regulations.	Environmental history records have been provided under separate cover to DCCEEW with the EPBC referral and have not be made public as the contain information that is culturally sensitive.
Information Sources	-
24. For information given in an EIS, the EIS must state the source of the information, how recent the information is, how the reliability of the information was tested; and what uncertainties (if any) are in the information.	Section 11.0 and BDAR
Relevant References and Guidelines	-
- The international conventions, management plans and principles that must be considered in relation to this proposal include: • Listed threatened species and communities - Australia's obligations under the: - o Convention on Biological Diversity - o The Convention on Conservation of Nature in the South Pacific (Apia Convention) - o The Convention on International Trade in Endangered Species of Wild Fauna and Flora o (CITES). - Any relevant recovery plans or threat abatement plans.	BDAR where applicable
Policies and Plans	-
The polices and plans that must be considered in relation to this proposal include: • Relevant conservation advice/s: http://www.environment.gov.au/cgi-bin/sprat/public/sprat.pl Commonwealth Listing Advice, Survey Guidelines and Referral Guidelines contain information on threatened species and ecological communities which may provide further support to proponents and NSW DPE in considering and evaluating the significance of residual impacts on the action's controlling provisions. These documents may be found in the DCCEEW's Species Profile and Threats Database: http://www.environment.gov.au/cgi-bin/sprat/public/sprat.pl	Noted