



Jacobs

Liddell Battery and Bayswater Ancillary Works Project

Appendix A – SEARs



A.1 Project SEARs

Planning Secretary's Environmental Assessment Requirements

Section 4.12(8) of the *Environmental Planning and Assessment Act 1979*
Schedule 2 of the Environmental Planning and Assessment Regulation 2000

Application Number	SSD 8889679
Proposal	Liddell Battery and Bayswater Ancillary Works Project , involving: <ul style="list-style-type: none"> • construction and operation of a Battery Energy Storage System with an estimated capacity of up to 500 MW / 2 GWh; • decoupling Liddell and Bayswater power stations; • ancillary infrastructure and operations to facilitate ongoing operation of Bayswater power station; and • consolidation of relevant existing consents.
Location	Liddell and Bayswater power stations, off the New England Highway, 15km south-east of Muswellbrook, 25km north-west of Singleton.
Applicant	AGL Macquarie Pty Limited (AGL)
Date of Issue	23 September 2020
General Requirements	<p>The Environmental Impact Statement (EIS) must comply with the requirements of Part 3 of Schedule 2 of the <i>Environmental Planning and Assessment Regulation 2000</i> (the EP&A Regulation) including:</p> <ul style="list-style-type: none"> • the information required under clause 6 of Schedule 2 of the EP&A Regulation; • the content listed in clause 7 of Schedule 2 of the EP&A Regulation, including, but not limited to: <ul style="list-style-type: none"> - a stand-alone executive summary; - a full description of the project, including: <ul style="list-style-type: none"> - all components, materials and activities required to construct the project (including any infrastructure that would be required for the project, but the subject of a separate approvals process); - site plans and maps at an adequate scale; - the location and dimensions of all project components; and - likely staging or sequencing of the project, including construction and rehabilitation; - the likely interactions between the project and any other existing, approved or proposed major projects in the vicinity of the site - a statement of the objectives of the project, including a description of the strategic need, justification, objectives and outcomes (including a detailed consideration of the capability of the project to contribute to the security and reliability of the electricity system in the National Electricity Market); - an analysis of feasible alternatives to the carrying out of the project, including an analysis of options considered having regard to the project objectives, the suitability of the chosen option and whether or not the project is in the public interest; - an analysis of the project, including an assessment, with a particular focus on the requirements of the listed key issues, in accordance with clause 7(1)(d) of Schedule 2 of the EP&A Regulation (where relevant); - an identification of how relevant planning, land use and development matters (including relevant strategic and statutory matters) have been considered in the impact assessment (direct, indirect and cumulative impacts) and/or in developing management/ mitigation measures; - a compilation of the measures proposed to mitigate any adverse effects of the project on the environment; - a justification for the preferred project taking into consideration the objects of the <i>Environmental Planning and Assessment Act 1979</i> (EP&A Act); and

	<ul style="list-style-type: none"> • a consolidated summary of all the proposed environmental management and monitoring measures, identifying all the commitments in the EIS • a conclusion evaluating the merits of the project, having regard to the requirements in Section 4.15 of the EP&A Act). <p>While not exhaustive, Attachment 1 contains a list of some of the environmental planning instruments, guidelines, policies, and plans that may be relevant to the environmental assessment of this development.</p> <p>In addition to the matters set out in Schedule 1 of the EP&A Regulation, the development application must be accompanied by a signed report from a suitably qualified person that includes an accurate estimate of the capital investment value of the development (as defined in Clause 3 of the EP&A Regulation), including details of all the assumptions and components from which the capital investment value calculation is derived.</p>
Key issues	<p>The EIS must address the following specific issues with the level of assessment of likely impacts proportionate to the significance of, or degree, of impact on, the issue, within the context of the project location and the surrounding environment:</p> <ul style="list-style-type: none"> • Hazards and Risk - including: <ul style="list-style-type: none"> - a preliminary hazard analysis (PHA) prepared in accordance with the Department's <i>Hazardous Industry Planning Advisory Paper No. 6, 'Hazard Analysis' and Multi-level Risk Assessment</i>; and - an assessment of potential hazards and risks including but not limited to bushfires, electromagnetic fields or the proposed grid connection infrastructure against the International Commission on Non-Ionizing Radiation Protection (ICNIRP) Guidelines for limiting exposure to Time-varying Electric, Magnetic and Electromagnetic Fields; • Air – including: <ul style="list-style-type: none"> - an assessment of the likely air quality impacts of the project in accordance with the <i>Approved Methods for the Modelling and Assessment of Air Pollutants in NSW</i> (EPA, 2016); - demonstrated ability to comply with the relevant regulatory framework, specifically the <i>Protection of the Environment Operations Act 1997</i> and the <i>Protection of the Environment Operations (Clean Air) Regulation 2010</i>; and - an assessment of the likely greenhouse gas impacts of the project; • Noise and Vibration – including: <ul style="list-style-type: none"> - an assessment of the likely construction noise impacts of the project under the <i>Interim Construction Noise Guideline</i> (DECCW, 2009); - an assessment of the likely operational noise impacts of the project under the <i>NSW Noise Policy for Industry</i> (EPA, 2017); - an assessment of the likely road noise impacts of the project under the <i>NSW Road Noise Policy</i> (EPA, 2011); and - an assessment of the likely vibration amenity and structural impacts of the project under <i>Assessing Vibration: A Technical Guideline</i> (DEC, 2006) and <i>German Standard DIN 4150-3 Structural Vibration – effects of vibration on structures</i>; • Traffic and Transport – including: <ul style="list-style-type: none"> - details of traffic types and volumes likely to be generated by the project; - details of the proposed transport routes, site access, safety issues and requirements for road works or upgrade; - an assessment of the likely impacts of the project on the capacity, condition, safety and efficiency of the road network, in particular heavy vehicles, oversize/ over-mass vehicles; and - details of measures to mitigate and / or manage potential impacts during construction, developed in consultation with the relevant road and rail authorities (if required);

	<ul style="list-style-type: none"> • Biodiversity – including: <ul style="list-style-type: none"> - an assessment of the biodiversity values and direct and indirect biodiversity impacts of the development throughout its life in accordance with the <i>Biodiversity Conservation Act 2016 (NSW)</i>, the <i>Biodiversity Assessment Method</i>, and documented in a <i>Biodiversity Development Assessment Report</i> (BDAR), including a strategy to offset any residual impacts, unless a BDAR waiver is granted; - 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; and - a detailed description of the proposed regime for minimising, managing and reporting on the biodiversity impacts of the development over time; • Land and Contamination – including: <ul style="list-style-type: none"> - an assessment of impacts of the project on soils, land capability and geotechnical stability of the site and surrounds; - an assessment of the extent and nature of any contaminated materials or acid sulphate soils on site; - as assessment of potential risks to human health and the receiving environment; and - a description of the measures that would be implemented to avoid or mitigate impacts; • Heritage – including an assessment of the likely Aboriginal and historic heritage (cultural and archaeological) impacts of the project, including adequate consultation with Aboriginal stakeholders having regard to the <i>Aboriginal Cultural Heritage Consultation Requirements for Proponents</i> (OEH, 2010); • Visual – including: <ul style="list-style-type: none"> - an assessment of the likely visual impacts of the development on the amenity of the surrounding area, private residences near the development and local road network; and - a detailed description of the measures that would be implemented to minimise the visual impacts of the development; • Waste – including identification, quantification and classification of the likely waste streams likely to be generated during construction and operation, and describe the measures to be implemented to manage, reuse, recycle and safely dispose of this waste including waste to be used for reclamation or other project activities; • Water – including: <ul style="list-style-type: none"> - a description of water demand, a detailed water balance, a breakdown of water supplies and the measures to minimise water use; - an assessment of the likely impacts of the development (including flooding) on the quantity and quality of the region's surface and groundwater resources, related infrastructure, adjacent licensed water users and basic landholder rights, and measures proposed to monitor, reduce and mitigate these impacts; - a description of the proposed water management system, water monitoring program and all other proposed measures to mitigate surface water and groundwater impacts; and - a description of the erosion and sediment control measures that would be implemented to mitigate any impacts during construction; • Social and Economic – including an assessment of the social and economic impacts and benefits of the project for the region and the State as a whole, including consideration of any increase in demand for community infrastructure and services; • Infrastructure Impacts – including an assessment of impacts on infrastructure, including other utility servicing infrastructure (such as electricity, gas and water supply); • Cumulative – including industrial facilities in the area and other nearby approved and proposed development, particularly in relation to hazards and risk, air quality, noise and vibration, traffic and soil and water; and
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	<ul style="list-style-type: none"> • Long Term Management – including an assessment of impacts associated with the operation and maintenance of the proposed facilities, including inspection arrangements and measures to ensure its integrity.
Environmental Risk Analysis	Notwithstanding the above key assessment requirements, the EIS must include an environmental risk analysis to identify potential environmental impacts associated with the project (construction and operation), proposed mitigation measures and potentially significant residual environmental impacts after the application of proposed mitigation measures. Where additional key environmental impacts are identified through this environmental risk analysis, an appropriately detailed impact assessment of this additional key environmental impact must be included in the EIS.
Consultation	<p>An appropriate and justified level of consultation with relevant parties during the preparation of the EIS must be undertaken, including with local, State and Commonwealth government authorities; relevant Aboriginal stakeholders, such as the Local Aboriginal Land Councils; utilities and service providers; and the public, including any relevant community groups and adjoining and affected landowners.</p> <p>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.</p>
Further consultation after 2 years	If you do not lodge a development application and an EIS for the development within 2 years of the issue date of these Environmental Assessment Requirements (EARs), you must consult further with the Planning Secretary in relation to the preparation of the EIS.

Attachment 1

Environmental Planning Instruments, Policies, Guidelines & Plans

Land	
	Australian Soil and Land Survey Handbook (CSIRO)
	Guidelines for Surveying Soil and Land Resources (CSIRO)
	The land and soil capability assessment scheme: second approximation (OEH)
Water	
Groundwater	NSW State Groundwater Policy Framework Document and component policies (DPIE Water)
	NSW Aquifer Interference Policy 2012 (DPIE Water)
	Australian Groundwater Modelling Guidelines 2012 (Commonwealth)
	National Water Quality Management Strategy Guidelines for Groundwater Protection in Australia (ARMCANZ/ANZECC)
	Guidelines for the Assessment & Management of Groundwater Contamination (EPA)
Surface Water	NSW State Rivers and Estuary Policy (DPIE Water)
	NSW Government Water Quality and River Flow Objectives (EPA)
	NSW State Rivers and Estuary Policy
	Australian and New Zealand Guidelines for Fresh and Marine Water Quality (ANZG))
	Approved Methods for the Sampling and Analysis of Water Pollutants in NSW (EPA)
	Managing Urban Stormwater: Soils & Construction (Landcom) and associated Volumes
	Technical Guidelines: Bunding & Spill Management (EPA)
	A Rehabilitation Manual for Australian Streams (LWRRDC and CRCCH)
	NSW Guidelines for Controlled Activities (DPIE Water)
	Guidelines for Controlled Activities on Waterfront Land (2018)
Flooding	Water Sharing Plans (available at https://www.industry.nsw.gov.au/water)
	Floodplain Development Manual (OEH)
	Floodplain Risk Management Guideline (OEH)
Contamination	
	Managing Land Contamination – Planning Guidelines SEPP 55 – Remediation of Land (EPA)
	State Environmental Planning Policy No. 55 – Remediation of Land
	Guidelines for Consultants Reporting on Contaminated Sites (EPA)
	Contaminated Sites Sampling Design Guidelines 1995 (EPA)
	Australian and New Zealand Guidelines for the Assessment and Management of Contaminated Sites (ANZECC)
	National Environment Protection (Assessment of Site Contamination) Measure 1999 (with amendment April 2013)
	Acid Sulfate Soils Manual (OEH)
Biodiversity	
	Biodiversity Assessment Method (OEH)
	Threatened Species Assessment Guidelines (OEH)
	Policy and Guidelines for Fish Habitat Conservation and Management (DPI)
	NSW State Groundwater Dependent Ecosystem Policy (NOW)
	Risk Assessment Guidelines for Groundwater Dependent Ecosystems (DPI)
Heritage	
	Aboriginal Cultural Heritage Consultation Requirements for Proponents (DECCW)
	Code of Practice for Archaeological Investigations of Objects in NSW (OEH)

	Guide to investigating, assessing and reporting on aboriginal cultural heritage in NSW (OEH)
	Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW (DECCW)
	NSW Heritage Manual (OEH)
	Assessing Heritage Significance (NSW Heritage Office, 2001)
	Statements of Heritage Impact (Heritage Office and Department of Urban Affairs and Planning, 2002)
Noise, Vibration and Blasting	
	NSW Noise Policy for Industry (EPA)
	Interim Construction Noise Guideline (EPA)
	NSW Road Noise Policy and Associated Application Notes (EPA)
	Environmental Noise Management – Assessing Vibration: a Technical Guideline (DEC)
	German Standard DIN 4150-3: Structural Vibration – effects of vibration on structures
	Technical Basis for Guidelines to Minimise Annoyance Due to Blasting Overpressure and Ground Vibration (ANZECC, 1990)
Air	
	Voluntary Land Acquisition and Mitigation Policy: For State Significant Mining, Petroleum and Extractive Industry Developments (DPE)
	Approved Methods and Guidance for the Modelling and Assessment of Air Pollutants in NSW (EPA)
	Approved Methods for the Sampling and Analysis of Air Pollutants in NSW (DEC)
	National Greenhouse Accounts Factors (Commonwealth)
Transport	
	Guide to Traffic Generating Developments (TfNSW)
	Road Design Guide (RMS) & relevant Austroads Standards
	Austroads Guide to Traffic Management Part 12: Traffic Impacts of Development
	Road and Related Facilities within the Department of Planning EIS Guidelines
Hazards	
	Hazardous and Offensive Development Application Guidelines – Applying SEPP 33
	Hazardous Industry Planning Advisory Paper No. 6 – Guidelines for Hazard Analysis
	Hazardous Industry Planning Advisory Paper No. 4 – Risk Criteria for Land Use Safety Planning
	Multi-Level Risk Assessment (DPE)
	Planning for Bushfire Protection (NSW RFS)
Waste	
	Waste Classification Guidelines (EPA)
	Protection of the Environment Operations (Waste) Regulation 2014
	Environmental Guidelines: Solid Waste Landfills (EPA)
	Tailings Management – Leading Practice Sustainable Development Program for the Mining Industry (Australian Government)
Environmental Planning Instruments and Other Planning Documents	
	State Environmental Planning Policy (State and Regional Development) 2011
	State Environmental Planning Policy (Infrastructure) 2007
	State Environmental Planning Policy No 55 – Remediation of Land
	State Environmental Planning Policy No 33 – Hazardous and Offensive Development
	Muswellbrook Local Environment Plan 2010
	Singleton Local Environment Plan 2013
	Draft Muswellbrook Local Strategic Planning Statement 2020-2040
	Singleton Council Community Strategic Plan (2017-2027)

A.2 Environmental Planning and Assessment Regulation 2000 checklist

Schedule 2 of the EP&A Regulation stipulates the process to obtain SEARs is addressed in the preparation of the EIS and the general form and content requirements. **Table A-1** identifies how this EIS addresses these form and content requirements.

Table A-1: General Form and Content Requirements for the environmental impact statement

EIS Requirement	Where addressed
An environmental impact statement must contain the following information:	
(a). the name, address and professional qualifications of the person by whom the statement is prepared	EIS Certification Page
(b). the name and address of the responsible person	
(c). the address of the land: (i) in respect of which the development application is to be made or (ii) on which the activity or infrastructure to which the statement relates is to be carried out	
(d). a description of the development, activity or infrastructure to which the statement relates	An overview of the project is provided in Section 1.1 and a full description is provided in Chapter 2 .
(e). an assessment by the person by whom the statement is prepared of the environmental impact of the development, activity or infrastructure to which the statement relates, dealing with the matters referred to in this Schedule	Chapter 6
(f). a declaration by the person by whom the statement is prepared to the effect that: (i) the statement has been prepared in accordance with this Schedule (ii) the statement contains all available information that is relevant to the environmental assessment of the development, activity or infrastructure to which the statement relates and (g). that the information contained in the statement is neither false nor misleading	EIS Certification Page
An environmental impact statement must also include each of the following:	
(a). a summary of the environmental impact statement	Executive Summary
(b). a statement of the objectives of the development, activity or infrastructure	Section 1.4.2.
(c). an analysis of any feasible alternatives to the carrying out of the development, activity or infrastructure, having regard to its objectives, including the consequences of not carrying out the development, activity or infrastructure	Chapter 4
(d). an analysis of the development, activity or infrastructure, including:	
(i) a full description of the development, activity or infrastructure	An overview of the project is provided in Section 1.1 and a full description is provided in Chapter 2 .

EIS Requirement	Where addressed
(ii) a general description of the environment likely to be affected by the development, activity or infrastructure, together with a detailed description of those aspects of the environment that are likely to be significantly affected	Chapter 6
(iii) the likely impact on the environment of the development, activity or infrastructure	Chapter 6
(iv) full description of the measures proposed to mitigate any adverse effects of the development, activity or infrastructure on the environment and	Chapter 6 and Chapter 7
(v) a list of any approvals that must be obtained under any other Act or law before the development, activity or infrastructure may lawfully be carried out	Chapter 3
(e). a compilation (in a single section of the environmental impact statement) of the measures referred to in item (d) (iv)	Chapter 7
(f). the reasons justifying the carrying out of the development, activity or infrastructure in the manner proposed, having regard to biophysical, economic and social considerations, including the principles of ecologically sustainable development set out in subclause (4)	Chapter 9