



Land Use Conflict Risk Assessment

Addendum to the LUCRA prepared by Tim Fitzroy & Assoc, and dated 31 May 2024, to incorporate a proposed SSD project - being a battery energy store system - to be developed by StorEnergy on land described as part of Lot 99 DP1020247, Deight Street / Back Saleyards Rd, East Molong

Planning Proposal to rezone Lots 11 and 12 DP 546140 and Lot A DP 961931, Euchareena Road, Molong, from R5 Large Lot Residential to R1 General Residential.

October 2025

Prepared by Cabonne Council

Addendum to East Molong LUCRA to include the proposed Molong BESS development

1.0 Introduction

The aim of the Land Use Conflict Risk Assessment (LUCRA) is to identify and assess the potential for land use conflict issues and risk of occurrence before a proposed change in land use proceeds and disputes arise. The report documents the nature of the proposed land use change and the nature of the area to which the change will occur.

The proposed change of land use primarily is that Lots 11 and 12 DP 546140 and Lot A DP 961931, Euchareena Road, Molong, are intended to be rezoned from R5 Large Lot Residential to R1 General Residential, to yield approximately 630 vacant residential allotments. A LUCRA was prepared in May 2024 to assess the impact of land use upon the subject land and adjoining land.

Since May 2024 a further proposed change of land use in the vicinity of the subject land has emerged, being that part of Lot 99 DP1020247, 1 Deight Street, located to the immediate east of the subject land, is intended to be used for construction of a State Significant development as a Battery Energy Storage System (BESS).

The BESS project will involve the development, construction, operation, and eventual decommissioning of the Molong BESS, with a capacity of 150 megawatts, 730 megawatt hours, connecting to the electricity grid at the existing Transgrid Molong 132/66 kilovolt transmission substation via a new overhead transmission line (approx. 900m) to be located within Lot 1 DP 542283.

The BESS will comprise 264 battery units, 50 inverters, transformers, a substation, and ancillary infrastructure within a development footprint of approximately 5ha. The batteries will be housed within individual containers, with each container measuring approximately 6m in length and with an approximate weight of 4.3 tonne.

This report provides an addendum to the May 2024 LUCRA to incorporate the proposed BESS project, and to identify potential risks, mitigation measures and residual risks likely to be experienced between the two development areas.

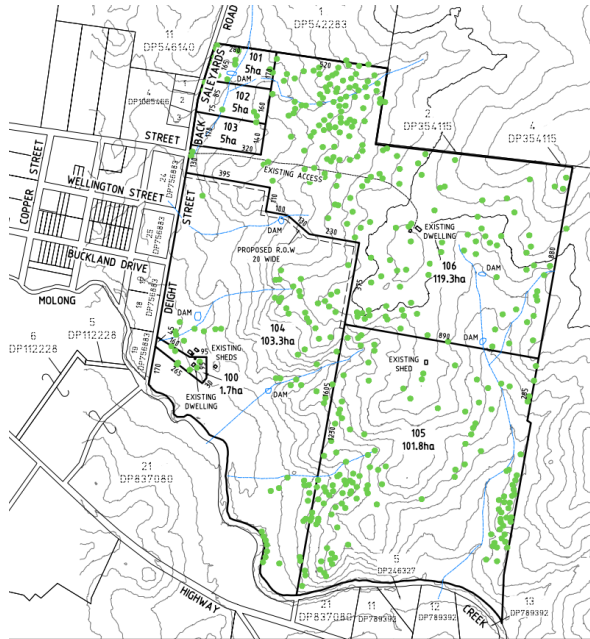
StorEnergy have provided draft copies of several of the EIS reports relating to the proposed SSD project, in particular the LUCRA and Noise Assessment reports for that development. Those two documents form the basis for the addendum to the East Molong Rezoning LUCRA.

2.0 Site

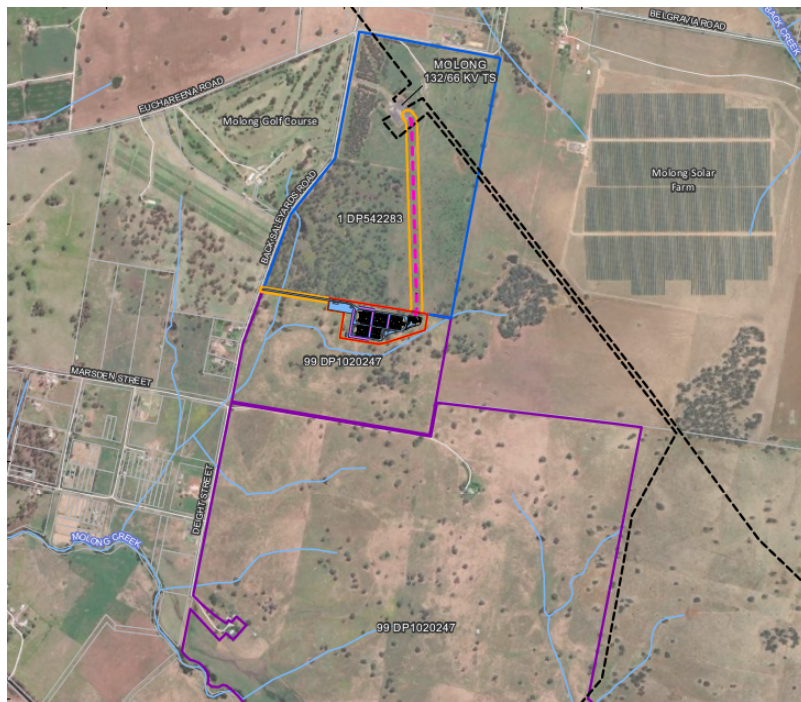
The proposed SSD Molong StorEnergy BESS project is to be located within the north eastern corner of Lot 99 DP 1020247, known as 1 Deight Street (aka Back Saleyards Rd), Molong, being a 339.3ha rural allotment containing a dwelling, outbuildings and farmland. Lot 99 DP 1020247 forms stage 1 of a development approval for subdivision of land, with three concessional allotments, to be located adjacent the proposed BESS development, approved as a later stage subdivision release (DA 2000/0182). The effect of the proposed BESS development upon the approved three future concessional (lifestyle) lots has not been referenced in the BESS proposal, nor does it form part of this addendum - beyond notation of the potential future land use changes.



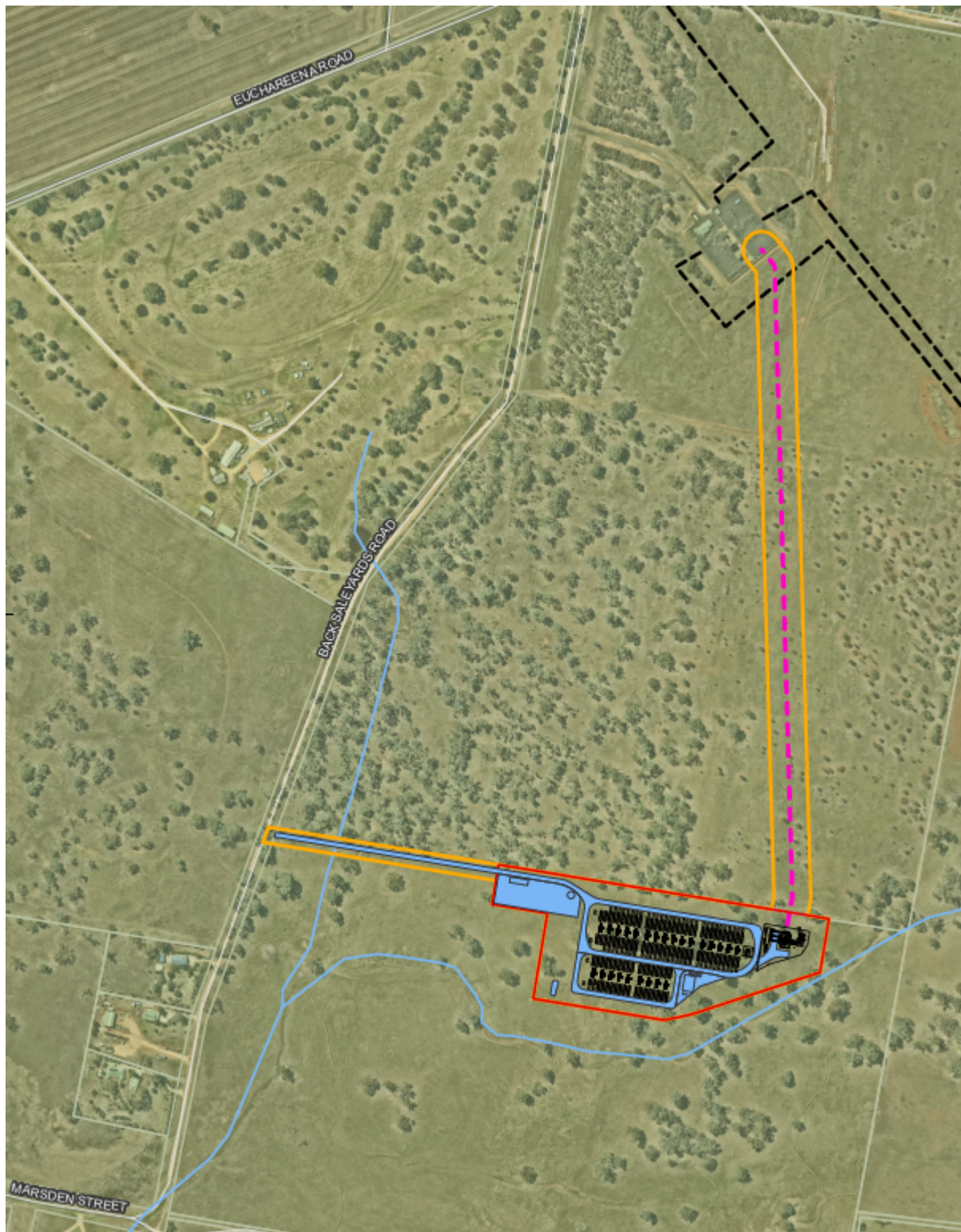
Site location – 1 Deight Street, Molong



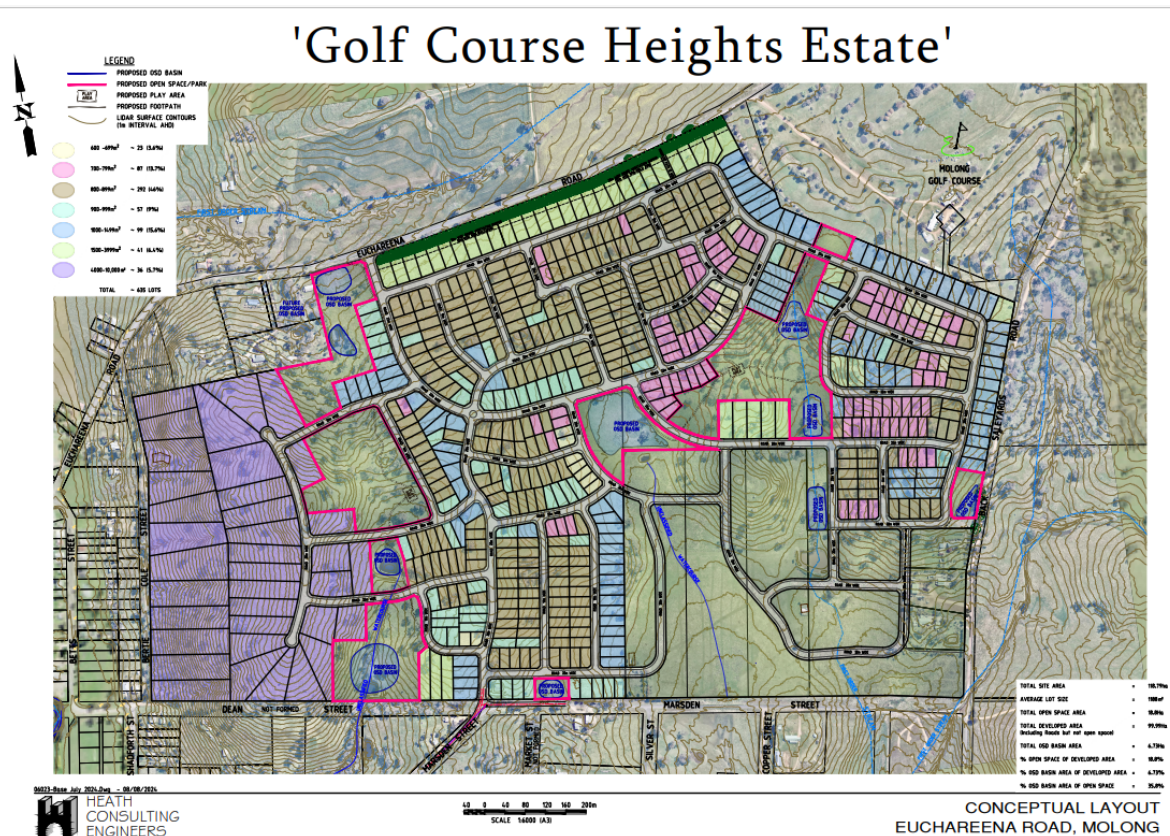
DA 2000/0182 – approved staged subdivision



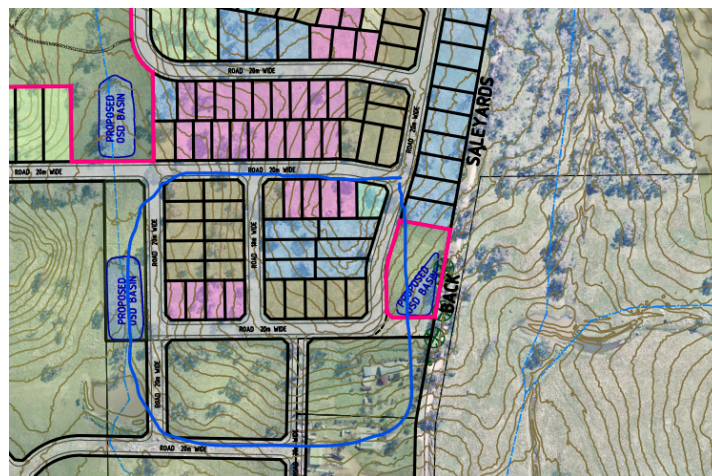
Location of the Molong BESS development to the east of the rezoning area



Concept plan for the Molong BESS and transmission line



Molong East (Golf Course Heights) residential land rezoning concept plan



Note – area circled in blue above is not part of the current residential rezoning subject land and provided as indicative of the potential future development by others.

Addendum to East Molong LUCRA to include the proposed Molong BESS development

3.0 The Molong BESS development

The project is listed as 26 March 2025 a State Significant Development as SSD-80471210, with the planning secretary's environmental assessment requirements (SEARs) issued for project on 26 March 2025. The Development Application and supporting Environmental Impact Statement was prepared and has recently been lodged with the department of planning for preliminary review of completeness of the provided information.

The project will involve development, construction and operation of a BESS with a capacity of 150MW, 730 MW hours, connecting to the electricity grid at the existing Transgrid Molong 132/66kV substation via a new overhead transmission line, as summarised in the following table (EIS report extract).

Project Element	Description
Proposed Development – Construction and Operation Summary	The Project would generally involve the following components: • Transport of construction personnel, equipment and materials to and from the project during construction (dependent on construction schedule), including all associated heavy and light vehicle traffic movements. • Site establishment works including limited vegetation clearing within the Development Footprint, bulk earthworks and a temporary construction compound. • Road works to formalise a new driveway crossing from Back Saleyards Road and internal site access road for construction purposes and ongoing access. • Construction of hardstand/laydown areas, fencing, internal roads, control room, auxiliary transformer, battery enclosures, and inverter/transformer/switchgear stations (referred to as Power Conversion Stations (PCS)). • Construction of approximately 900m of overhead 132 kV transmission line to facilitate connection to the existing Transgrid's Molong Substation and associated high voltage concrete or steel poles and wiring. • Construction of ancillary works including a parking area, water tank, Operations and Maintenance (O&M) building (including storage structures), stormwater management infrastructure, security lighting, noise walls and fencing. • The installation of 264 BESS units (maximum) within individual, modular containers, on hardstand footings with a total capacity of 150 MW/730MWh. • The installation of 50 inverters on hardstand footings. • Installation of subsurface cabling infrastructure within the Development Footprint. • Commissioning and testing of all installed equipment in the Development Footprint. The BESS may be subject to capacity replenishment and/or capacity augmentation events as necessary to extend storage durations.
Site Access	Access to the BESS is proposed via a new vehicle crossover and driveway from Back Saleyards Road. An internal access road will be established to accommodate construction vehicles and vehicles associated with ongoing maintenance.
Grid Connection	A new overhead transmission line (132 kV) and associated high voltage steel poles will be constructed to connect the BESS to the existing Transgrid Molong 132/66 kV Transgrid Substation north of the Development Footprint. The transmission line poles will be up to 18 metres (m) in height with a minimum ground clearance of 7.5 m and located within the proposed 45m transmission line easement.
Construction Duration	Construction is anticipated to take approximately 22 months (14 months construction and 8 months commissioning).
Operation Life Expectancy	The operational life will be determined by the evolving nature of the technology, however is anticipated that the lifespan will be approximately 30 years from the Commercial Operation Date (COD).

3.1 Noise and vibration risk and mitigation assessment

Construction and plant operation of the BESS development have been assessed to identify land use conflict risk and mitigation measures between that development and the proposed residential rezoning of land known as Molong East. Traffic and noise are the most likely land use conflict risks, and assessment undertaken indicated that those risks can be mitigated with a low residual risk remaining. Environmental risks have also been identified, mitigation measures proposed by the proponents, as summarised in the following LUCRA addendum.

The Noise and Vibration Impact Assessment prepared by SLR Consulting Australia for StorEnergy 3 Pty Ltd for the Molong BESS project stated that the 'predicted noise levels at the closest noise sensitive receivers during the construction and operation of the BESS were assessed against the various requirements of the NSW Noise Policy for Industry, and the Interim Construction Noise Guideline' with the key impacts identified being:

- Noise and construction activities – all construction work will be undertaken during standard hours of Monday – Friday 7am to 6pm, Saturday 8am to 1pm, with no work on Sunday or Public Holidays. Some noise disturbance will be noticeable to nearby receptors at various stages of the construction phase, with community engagement and use of best practice management control measures proposed to minimise residual risk at nearby receivers premises.
- Construction vibration is unlikely to be felt at nearby receptors
- Noise from operational activities -compliance with relevant guidelines has been demonstrated at all receivers for each assessment period, with inclusion of silencing treatment of the BESS battery containers and inverters, and construction of 4m high noise walls (potentially increased to 5m height for greater effect) at key locations within the development footprint
- Cumulative noise emissions and impact of the BESS, the existing Transgrid substation and the Molar Solar Farm (also located nearby) was considered and are not expected to exceed the recommended stringent amenity criteria during the night period.

The Noise and Vibration Impact Assessment sets out mitigation measures for site layout and site operation to ensure compliance with noise and acoustic performance criteria.

4.0 Molong BESS LUCRA

For the purpose of inclusiveness, the following extract from the Molong StorEnergy BESS LUCRA is reproduced so that the risks and mitigation measures identified within can be applied to the Molong East (Golf Course Heights) residential rezoning LUCRA findings. The LUCRA identifies a range of likely risks, along with mitigation measures, and an assessment of residual risks. When extended to consider the context of the East Molong rezoning proposal it is considered that the construction and operation of the Molong BESS facility will not have adverse environmental, physical or social impacts upon the future residential use of the East Molong subject land.

5.0 Land Use Conflict Risk Assessment

5.1 Risk Identification and Risk Ranking

The LUCRA process evaluates the probability and consequence of potential land use conflicts and uses a matrix to estimate risk, provided in Table 7. Associated tables for determining probability and consequence are provided in Table 8 and Table 9, respectively.

A risk ranking of 25 is the highest magnitude of risk; a highly likely, very serious event. A rank of 1 represents the lowest magnitude or risk an almost impossible, very low consequence event.

Risk Rankings have been categorised in terms of their probability and consequence as:

- Low Risk, risk ranking between 1 and 10.
- Moderate Risk, risk ranking between 11 and 19.
- High Risk, risk ranking between 20 and 25.

Table 7 Risk Ranking Matrix

Consequence	Probability				
	A	B	C	D	E
	Almost Certain	Likely	Possible	Unlikely	Rare
1 - Severe	25	24	22	19	15
2 - Major	23	21	18	14	10

Probability					
3 - Moderate	20	17	13	9	6
4 - Minor	16	12	8	5	3
5 - Negligible	11	7	4	2	1

Table 8 Probability Table

Level	Descriptor	Description
A	Almost Certain	Common or repeating occurrence
B	Likely	Known to occur, or 'it has happened'
C	Possible	Could occur, or 'I've heard of it happening'
D	Unlikely	Could occur in some circumstances, but not likely to occur
E	Rare	Practically impossible

Table 9 Measure of Consequence

Level	Descriptor	Description	Example/Implications
1	Severe	- Severe and/or permanent damage to the environment - Irreversible - Severe impact on the community - Neighbours are in prolonged dispute and legal action involved	- Harm or death to animals, fish, birds or plants - Long term damage to soil or water - Odours so offensive some people are evacuated or leave voluntarily - Many public complaints and serious damage to Council's reputation - Contravenes Protection of the Environment & Operations Act and the conditions of Council's licences and permits. Almost certain prosecution under the POEO Act
2	Major	- Serious and/or long-term impact to the environment - Long-term management implications - Serious impact on the community - Neighbours are in serious dispute	- Water, soil or air impacted, possibly in the long term - Harm to animals, fish or birds or plants - Public complaints. Neighbour disputes occur. Impacts pass quickly - Contravenes the conditions of Council's licences, permits and the POEO Act - Likely prosecution
3	Moderate	- Moderate and/or medium-term impact to the environment and community - Some ongoing management implications - Neighbour disputes occur	- Water, soil or air known to be affected, probably in the short term - No serious harm to animals, fish, birds or plants - Public largely unaware and few complaints to Council - May contravene the conditions of Council's Licences and the POEO Act - Unlikely to result in prosecution

Level	Descriptor	Description	Example/Implications
4	Minor	- Minor and/or short-term impact to the environment and community - Can be effectively managed as part of normal operations - Infrequent disputes between neighbours	- Theoretically could affect the environment or people but no impacts noticed - No complaints to Council - Does not affect the legal compliance status of Council
5	Negligible	- Very minor impact to the environment and community - Can be effectively managed as part of normal operations - Neighbour disputes unlikely	- No measurable or identifiable impact on the environment - No measurable impact on the community or impact is generally acceptable

5.2 Risk Assessment

The risk assessment identifies and evaluates potential land use conflicts associated with the proposed BESS.

A risk ranking is determined based on probability and consequence, and a revised risk ranking is determined based on implementation of identified management strategies.

The full suite of mitigation measures are outlined within the relevant specialist consultant reports which support the EIS.

Table 10 Management Strategy

Activity	Identified potential conflict	Probability (P)	Consequence (C)	Risk ranking	Management Strategy	Revised Risk Ranking (P;C)	Performance target
Visual Amenity	Visibility of construction activities from neighbouring properties and the road network.	C	4	8	Mitigation measures to be incorporated as per the LVIA.	5 (D;4)	Effectiveness will be measured as part of the Construction Environmental Management Plan (CEMP) and Operational Environmental Management Plan (OEMP).
	Visibility of project infrastructure from residences and the road network.	C	4	8		5 (D;4)	Effectiveness will be measured as part of the CEMP and OEMP
	Visibility of project during night hours from security lighting.	D	4	5	Where possible, have the security lighting installed as passive infrared lighting and directed internally towards the BESS.	2 (D;5)	Effectiveness will be measured as part of the CEMP and OEMP.

Proximity to Town Centre	Impacts of traffic during construction.	B	3	17	Development of a Construction Traffic Management Plan (CTMP) which identifies and seeks for construction traffic to avoid peak traffic hours, with Molong and the wider road network region.	8 (C, 4)	Effectiveness will be measured as part of the Construction CTMP
Water quality	Impacts of construction activities on water quality.	C	4	8	An Erosion and Sediment Control Plan (ESCP) will be prepared as part of the CEMP for the Project across the Development Footprint. The ESCP will be prepared in accordance with Managing Urban Stormwater: Soils and Construction (Landcom 2004), known as 'the Blue Book', and Volume 2A Installation of Services (DECC 2008a).	5 (D;4)	Effectiveness will be measured as part of the CEMP.
	Impacts of ongoing operation on water quality, including potential for run off, sediment or contaminant impacts off site.	C	5	4	Placement of an erosion resistant surface below the edges of battery structures, such as reinforced concrete or a layer of crushed rock. Stormwater management infrastructure to be constructed to ensure water is conveyed to	2 (D;5)	On-going monitoring will be undertaken to ensure that stormwater infrastructure is operating effectively.

Activity	Identified potential conflict	Probability (P)	Consequence (C)	Risk ranking	Management Strategy	Revised Risk Ranking (P;C)	Performance target
					appropriate locations for disposal.		
Flooding	Risk of additional flooding to adjoining land.	D	4	5	Implementation of mitigation strategies outlined in the Flood Impact Assessment (Appendix M of the EIS).	1 (E,5)	Ongoing monitoring including review of any complaints received.
Air quality	Dust generation during construction activities.	B	4	12	Preparation and implementation of a Dust Management Plan which provides a list of practical mitigation measures to minimise potential offsite dust nuisance to receptors situated near the project entrance. At minimum, the management plan should implement watercart treatment and speed limits for unsealed access roads used by construction vehicles in the vicinity of residential dwellings. The DMP will form part of the CEMP.	8 (C;4)	Effectiveness will be measured as part of the CEMP.
	Dust generation during ongoing operation.	C	4	8	An onsite speed limit of 40 km/hr to reduce dust generation on any unsealed sections of access road. When necessary, the application of binders to unsealed sections of the site access road to reduce dust.	8 (C;4)	Ongoing monitoring will be undertaken including review of any complaints received.

Activity	Identified potential conflict	Probability (P)	Consequence (C)	Risk ranking	Management Strategy	Revised Risk Ranking (P;C)	Performance target
Noise	Impacts of construction noise and vibration on residents.	A	3	20	Implement noise mitigation measures identified within the Noise Impact Assessment which includes: - No construction work outside of Standard Construction Hours as proposed - A Construction Noise and Vibration Management Plan (CNVMP) be prepared as part of the CEMP.	8 (C;4)	Effectiveness will be measured as part of the CNVMP.
	Impacts of operational noise on residents.	D	5	2	The Noise Impact Assessment has not identified any exceedance of project noise at the identified residential receivers with the operation of the proposal. Plant equipment shall be maintained to ensure that it is functioning efficiently.	1 (E;5)	Ongoing monitoring will be undertaken including review of any complaints received.
Safety	Exposure of residents to hazardous events or substances.	C	1	22	Implementation of the Prevention / Protection Safeguards identified within the Hazard and Risk Assessment.	6 (E;3)	Protection and prevention safeguards will be reviewed after any incident occurring and updated as necessary
	BESS explosion and/or thermal runaway reaction.	C	1	22	The BESS units will have a Battery Management System (BMS), including automatic shut down in case of any safe limits of voltage, current and temperature being exceeded. The units will	10 (E;2)	

Activity	Identified potential conflict	Probability (P)	Consequence (C)	Risk ranking	Management Strategy	Revised Risk Ranking (P;C)	Performance target
					also have an explosion control system.		
	Impact of fires, should they spread to adjoining land.	C	1	22	Project design to include adequate separation distances between main transformer and BESS units and between battery units. In a non-BESS initiated fire, firefighting practice would protect BESS units by keeping batteries cool with water. Provision of water tank is to be included within the design, for firefighting purposes	10 (E;2)	Protection and prevention safeguards will be reviewed after any incident occurring and updated as necessary
Security	Change in land use resulting in increased activity on site during the projects construction period and potential theft or vandalism at neighbouring properties.	D	3	9	A zero-tolerance policy on theft will be implemented on-site throughout the project's construction and operation period. Surrounding landholders, project landholders, and law enforcement will be provided with the primary contractor's contact information. The CEMP will include a Code of Conduct for the project's workers (particularly to avoid anti-social behaviour at peak construction times).	5 (D;4)	Compliance will be measured in the CEMP and OEMP.

Activity	Identified potential conflict	Probability (P)	Consequence (C)	Risk ranking	Management Strategy	Revised Risk Ranking (P;C)	Performance target
	Change in land use resulting in vandalism and theft of project infrastructure and construction materials.	C	4	8	A zero-tolerance policy on theft will be implemented on-site throughout the project's construction and operation period. Surveillance cameras and signs will be implemented to deter vandalism and theft. Chain mesh security fencing will be installed to control access.	5 (D;4)	Compliance will be measured in the CEMP
Traffic	Impacts of construction traffic (including heavy vehicles) on the function and efficiency of the road network.	A	2	23	Preparation and implementation of a CTMP.	8 (C;4)	Effectiveness will be measured as part of the CTMP.
	Impacts of construction traffic (including heavy vehicles) on agricultural / livestock or local transport activities.	B	2	21	Preparation and implementation of a CTMP.	8 (C;4)	Effectiveness will be measured as part of the CTMP.
	Impacts of construction traffic on wildlife.	C	3	13	Construction work to be contained to the standard construction hours, to reduce night-time driving, when wildlife conflict is more likely.	5 (D;4)	Effectiveness will be measured as part of the CTMP.

Activity	Identified potential conflict	Probability (P)	Consequence (C)	Risk ranking	Management Strategy	Revised Risk Ranking (P;C)	Performance target
	Impact of operational traffic on the function and efficiency of the road network.	E	5	1	Traffic associated with the operation of the facility will be minimal and will not affect the function of the road network.	1 (E;5)	No actions required
Weeds and pest management	Introduction and increased distribution of weeds during construction as a result of increased vehicle and pedestrian movements.	B	4	12	To manage the transfer of weeds and pathogens to and from work areas, a washdown bay will be included at the access to clean vehicles and equipment prior to arrival and when leaving the work areas. The focus will be to minimise the transfer of soil and seed material. This will occur during vegetation clearing and construction and operation. The Project's CEMP and OEMP will include weed management protocols, such as measures for the identification, management, and ongoing monitoring of weeds on-site. Training staff and conducting site briefings to communicate environmental features to be protected and the measures implemented to protect them	5 (D;4)	Effectiveness will be measured as part of the CEMP and OEMP.
	Impacts of any weed control measures to adjoining land.	D	3	9	Incorporate biosecurity measures into the OEMP to reduce impacts to adjacent vegetation in adjoining lot.	5 (D;4)	Effectiveness will be measured as part of the OEMP

Activity	Identified potential conflict	Probability (P)	Consequence (C)	Risk ranking	Management Strategy	Revised Risk Ranking (P;C)	Performance target
Waste	Increased waste production during construction.	B	4	12	The CEMP will detail procurement, material ordering and waste management and disposal procedures to be followed during construction. Minimal waste will be created during operation of the facility.	7 (B;5)	Effectiveness will be measured as part of the CEMP.
	Risk of waste to adjoining properties, or pest and vermin from poor management.	C	4	8	Waste related impacts have been assessed and operational and construction measures have been proposed through the Waste Management Plan (WMP). During both stages of the development construction works and staff should work in accordance with the WMP.	1(E,5)	Effectiveness of the WMP
Social	Increased demand on local services and accommodation from construction phase	C	3	13	Early and ongoing consultation throughout the construction process should be had with key stakeholder.	8 (C,4)	Effective measured by engagement with key stakeholders.
	Impacts on local and regional employment	D	4	5	During construction the development will utilise local employment within the workforce where possible. As the BESS Footprint is minor, it is unlikely to have an impact on the existing agricultural workforce and subsequent supply chains in the region.	5 (D,4)	Effective measured by engagement with key stakeholders.

The Molong BESS project LUCRA provides the following mitigation measures, which can equally demonstrate that adverse land use conflict between the proposed development and the future residential estate is can be identified and adequately managed, such that impacts, are short term and of minor effect.

6.0 Recommended Mitigation Measure

Table 12 includes a summary of the recommended mitigation measures that have been outlined in the LUCRA.

Table 12 Mitigation Measures

Impact	Mitigation Measures and Monitoring Requirements
Weeds	Prepare and implement a Construction Environmental Management Plan, which should include biosecurity management measures and outlines specific mitigation measures to minimise the chance of foreign weeds. The biosecurity management practises should be in accordance with the DPI's <i>Managing biosecurity risks in land use planning and development guide</i> .
Visual Impact	Noise walls to be finished in a muted, no-reflective green tone.
Pests	Prepare and implement an Operational Environmental Management Plan, which should include biosecurity management measures. The biosecurity management practises should be in accordance with the DPI's <i>Managing biosecurity risks in land use planning and development guide</i>
Fire	Each battery unit should be installed with a battery management system
Fire	Project layout design to ensure sufficient separation between battery units
Traffic	Prepare and implement a Construction Traffic Management Plan
Dust	Prepare and implement a Construction Environmental Management Plan

Impact	Mitigation Measures and Monitoring Requirements
Noise	Prepare and implement a Construction Noise and Vibration Management Plan.
Noise	Restrict construction hours to the standard construction hours.
Noise	Noise and/or vibration monitoring will be conducted (as appropriate) in response to any complaints received to verify that levels are not substantially above the predicted levels.
Light	Direct lights downward as much as possible and lighting should be aimed inward towards the BESS where possible and away from the Development Footprint boundaries.
Stormwater	Implement a stormwater water management system in accordance with the Blue Book
Erosion	Implement an erosion and sediment control plan for the construction phase of the project
Damage to public infrastructure	Develop a dilapidation report prior to construction, with the developer required to undertake make good works if public infrastructure is damaged as a result of construction
Waste	Development and implantation of a Waste Management Plan

The mitigation measures outlined in the above table are also detailed in the Environmental Impact Statement (EIS), which provides a more comprehensive explanation of each measure. These mitigation strategies have been informed by a range of technical studies conducted as part of the overall assessment of the Project.

7.0 Conclusion

The above information should be read in conjunction with the East Molong LUCRA, and provides sufficient detail and assessment of the potential land use conflicts arising from

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the proposed construction and operation of the Molong BESS facility, to be confident that the likely risks have been identified along with adequate mitigation measures, and that an assessment of the residual risk indicates that the future residential use of the proposed Molong East residential estate can co-exist in near proximity to the proposed BESS facility without adverse environmental, social or cultural impacts.

