

ID	Mitigation Measures	Timing
General		
G1	Prior to construction, an Environmental Management Strategy for the development will be prepared and implemented. This strategy will: • Provide the strategic framework for environmental management • Identify the statutory approvals that apply • Describe the role, responsibility, authority and accountability of all key personnel involved in the environmental management • Set out the procedures that would be implemented. The Environmental Management Strategy will be reviewed and updated prior to the subsequent key stages of the development including operations and decommissioning.	Pre-construction
Traffic and transport		
T1	A CTMP will be prepared to mitigate potential construction traffic impacts. The CTMP will include the following: • Consultation outcomes with the relevant road authorities and adjacent landowners during preparation of the CTMP • A process for ongoing consultation with relevant road authorities, stakeholders and nearby developments to understand any overlap in construction programs and ensure appropriate coordination of construction activities • Special traffic management plans for special events such as the Tamworth Country Music Festival, weather events and roadworks developed in conjunction with the relevant stakeholders including preparation of contingency plan and emergency response processes • Management of hours of works and deliveries, staff transport and provision of on-site tool storage where practicable • The outcomes of the review of using shuttle buses during construction in consultation with TRC to reduce the need for private vehicle use • Identification of parking areas for the workforce to minimise impacts on sensitive land uses and businesses. To minimise the potential for parking disruptions, the following management hierarchy would be applied: – Car parking within the proposed construction compound – In consultation with neighbouring landowners • Measures to minimise potential traffic movement during key events in Tamworth (such as the Tamworth Country Music Festival) • A detailed route assessment will be completed for OSOM construction vehicles. The assessment will include a review of height clearance to bridges and bridge loads • A process for managing OSOM deliveries (obtain either a Ministerial Orders, Class 1 National Notices or permits with the National Heavy Vehicle Regulator depending on the size and loads of the vehicles)	Pre-construction

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	• Transport of components and material will be planned in detail and in consultation with New South Wales Police Force (NSWPF), recognising and determining whether the scale of oversized vehicle movements will require a significant commitment of police resources to facilitate. The following measures are proposed to manage the overall transport operations and minimise impacts on other road users: – Develop a regular schedule of road closures comprising a list of specific roads/intersections and closure times and communicate this widely to provide advance warning of closures to road users (If required). – No over-dimension vehicle operations will occur during school bus operating hours (where feasible) which may occur along the routes from where the vehicles would be travelling from – Transport activities will occur outside of peak hour conditions (where feasible) • Routes to be used by heavy construction-related vehicles to minimise impacts on sensitive land uses and businesses e.g., avoiding school bus operating hours. Secondary alternative construction route activities should be included, in the event of the primary route is blocked off by an emergency • Detail the alternative route to be used in the event of flooding, in consultation with stakeholders, during the detailed design of the Project (This will also be detailed in the Emergency Management Plan) • Primary and secondary routes to be used by heavy construction-related vehicles • Traffic dust management measures • Notification requirements prior to the movement of hazardous / dangerous or oversize construction material and equipment • Measures to manage and facilitate the ingress/egress of the vehicles to ensure safety for all users along Ascot-Calala Road, including, as required regulatory and direction signposting, variable message signs, traffic management personnel and all other traffic control devices necessary for the implementation of the CTMP • Provision to induct employees and contractors to raise awareness and understanding of traffic and transport mitigation measures to be implemented • Fatigue management measures to be introduced and enforced for all workers • Monitoring objectives to review the performance of traffic management.	
T2	A dilapidation survey of will be undertaken on Ascot-Calala Road and Burgmanns Lane will be undertaken prior to the commencement of construction development to review the road condition and to monitor post construction impacts. Where Project related road damage is identified, it will be repaired to its pre-construction condition.	Pre-construction

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T3	Travel demand management (TDM) campaign will be developed to inform the public on works and its effect on network operations. Opportunities for the use of a shuttle buses during construction will be explored in consultation with TRC to reduce the need for private vehicle use. The outcomes of this review will be documented in the CTMP.	Pre-construction
T4	A detailed route assessment will be completed for all OSOM vehicles used during construction.	Pre-construction
T5	A process for managing OSOM vehicle deliveries will be developed and implemented (obtain either a Ministerial Orders, Class 1 National Notices or permits with the National Heavy Vehicle Regulators depending on the size and loads of the vehicles).	Pre-construction
T4	Local road users and residents will be notified in advance of construction works being undertaken to ensure adequate opportunities are provided to seek alternative routes.	Construction
T5	In the event traffic must be stopped or diverted, adequate notification will be provided through community engagement procedures. Durations of impacts will be kept to a minimum and traffic queues minimised as far as practicable.	Construction
T6	A Driver Code of Conduct will be implemented to maintain safety within and around the Project and will be included in the CTMP. The Code of Conduct will be communicated to all site workers during site induction and will be reminded of the requirements of the code regularly in toolbox meetings. The Code of Conduct will be revised prior to commencement of on-site works and when required during construction works. The Code of Conduct will include but not be limited to: • All vehicles associated with the Project are required to travel within the posted speed limits on public roads • All large vehicles associated with the Project are required to follow the designated heavy and OSOM vehicle routes and minimise impact on school bus routes • All operators of the vehicles associated with the Project should maintain a high level of awareness and respect for all other road users • Safe driving practice training will be provided prior to start-up of any traffic and access related management tasks, and provide updates if the tasks, equipment or procedures are expected to, or have changed.	Pre-construction
T7	Fatigue management measures will be introduced and enforced for all workers including the standard hours of operation.	Construction and operation
T8	All vehicles associated with the Project will be compliant with relevant State legislation in relation to roadworthiness and modifications, and maintained regularly by way of vehicle checks and maintenance.	Construction and operation
T9	Site access management will be implemented to maintain the safety of the general public and the employees. This will include measures such as advisory truck turning signage and mandating heavy vehicles come from south via Whitehouse Lane.	Construction

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T10	Advance truck turning signage will be installed to warn vehicles of heavy vehicles turning in and out of the Project Site access during the construction.	Construction
T11	Provision of experienced and qualified traffic control personnel.	Construction
T12	Relevant emergency services will be notified in advance prior to the movement of all hazardous/dangerous goods or OSOM construction material and equipment.	Construction
T13	During operational maintenance activities, heavy vehicle movements requiring escort will comply with all applicable road transport regulations and will be coordinated in advance with the relevant authorities.	Operation
Noise and vibration		
NV1	Noise modelling will be undertaken for the preferred supplier to verify: - Compliance with the Project specific noise criteria in accordance with the Noise Policy for Industry (EPA, 2017) - Design noise mitigation measures to be implemented such as silencers, layout refinements and noise path controls. Other approaches to reduce noise levels that would be considered include selecting suppliers with fewer sound sources (quantity) and lower noise emissions and / or adjusting fan speeds to account for reduced cooling capacity overnight.	Pre-construction
NV2	All nearby receivers (including those along the primary heavy traffic route on Whitehouse Lane and Ascot-Calala Road) will be notified about works and expected duration in accordance with the community consultation developed and implemented for the Project.	Construction
NV3	The draft CNVMP will be reviewed and updated prior to the commencement of construction. The Plan will identify feasible and reasonable approaches to reduce noise and vibration impacts during construction of the Project.	Pre-construction
NV4	Works will occur during standard working hours only. These hours are: 7 am to 6 pm, Monday to Friday 8 am to 1 pm, Saturday - No work on Sundays or public holidays. If works must occur out of hours for justified reasons (e.g. worker safety or reduction of impact on traffic), preference will be given today and/or evening time works (i.e. between 7 am and 10 pm). Out of Hours works will be separately assessed with appropriate noise mitigation and community consultation implemented as necessary based on the level of predicted impact.	Construction
NV5	Worksite induction training and 'toolbox talks' will include education for workers on noise issues related to the site (e.g. workers will be advised to avoid shouting or whistling on-site near sensitive receivers).	Construction

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NV6	The EMS will include measures and processes for managing noise resulting from the operation of the Project, including a process for managing complaints.	Pre-operation
NV7	If required, implement limitations of fan speed duty in the equipment firmware for the daytime, evening and night-time periods to achieve compliance with the baseline NPI noise criteria at all noise-sensitive receivers during periods of typical operations (up to 90% of any season) and compliance with the adjusted criteria during periods of high temperature operations (up to 10% of any period).	Operation
NV8	The Proponent will consult with owners of properties predicted or demonstrated to exceed the default noise objectives outlined in Note 1 of Table 3-1 of the Amendment Report for more than 10 percent of any given season and, if appropriate, will seek to enter into negotiated agreements with the owners of the residences or the land.	Construction and operation
Biodiversity		
FF1	Clearing of native vegetation will not occur until the EMS is approved. The EMS will include flora and fauna management measures to be implemented.	Pre-construction
FF2	If native clearing occurs during spring nesting season, pre-clearing surveys will be undertaken. No breeding sites or active nests will be disrupted, as far as practical.	Construction
FF3	Native vegetation clearing will be minimised as far as is practicable.	Construction
FF4	The limits of native vegetation clearing will be marked on plans and on site with signed fencing so that clearing activities are constrained to approved areas only.	Construction
FF5	Where fauna species are identified in native vegetation to be cleared, animals will be removed and relocated to adjacent bushland prior to clearing. If this is not possible, the tree will be sectionally dismantled or soft felled under the supervision of a suitably qualified ecologist or wildlife carer, before relocating the animal.	Construction
FF6	Pits/trenches adjacent to native vegetation that will remain open overnight, will be securely covered, where possible. Alternatively, fauna ramps (logs or wooden planks) will be installed to provide an escape for trapped fauna.	Construction
FF7	Appropriate sediment and erosion controls around the impact area will be installed prior to the commencement of earthworks.	Construction
FF8	Where possible, earthworks will be undertaken during dry weather conditions. No clearing of vegetation will occur during overland flow events.	Construction
FF9	A Pest and Weed Management Plan will be prepared by a suitably qualified person as part of the EMS to address agricultural biosecurity and weed and pest impacts relating to adjoining land in the vicinity of the Project.	Pre-construction

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FF10	Prior to carrying out any development of the Project that could directly or indirectly impact the biodiversity values requiring offset, Iberdrola will provide evidence to the Planning Secretary that biodiversity credits have been retired.	Pre-construction
Hazards and risk		
HR1	The investigation reports on the Victorian Big Battery Fire (occurred on 31 July 2021) will be reviewed and relevant findings will be implemented for the Project when finalising design and preparing for operations. The publicly available investigation reports include: • Energy Safe Victoria: Statement of Technical Findings on fire at the Victorian Big Battery • Fisher Engineering and Energy Safety Response Group: Report of Technical Findings on Victorian Big Battery Fire.	Detailed design
HR2	A Fire Safety Study will be prepared in accordance with the development conditions to identify measures to eliminate the expansion of any fire incident. These may include: • Type of firefighting or control medium; and • Demand, storage and containment measures for the medium. A Fire Safety Study (FSS) will be prepared prior to construction in accordance with the requirements of Fire and Rescue NSW and Hazardous Industry Planning Advisory Paper (HIPAP) No.21. The study will: be developed to the satisfaction of FRNSW be consistent with the Department's Hazardous Industry Planning Advisory Paper No. 2 'Fire Safety Study' guideline be prepared in accordance with the FRNSW Fire Safety Guideline Technical Information – Large scale external lithium-ion battery energy storage systems – Fire safety study considerations describe the final design of the BESS include reasonable worst-case fire scenario to and from the battery storage and the associated fire management identify measures to eliminate the expansion of any fire incident including: adequate fire safety systems and appropriate water supply separation and / or compartmentalisation of battery units strategies and incident control measures specific to the battery storage design.	Detailed design
HR3	The quantities of dangerous goods stored and handled at the site will be below the threshold quantities listed in the Department's Hazardous and Offensive Development Application Guidelines – Applying SEPP 33 at all times.	Detailed design

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HR4	All chemicals, fuels and oils used on-site in will be stored and handled accordance with: a. the requirements of all relevant Australian Standards; and b. the NSW EPA's Storing and Handling of Liquids: Environmental Protection – Participants Handbook if the chemicals are liquids.	Construction and operation
HR5	An Emergency Plan (EP) will be developed for the site in accordance with HIPAP No.1.	Prior to commissioning
HR6	An Emergency Services Information Package (ESIP) will be prepared in accordance with FRNSW fire safety guideline – Emergency services information package and tactical fire plans.	Prior to commissioning
HR7	An Emergency Responders Induction Package will be developed for the Project prior to commencement and will: - Be prepared in consultation with FRNSW - Inform first responders of site-specific features and safety measures to ensure they are able to undertake their duties effectively in accordance with agency specific Standard Operational Guidelines.	Prior to commissioning
Bushfire		
BR1	A non trafficable asset protection zone (APZ) will be implemented for a distance of 12 metres in all directions, including Ancillary Infrastructure and Construction Laydown areas (unless a performance based solution adequately demonstrates that a smaller APZ would meet the aims and objectives of the PBP guidelines).	Construction
BR2	A minimum four metre wide, all weather vehicular access track around the BESS, consistent with access standards in PBP (NSW RFS 2019) will be provided	Construction
BR3	Provide a minimum 20,000 litre static water supply for fire fighting purposes and fitted with a 65 millimetre storz fitting suitable fittings sufficient to enable firefighting. The tank will be located adjoining the internal property access road within the required APZ and is to be concrete or metal and all exposed water pipes external to the building are metal, including any fittings. A static water supply marker should be obtained from the Rural Fire Service and displayed in a prominent position at the front gate. This supply may form part of larger water holding structure.	Detailed design
BR4	Where practicable, electrical transmission lines will be located underground.	Detailed design
BR5	Prepare a Bushfire Emergency Management and Evacuation Plan in accordance with the RFS document <i>A Guide to Developing a Bushfire Emergency Management and Evacuation Plan</i> to be implemented for construction and operation of the Project.	Detailed design
BR6	Establish a 'hot works management system' for both construction and operation phases to prevent accidental bushfire ignition from hot works on site	Detailed design
BR7	A Fire Management Plan (FMP) will be prepared in consultation with NSW RFS Tamworth Fire Control Centre and will include:	Detailed design

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	• 24 hour emergency contact details including alternative telephone contact • Site infrastructure plan • Fire fighting water supply plan • Site access and internal road plan • Construction of Asset Protection Zones (APZ) and their continued maintenance • Location of hazards (Physical, Chemical and Electrical) that will impact on fire fighting operations and procedures to manage identified hazards during fire fighting operations • Such additional matters as required by the NSW RFS District Office (FMP review and updates).	
Heritage		
H1	Construction teams and operations staff will receive cultural training to ensure they understand the cultural values of these sites and their connection to the surrounding landscape and the Local Gamilaroi / Kamilaroi Aboriginal community that continue to care for country.	Construction and operation
H2	The EMS will include unexpected finds protocols to be implemented in the unlikely event that Aboriginal objects, human remains, or items of heritage are discovered during construction or operation. All reasonable steps will be taken to avoid harm, modification, or other impact to Aboriginal objects except as authorised by this approval. The Aboriginal heritage management procedures will: a. be prepared by a suitably qualified and experienced persons; b. be prepared in consultation with Registered Aboriginal Parties and be reviewed by Heritage NSW; c. include a description of the measures that would be implemented for: i. ongoing consultation with Registered Aboriginal Parties, including consultation regarding changes to the management of Aboriginal cultural heritage. ii. a contingency plan and reporting procedure for the management of Unexpected Heritage Finds and Human Remains. The Unexpected Heritage Finds and Human Remains Procedure, as submitted to the Planning Secretary, must be implemented for the duration of construction.	Pre-construction and pre-operation
H3	The Registered Aboriginal Parties will be kept informed about the SSD. The Registered Aboriginal Parties must continue to be provided with the opportunity to be consulted about the Aboriginal cultural heritage management requirements of the SSD.	Construction and operation
Visual amenity		

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V1	The design of the Project will consider the use of materials that integrate with the surrounding landscape. Where possible, suitable colours and finishes will be chosen for project infrastructure to minimise visual impacts (including glare/reflectivity), including the O&M buildings/facilities and the noise acoustic wall surrounding the BESS. These buildings and materials will be designed to blend in with the local rural/farming landscape. If practicable, the wall may be painted in a neutral colour (e.g. khaki, beige, green or similar) rather than white, so as to better blend in with the local rural landscape.	Detailed design
V2	Cut off and direct light fittings (or similar technologies) would be used where appropriate to minimise glare and light spill onto private property.	Detailed design
V3	Landscaping will be installed and maintained in accordance with the conceptual landscape plan, including screen planting along the north, east and south of the BESS facility. The final location and extent of landscaping will be determined during detailed design. The key principals include: - Planting should remain in keeping with existing landscape character - Species selection is to be typical of the area - Planting layout should avoid screening views of the broader landscape - Avoid the clearing of existing native vegetation. Where appropriate reinstate any lost vegetation - Allow native vegetation to regrow over any areas of disturbance.	Detailed design
V4	Consultation will be undertaken with neighbouring properties to ensure screening locations and dimensions are appropriate to mitigate views of the Project.	Pre-construction
Land		
L1	A soil survey according to the Australian Soil and Land Survey Field Handbook (CSIRO, 2009) and the Australian Soil Classification (Isbell, 2021) will be undertaken to verify soil characteristics and further inform the potential for salinity, acid sulfate soils and erosion to occur.	Pre-construction
L2	An Unexpected Contaminated Land Finds Protocol will be included in the EMS to manage any disturbance of material that is odorous, stained, or containing anthropogenic materials, in the event that these are encountered during construction.	Pre-construction
L3	The EMS prepared for the Project will include measures to manage any spills that occur during operation.	Pre-operation
L4	A Rehabilitation and Decommissioning Management Plan is to be prepared in consultation with NSW DPI prior to decommissioning. The Rehabilitation and Decommissioning Management Plan will include: - Removal of all above and below ground Project infrastructure - Reverse any compaction by mechanical ripping - Verification of a safe, stable and non-polluting site	Prior to decommissioning

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Social and economic		
SE1	A Local Procurement Strategy will be implemented to prioritise local jobs and businesses wherever possible. The Local Procurement Strategy will: • Encompass considerations regarding local employment and procurement (with a specific focus on First Nations participation) and the associated accommodation of the construction workforce • Define workforce requirements and expectations, including minimum qualifications, to determine the extent/viability of local procurement • Target people and businesses within Tamworth LGA and regional surrounds • Continue to consult with stakeholders such as the TRC, Department of Regional NSW, Tamworth Business Chamber and other economic development or local social service agencies- • Be prepared in consultation with, and endorsed by, TRC prior to commencement of construction (unless the Planning Secretary otherwise agrees).	Pre-construction
SE2	An outline of the planned workforce staging, and likely material requirements will be communicated to the broader local business community to allow local supply chains to plan for potential surges in need for goods and services as part of broader engagement with local business (Local Procurement).	Pre-construction
SE3	Engagement will be undertaken with local business/tourism bodies to obtain information on local tourism, dining and service offering to supply construction workers with information on local services for shopping and dining options during construction.	Pre-construction
SE4	A Community and Stakeholder Management Plan will be prepared and implemented in line with Undertaking Engagement Guidelines for State Significant Projects (DPE, 2022). The plan will provide procedures for: • Informing stakeholders of potential impacts • Providing project-related updates • Registering and responding to complaints and feedback.	Pre-construction
SE5	A Community Enhancement Fund to support very localised and meaningful community and environmental initiatives that have strong resident and broader community support, throughout the life of the Project would be developed. Iberdrola is committed to establishing a benefit sharing scheme such as a fund for community-based projects. The details of the benefit sharing scheme are yet to be determined but would likely be managed through a committee comprising representatives from Iberdrola, TRC and the local community. This has discussed with TRC but requires further development in partnership with the community and key stakeholders.	Construction and operation
Water		
W1	A construction water balance will be undertaken to confirm the water requirements and ensure sustainable access to water sources.	Pre-construction

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W2	Excavations will be limited to depths above the observed groundwater levels. Where deeper excavation is required, the groundwater assessment will be reviewed.	Detailed design Construction
W3	The overarching design and development of infrastructure and engineered control during detailed design will include: • Ongoing consultation with TRC on required water quality targets and water controls to manage general risks associated with increases in impervious areas. Infrastructure will be developed with consideration to Appendix A of the TRC Development Control Plan 2010. • Oil-water management controls within the BESS substation will be designed to consider relevant Australian Standards, as well as any requirements of electricity distributors • Stormwater infrastructure will be designed to include a closure mechanism (e.g. penstock gate) or alternative arrangement to detain flows from leaving in the event of a spill/firewater discharge.	Detailed design
W4	A Soil and Water Management Plan (SWMP) and Erosion and Sediment Control Plan (ESCP) will be developed to management potential water impacts during construction. The ESCP will be developed in accordance with the principles and requirements of the Blue Book (Landcom 2004).	Pre-construction
W5	Flood emergency response protocols will be prepared and implemented to address the potential for access routes to be affected by road closures during flood events.	Pre-construction
W6	The EMS for the Project will include a management and maintenance schedule to ensure that stormwater management system devices are regularly inspected and maintained.	Pre-construction
Waste		
WM1	The preliminary Waste Management Plan prepared as part of the EIS will be reviewed and updated prior to the commencement of construction.	Pre-construction
WM2	All materials requiring removal from the Project will be classified in accordance with the NSW EPA <i>Waste Classification Guidelines</i> (2014). This material will only be transported from the Project to an appropriately licensed landfill for disposal, or to an appropriately licenced recycling facility.	Construction
WM3	The resource management hierarchy principles established under the WARR Act of avoid / reduce / reuse / recycle / dispose will be applied where feasible.	Construction
WM4	Wastes will be appropriately quantified, transported, stored and handled in accordance with NSW EPA waste classification and in a manner that prevents pollution of the surrounding environment	Construction
WM5	The handling and management of special wastes will be carried out in accordance with relevant legislation, codes of practice and Australian standards	Construction

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WM6	A Waste Register will be maintained for the duration of construction. The register will detail the type of waste, volume/quantity of waste and recycle/disposal options.	Construction
WM7	Working areas will be maintained, kept free of rubbish, and cleaned up at the end of each working shift.	Construction
WM8	Waste will be managed and disposed of in accordance with the relevant applicable legislation, policies and guidelines, including the WARR Act and the <i>NSW Waste Avoidance and Resource Recovery Strategy 2014-21</i> (EPA 2014).	Operation
Air quality		
AQ1	Reasonable and feasible dust suppression will be implemented during construction activities to minimise fugitive dust emissions	Construction
AQ2	All vehicles transporting materials to and from the Project will be covered and secured	Construction
AQ3	Speed limits on the Project Site will be established and enforced during construction	Construction
AQ4	All plant and equipment will be inspected before it is used on-site and maintained in accordance with manufacturers specifications and will comply with relevant vehicle emission standards, where applicable.	Construction
AQ5	All plant and equipment will be switched off when not in use for extended periods	Construction
AQ6	Air quality measures will be included in the EMS	Pre-construction
AQ7	Dust and air quality complaints will be managed in accordance with the overarching complaints handling process for the Project. Appropriate corrective actions, if required, will be taken to reduce emissions in a timely manner.	Construction
AQ8	Plant and equipment will be maintained in good condition to minimise ignition risk of fuel or chemicals, spills and air emissions that may cause nuisance.	Operation
Cumulative		
CU1	A process for monitoring the timing and location of other developments within the vicinity of the Project will be outlined in the EMS. Where potential adverse cumulative impacts are identified, consultation will be undertaken to encourage a collaborative effort as these projects progress and take a flexible and iterative approach to ensure the best outcomes.	Pre-construction