Wallerawang Battery Energy Storage System

State Significant Development (SSD 14540514)

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Executive Summary

Greenspot Wallerawang Pty Ltd (Greenspot) proposes to develop a 500 megawatt (MW) / 1,000 MW-hour (MWh) battery energy storage system (BESS) within the landholding of the decommissioned Wallerawang Power Station in the Lithgow City local government area.

The Department exhibited the Environmental Impact Statement for the project and received nine public submissions in support of the project. In addition, 17 government agencies, including Lithgow City Council (Council), provided advice.

The key assessment issues are energy transition, land use compatibility and noise.

The project would capture and store energy, including energy generated from renewable sources, and distribute this energy back into the grid during peak demands. The project would also provide firming capacity to the National Energy Market as well as additional services to assist grid stability, including frequency control ancillary facilities.

The project site is located within the broader landholding of the decommissioned Wallerawang Power Station and is located on land that contained a pine plantation prior to harvesting in May 2022. Lands surrounding the site include a railway line, pine plantations, cleared grasslands, the township of Wallerawang to the west and some residential properties to the east. The project is largely shielded from nearby residences, is located in an area historically used for electricity generation and is a compatible land use in this location.

The Department has also undertaken a comprehensive assessment of the full range of other potential impacts, including noise, biodiversity, visual, land contamination, hazards, bushfire, water, heritage, and traffic. The Department has recommended a range of detailed conditions, developed in conjunction with agencies and Council, to ensure all potential impacts are effectively minimised, managed or offset.

Overall, the Department considers the site to be suitable for the project as it is located within an 77established industrial area in close proximity to the existing electricity network and would store and distribute energy to support the reliability of energy supply to NSW.

The project is consistent with the Commonwealth's Renewable Energy Target and NSW's *Climate Change Policy Framework* and the *Net Zero Plan Stage 1: 2020 – 2030*, as it would contribute 500 MW / 1,000 MWh of energy storage to dispatch energy to the grid when the energy generation from renewable resources is limited, which would increase grid stability and energy security.

The project would also provide flow-on benefits to the local community, including up to 100 construction jobs, a capital investment of $404 million and staged contributions to Council in the order of $2 million for community enhancement projects through a Voluntary Planning Agreement.

The Department considers the project would not result in any significant impacts on the local community or the environment, and any residual impacts can be managed through the implementation of the recommended conditions.

The project would result in benefits to the State of NSW and is therefore in the public interest.

Contents

1 Introduction

Greenspot Wallerawang Pty Ltd (Greenspot) proposes to develop a new State significant development battery energy storage system (BESS) within the landholding of the decommissioned Wallerawang Power Station, approximately 10 kilometres (km) north-west of Lithgow in the Lithgow City local government area (LGA) (see **Figure 1**).

The Wallerawang Power Station began operating in the 1950's and, prior to its closure in 2014, had a generation capacity of 1,240 megawatts (MW).

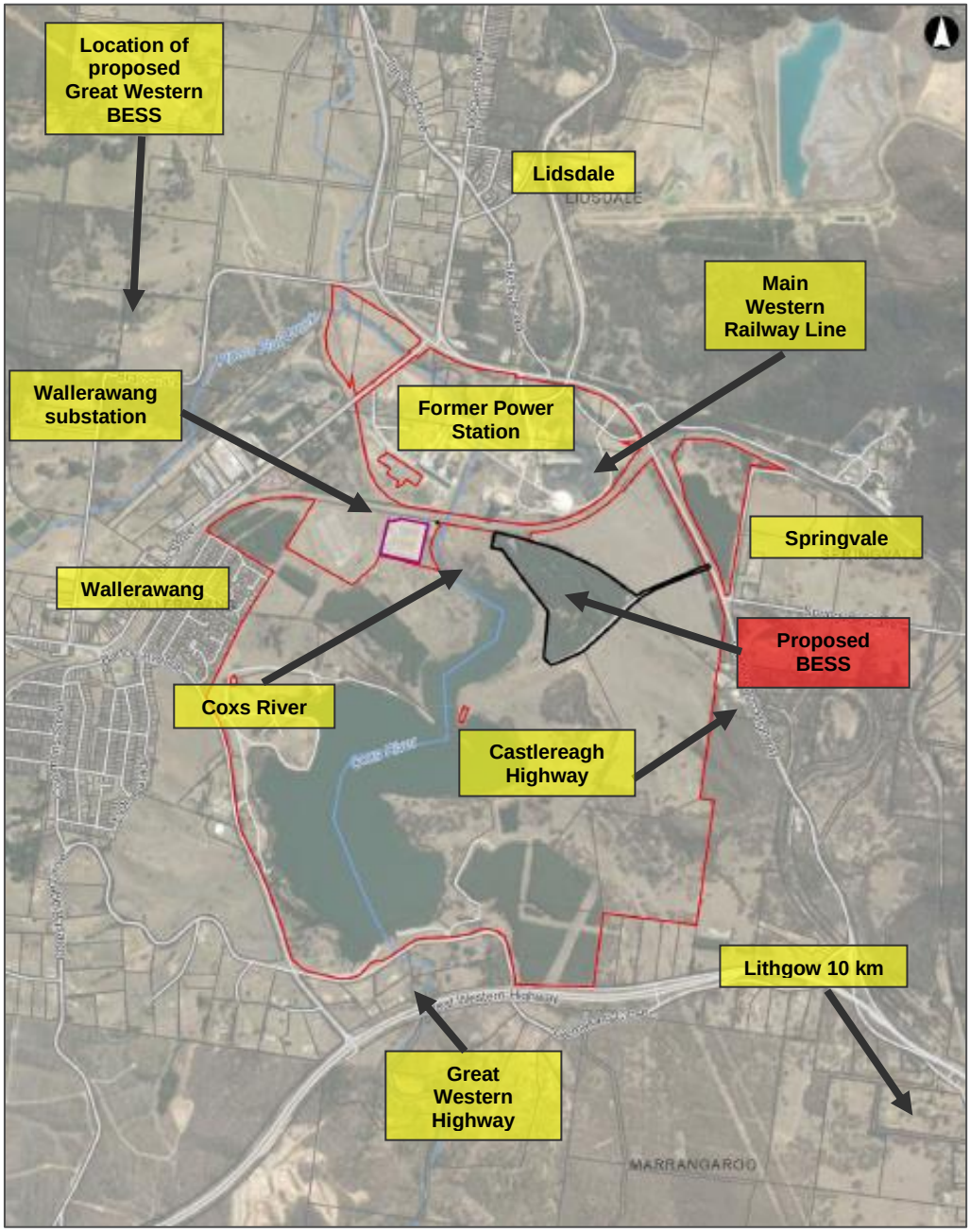


Figure 1 | Project Location

2 Project

The project involves the construction of a BESS, with a storage capacity of up to 500 MW / 1,000 MW-hour (MWh) and a new 330 kV overhead electricity transmission line which would connect to the existing Transgrid Wallerawang substation, located approximately 320 m to the west of the site (see **Figure 2**). It also involves the upgrading and decommissioning of equipment over time.

The BESS would be constructed over approximately 12 to 24 months. However, construction may be staged with the first 300 MW to be constructed initially, with the second 200 MW to be constructed within five years.

The key components of the project are summarised in **Table 1,** shown in **Figure 2**, and described in detail in the Environmental Impact Statement (EIS) (see **Appendix B**) and Submissions Report (see **Appendix D**). **Figure 3** shows the site, including the recently harvested pine plantation.

Table 1 | Main Components of the Project

Aspect	Description
Project summary	• up to 2013 containerised lithium-ion type batteries (up to 2.5 m high) with integrated control systems, inverters, transformers, heating, ventilation and air conditioning units; • a 330 kV switchyard, including four high voltage transformers; • site infrastructure, including a permanent site office, roads, parking, lighting and fencing; • 8 m high noise barriers around the perimeter of the BESS; • site establishment works and temporary laydown area/construction compound; • 600 m long above-ground 330 kV transmission line connecting to Wallerawang substation.
Project area	• 22.1 hectares (ha). Development footprint: 11.05 ha (including transmission line and access road).
Site entry, road upgrades and access route	• Site access would be via an existing access road from Castlereagh Highway. • Required upgrades include new basic right and rural auxiliary left turn treatments at the Castlereagh Highway/access road intersection. • Access route: Port Botany, M4, Great Western Highway, Castlereagh Highway.
Construction, Employment and Capital Investment Value	• Construction period: 12 to 24 months (peak period of 9 to 15 months) with construction hours of Monday to Friday 7 am to 6 pm, and Saturday 8 am to 1 pm. • Up to 100 construction jobs and up to 5 operational jobs. • Capital investment value of $404.3 million.
Decommissioning and rehabilitation	• At the end of operational life, above ground components would be removed and land repurposed for other industrial uses.
Operation	• The expected operational life of the infrastructure is 15 to 20 years. However, the project may involve infrastructure upgrades that could extend the operational life. • The BESS would operate 24 hours a day, seven days a week
VPA	• A payment to Council of $1,000 per MW (indexed to CPI) to be paid on the commencement of operation and in year 5, 10 and 15 of operations. Total value estimated to be $2 million.

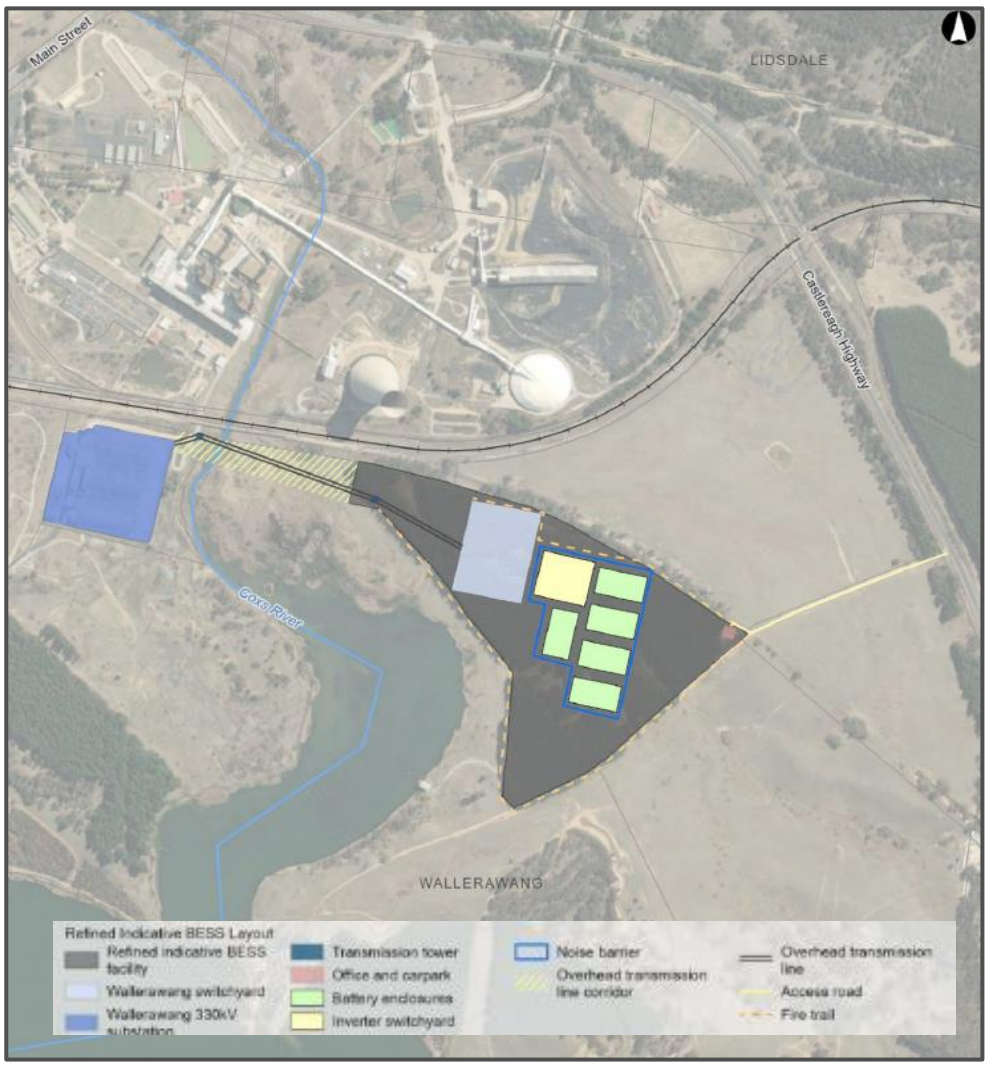


Figure 2 | Project Layout

Figure 3 | Project site: aerial view looking west

3 Strategic Context

3.1 Local context

The site is located within a broader landholding of over 600 ha surrounding the former Wallerawang Power Station. The area surrounding the site forms part of the former Wallerawang Power Station buffer zone and contains industrial and rural land uses with zonings of IN3, SP2 and RU1. The wider area includes the Great Western Railway line, residential properties and an operating underground coal mine.

A commercial pine forest on the site was previously cleared under a separate approval in May 2022. The site is proposed to be repurposed as part of a Master Plan for the site known as the 'Greenspot 2845 Activity Hub', consistent with the *Draft Lithgow 2040 Local Strategic Planning Statement,* which identifies the potential for the site to form part of a future industrial eco-park redevelopment.

The broader Lithgow region has historically been used for coal mining and power generation operations, including the existing Springvale Coal Mine and Mount Piper Power Station. Another energy project (Great Western BESS) located 1.2 km north-west of the site is currently under assessment by the Department.

3.2 Energy Context

As NSW transitions away from coal fired power, there is an increasing need for battery storage to firm renewable energy sources.

The NSW Electrical Strategy (2019) notes that all coal fired power plants in NSW are scheduled for closure within the next twenty years and that firmed renewables are the lowest cost option to replace aging coal power stations.

AEMO's 2022 Integrated System Plan (ISP) states that battery storage (such as the Wallerawang BESS) is required to provide firming capacity and to support intra-day energy shifting.

In addition, the project is located in proximity to the Central-West Orana Renewable Energy Zone (REZ), which the NSW Government supports in order to unlock regional investment and new energy infrastructure. Although outside the REZ, the project is located near major transmission lines between the REZ and Sydney.

The *Central West and Orana Regional Plan 2036 Regional Plan* identifies the Lithgow LGA as having the potential to grow renewable energy industries and is supported by Direction 9, which is to increase renewable energy generation and to facilitate innovative storage technologies.

The project's alignment with existing Commonwealth and State policies and strategies is considered further in **Section 6.1**.

4 Statutory Context

4.1 State Significant Development

The project is classified as State significant development under section 4.36 of the *Environmental Planning and Assessment Act 1979* (EP&A Act). This is because it triggers the criteria in Clause 20 of Schedule 1 of *State Environmental Planning Policy (Planning Systems) 2021*, as it is development for the purpose of electricity generating works with a capital investment value of more than $30 million.

Consequently, the Minister for Planning is the consent authority. However, under the Minister's delegation of 9 March 2022, the Director Energy Assessments, may determine the development application as Lithgow City Council (Council) did not object, there were less than 15 unique objections from the general public, and a political donations disclosure statement has not been made.

4.2 Permissibility

The site is zoned IN3 (Heavy Industrial), SP2 (Infrastructure – electricity generating works/roads) and RU1 (Primary Production) under the *Lithgow Local Environmental Plan 2014* (LEP).

The project is permissible because:

- electricity generating works, which includes electricity storage, is permissible in the SP2 zone under the LEP; and
- electricity generating works are permissible with consent on any land in a prescribed rural, industrial or special use zone, including IN3 and RU1 zones, under clause 34 of the *State Environmental Planning Policy (Transport and Infrastructure) 2021* (Transport and Infrastructure SEPP).

4.3 Integrated and Other Approvals

Under Section 4.41 of the EP&A Act, a number of other approvals are integrated into the SSD approval process, and therefore are not required to be separately obtained for the proposal.

Under Section 4.42 of the EP&A Act, a number of further approvals are required, but must be substantially consistent with any development consent for the proposal.

The Department has consulted with the relevant government agencies responsible for the integrated and other approvals, considered their advice in its assessment of the project, and included suitable conditions in the recommended conditions of consent to address these matters (see **Appendix F**).

4.4 Mandatory Matters for Consideration

Section 4.15 of the EP&A Act outlines the matters that a consent authority must take into consideration when determining development applications. The Department has considered all of these matters in its assessment of the project, as well as Greenspot's consideration of environmental planning instruments in its EIS, as summarised in **section 6** of this report. The Department has also considered relevant provisions of the environmental planning instruments in **Appendix H**.

5 Engagement

5.1 Department's Engagement

The Department publicly exhibited the EIS from 9 February 2022 until 8 March 2022, advertised the exhibition in the *Lithgow Mercury*, and notified surrounding landowners in proximity to the project site.

The Department also consulted with Council and relevant government agencies throughout the assessment, and inspected the site on 2 June 2022. The Department notified and sought comment from Transgrid and Transport for NSW (TfNSW) in accordance with the Transport and Infrastructure SEPP, as discussed further in **section 5.4**.

5.2 Greenspot's Engagement

Greenspot's engagement with the local community included a dedicated project webpage, enquiries hotline, door to door visits, a community newsletter and two community information evenings, and consultation with the Department, Council and agencies during the assessment.

5.3 Submissions and Submission Report

During the exhibition of the EIS, the Department received nine public submissions indicating support for the project. Advice was received from 17 government agencies, including Council. Full copies of the agency advice and public submissions are attached in **Appendix C**.

Greenspot provided a response to all matters raised in submissions on the project (see **Appendix D**) and also provided additional information during the Department's assessment (see **Appendix E**).

The Submissions Report also detailed some minor refinements to the project, including changes to the development footprint (within the existing project site), an increase in the height of acoustic noise barriers to 8 m and revisions to the access road intersection upgrades.

5.4 Key Issues – Community

The Department received nine unique submissions during the exhibition, all in support of the proposal. One submission did however express concerns regarding fire safety and the protection of the Coxs River from pollution. These issues are discussed in **section 6.4**.

The key matters raised in the supporting submissions included views that:

- the local economy would benefit as a result of the project by creating local jobs and supporting local businesses;
- it is an opportunity for the Lithgow region to capitalise on this type of industry, to promote the region as a hub for renewable energy and to assist in the transition from fossil fuels; and
- use of the former power station site is appropriate and it will form the first step in the transformation of the site to the Greenspot 2845 Activity Hub.

Following the close of exhibition, feedback was also received on behalf of the Ibbai Waggan-Wiradjuri People. The feedback primarily claims the NSW Government's planning approvals framework is unlawful.

5.5 Key Issues – Government Agencies, Council and Utility Providers

Council supported the project and none of the government agencies objected to the project. However, they provided comments on key aspects and recommended conditions of consent. A summary of the key matters raised in the government agency submissions and subsequent advice is provided in **Table 2.**

The Department's consideration of the matters raised is provided in **Section 6** of this report.

Table 2 | Summary of Agency Advice

Agency	Key Issues
Council	• Recommended conditions be imposed requiring the approval of relevant management plans related to construction, flora and fauna, and landscaping. • Noted the opportunity to enter into a Voluntary Planning Agreement (VPA) for community facilities and/or infrastructure for the project.
Biodiversity, Conservation and Science Directorate (BCS)	• Noted scheduled clearing of the forestry area in 2022 under a Pine Plantation Deed and this area is not subject to assessment in the BDAR. • Recommended conditions regarding biodiversity offsets and confirmed the proposal would result in negligible change in the existing floodplain.
DPE Water	• Provided recommendations related to water management and compliance.
Transport for NSW	• Provided recommendations including upgrades to the access road/Castlereagh Highway intersection and preparation of a Construction Traffic Management Plan. • Provided recommendations regarding protection of the adjacent rail corridor.
Regional NSW – Mining, Exploration & Geoscience	• Requested further consultation regarding any proposed biodiversity offset areas or any supplementary biodiversity measures.
Heritage NSW	• Supported the findings and recommendations of the Aboriginal Cultural Heritage Assessment Report (ACHAR), including the implementation of an unexpected finds protocol. • Supported recommended mitigation measures relating to the heritage significant sandstone culvert.
Water NSW	• Provided recommendations related to stormwater management, including a detailed Stormwater Management Plan.
Fire & Rescue NSW	• Requested an Emergency Plan and Fire Safety Study.
Rural Fire Service	• Provided recommendations regarding bushfire safety measures in accordance with relevant bushfire safety requirements stipulated under *Planning for Bushfire Protection 2019,* including the provision of asset protection zones and preparation of a Fire Management Plan.
Environmental Protection Authority	• Noted the proposal is located on land subject to an existing Environment Protection Licence and that Greenspot would exclude the BESS site from the land subject to the licence. • Provided recommendations regarding operational noise and emergency management.

The **Department's Primary Industries Fisheries Group** (DPI Fisheries), the **Department's Primary Industries Agriculture Group** (DPI Ag), **Crown Lands Group** (DPI Crown Lands), **UGL Regional Linx** (operator of the Country Regional Rail Network) and **Forestry Corporation of NSW** raised no concerns or provided no comments. **Transgrid** raise no concerns and provided information on the network connection process.

6 Assessment

The Department has undertaken a comprehensive assessment of the merits of the project. This report provides a detailed discussion of the key assessment issues, namely energy transition and land use compatibility.

The Department has also considered the full range of potential impacts associated with the project and has included a summary of the conclusions in **section 6.4.** A list of the key documents that informed the Department's assessment is provided in **Appendix A**.

6.1 Energy Transition

The project aligns with a range of national and state policies (see **Table 3**), which identify the need to diversify the energy generation mix and reduce the carbon emissions intensity of the grid while providing energy security and reliability.

The project would support the State's continued transition away from traditional power generation derived from fossil fuels, which is largely dispatchable (able to quickly ramp up or down depending on electricity demands), to renewable energy generation such as wind and solar, which is inherently variable. The project would provide 'firming capacity' by contributing to dispatchable energy availability during peak energy demands or when renewable production is low.

With the planned closures of a number of coal-fired power stations within NSW, including Liddell in 2023, Eraring in 2025, and Bayswater in 2033, the project provides for the delivery of 500 MW / 1000 MWh of dispatchable energy, providing firming capacity to power up to 187,000 homes.

6.2 Compatibility of Proposed Land Use

The project site is located within the broader landholding of the decommissioned Wallerawang Power Station and predominantly contained a pine plantation until May 2022. The immediate surrounds are also undeveloped, containing grasslands or agricultural (grazing) land with the Main Western Railway line abutting the northern boundary of the site with the disused Wallerawang Power Station beyond. The land use zoning of the precinct and surrounds is shown in **Figure 4**.

The proposed development is consistent with the *Draft Lithgow 2040 Local Strategic Planning Statement* which identifies the potential for the disused power station and buffer lands to form part of a future industrial eco-park redevelopment. The proposed BESS would be the first step in achieving this vision and forms part of a Master Plan for the site known as the 'Greenspot 2845 Activity Hub'.

The Department considers the operation of the proposed development is suitable within the land use context of the locality, aligns with the historical use of the broader Wallerawang Power Station site for electricity generating purposes and would not detract from the character of the area. The Department also considers that the project has been designed to minimise impacts and is sited appropriately in close proximity to the existing Wallerawang substation, with ease of access to existing transport networks.

Given the surrounding land uses, and having evaluated the impacts of the development, the Department considers that the development would not result in any land use conflicts, and any amenity impacts of the development could readily be managed through the application of Greenspot's mitigation measures and the recommended conditions. The Department's assessment of off-site amenity impacts considered the impact of noise, construction and operational traffic generation, flooding, and visual impacts, and concludes that the impacts would be minor subject to the recommended conditions (see **sections 6.3** and **6.4**).

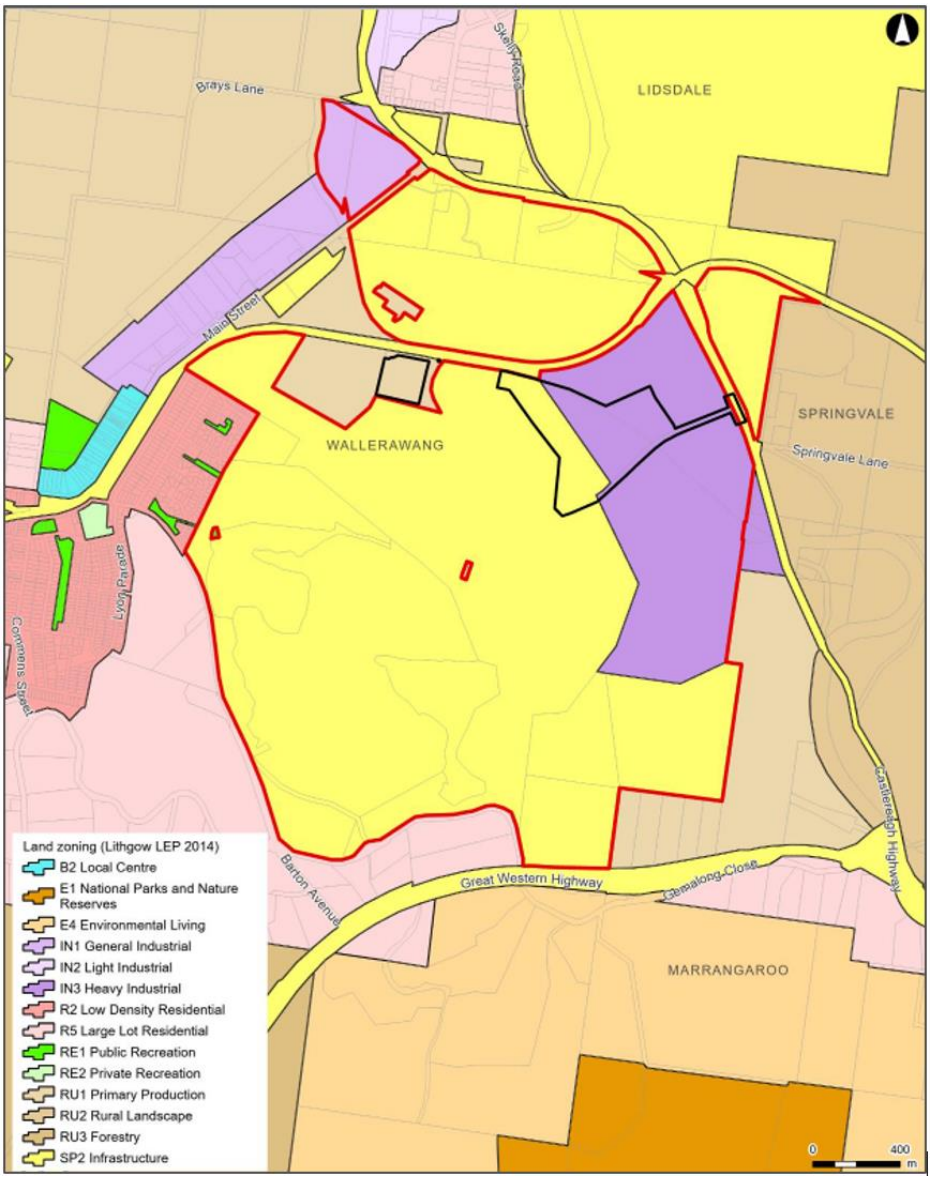


Figure 4 | Land use zoning

6.3 Other Issues

The Department's consideration of other issues is summarised in **Table 3** below.

Table 3 | Other Issues

Findings	Recommendations
Noise & Vibration	
• Six residential receivers are located within 2 km of the site with the closest located in Springvale Lane, approximately 520 m east of the proposed BESS. • Noise generated by construction activities is predicted to be below the 'highly noise affected' criterion of 75 dB(A) for all residential receivers under EPA's Interim Construction Noise Guideline (ICNG). • Construction noise would also be generally below the 'noise affected' criterion under the ICNG for most residential receivers, except for modelled maximum exceedances up to 21 dB(A) for three residential receivers to the east of the site (during approximately 9 days of intersection upgrade works), and up to 16 dB(A) for the closest residential receivers in Wallerawang township (during approximately 53 days of switchyard fitout works). However, these exceedances represent a 'worst case scenario', assuming all construction machinery operates simultaneously, in a location within the site nearest to receivers, which would be unlikely to occur in practice. • Greenspot has committed to implementing construction noise mitigation measures in accordance with the ICNG, including use of low noise plant and equipment, temporary noise barriers and limiting construction to standard daytime hours. • With the proposed construction of a permanent acoustic barrier (up to 8 m high) around the BESS, operational noise levels are predicted to comply with minimum noise criteria under the NSW Noise Policy for Industry (EPA, 2017), for all surrounding residential receivers. • No vibration impacts are predicted at any vibration sensitive receivers based on separation distances exceeding 150 m. • Increased road traffic noise is predicted to be minimal and cumulative noise impacts would be negligible. • The Department has recommended conditions requiring Greenspot to minimise noise during construction, upgrading or decommissioning, and limiting operational noise. With these measures, the Department and the EPA are satisfied that project construction noise can be appropriately managed and operational noise would not impact the amenity of the locality.	• Minimise the noise generated by any construction, upgrading or decommissioning activities on site in accordance with best practice requirements outlined in the ICNG. • Comply with the project noise trigger levels as derived from the NSW Noise Policy for Industry (EPA, 2017) at any non-associated residence and take all reasonable and feasible steps to minimise operational noise. • Restrict construction hours to Monday to Friday 7 am - 6 pm, and Saturday 8 am - 1 pm unless inaudible at non-associated receivers.
Biodiversity	
• The 22.1 ha site predominantly comprised a commercial pine plantation (harvested in May 2022), which is not subject to biodiversity assessment. • A total of 7.63 ha of vegetation (excluding the pine plantation) would be impacted by the project, 6.48 ha (85%) of which is predominantly highly disturbed exotic vegetation. 1.15 ha of Black gum grassy woodland (PCT 677) would be impacted by the project, including six hollow-bearing trees. • Black gum grassy woodland does not align with any Threatened Ecological Community listed under the *Biodiversity Conservation Act 2016* (BC Act) or the *Environmental Protection and Biodiversity Conservation Act 1999* (EPBC Act). • No threatened biodiversity, at risk of serious and irreversible impacts under the BC Act, are known or considered likely to occur within the site.	• Retire the applicable biodiversity offset credits in accordance with the NSW Biodiversity Offsets Scheme. • Prepare and implement a Biodiversity Management Plan in consultation with BCS, including measures to protect and manage vegetation and fauna habitat

Findings	Recommendations
• The project is not considered to be a 'controlled action' under the EPBC Act and the site is not considered to include potential Koala Habitat. • A total of 30 ecosystem credits (PCT 677) and 129 species credits (*Eucalyptus aggregata* and Large-eared Pied Bat) are required to offset biodiversity impacts as a result of the project. The final credit requirement would be retired in accordance with the *NSW Biodiversity Offset Scheme.* • With these measures, both BCS and the Department consider that the project is unlikely to result in a significant impact on the biodiversity values of the locality.	outside the approved disturbance area.
Traffic and Transport	
• The transport route for heavy vehicles during construction is from Port Botany via the State road network using the M4, Great Western Highway and Castlereagh Highway, which provides direct access to the site. All roads are approved B-double routes. • Light vehicle access routes would vary, with workers most likely to travel from Lithgow. • Site access would be via an existing access road connecting with Castlereagh Highway, which would be upgraded with basic right turn and rural auxiliary left turn treatments. The access road would also be paved for 30 m from this intersection. • The main increase in traffic would occur over the peak construction phase generating up to 100 light vehicle movements and 20 heavy vehicle movements per day, as well as a total of 36 heavy vehicle requiring escort vehicle movements. • Operational traffic would be limited, with up to 5 light vehicle movements per day for staff, and infrequent heavy vehicle access only when required for maintenance. • The proposed transport route has sufficient capacity to accommodate the construction and operational traffic associated with the project, and no road upgrades (other than for site access) are required. • With the implementation of intersection upgrades and a Traffic Management Plan the Department, TfNSW and Council consider that the project would not result in significant impacts to the road network capacity, efficiency or safety.	• Construct site access intersection upgrades to the satisfaction of TfNSW. • Restrict the number and size of vehicles during construction, upgrading and decommissioning. • Prepare and implement a Traffic Management Plan. • Restrict access to the designated transport route. • Ensure the length of vehicles entering the site does not exceed 36 m. • Require works in proximity to the rail line to be undertaken to the satisfaction of TfNSW.
Visual Impact	
• Greenspot assessed the visual impacts of the development from representative viewpoints surrounding the site.Visual impacts on the closest residential locations within Wallerawang township were assessed as moderate noting a separation distance of 1.2 km to the project, mature vegetation on the western side of Coxs River, and that the project would be viewed within the context of other energy infrastructure existing on the site. Greenspot's assessment conservatively assumes the removal of the existing pine plantation currently screening views of the site from the west.	• Prepare a detailed Landscape Plan to provide vegetation screening around the perimeter of the BESS compound.

Findings	Recommendations
• Other viewpoints to the site from Wallerawang township would be significantly obscured by intervening buildings, topography and vegetation. • Visual impacts on the closest receiver to the east (Springvale Road) were assessed as moderate to low given the separation distance (520 m), intervening vegetation and its lower elevation compared to the site. Visual impacts on the Castlereagh Highway were also assessed as moderate to low as motorist's views would be fleeting and filtered by roadside vegetation. Impacts from all other viewpoints would be negligible. • The project includes a noise wall which would also reduce the potential visual impact and Greenspot has also committed to substantial perimeter landscaping around the BESS compound beyond the noise wall to further mitigate any visual impacts. The proposed screening includes over 250 trees with heights at maturity of up to 30 m and a landscape architect has confirmed the viability of the proposed landscaping strategy. • Subject to landscape screening and other mitigation measures, including use of less obtrusive colours and non-reflective surfaces, and the sensitive use of security lighting, the Department concludes the visual impacts of the project are acceptable.	• Minimise visual impacts by selection of less obtrusive colours and reflective surfaces. • Security lighting is directed away from surrounding receivers.
Water	
Drainage • The project includes construction of a concrete pad for the BESS, requiring filling of an ephemeral natural creek through the centre of the site and replacing it with a 1.2 m diameter pipe. A biodiversity assessment of the creek found it was degraded, with a high cover of weeds and instream vegetation. • DPE Water raised no concerns subject to conditions to ensure adequate water management and compliance. Flooding • The BESS would be situated on land at a level to avoid any flood impact. A Flood Assessment of the project found the development would result in minimal change to existing flood conditions with impacts largely contained to the area downstream of the proposed pipe where it discharges onto the floodplain. Notably, any increased level of flooding in this location would occur on land owned by Greenspot. Water usage and water quality • Water required during construction would be imported by truck by a licenced commercial supplier. • Given minimal water requirements during operation, the project would not be connected to the potable water mains and would utilise captured or imported water. • Water quality impacts during construction would be managed by erosion and sediment control measures, and • Stormwater treatment measures would manage water quality during operation, and the Department and WaterNSW are satisfied there would be a neutral or beneficial effect on water quality within the Sydney drinking water catchment.	• Require compliance with Guidelines for Controlled Activities (NRAR 2018). • Ensure the BESS is designed, constructed and maintained to reduce impacts on surface water, localised flooding and groundwater. • Prepare and implement a Soil and Water Management Plan.
Hazards	

Findings	Recommendations
• Greenspot's Preliminary Hazard Analysis (PHA) considered risk associated with transport and storage of hazardous materials, as well as operation of the BESS itself, in accordance with *State and Environmental Planning Policy (Resilience and Hazards) 2021* (Hazards SEPP), *Applying SEPP 33*, and the relevant Hazardous Industry Planning Advisory Papers. • Overall, the PHA identified one medium risk event associated with unauthorised access resulting in asset damage. Recommended mitigation measures include locating the BESS within a secure area with fencing and camera, warning signs and an on-site security protocol. • All other risks were concluded to be low with no significant off-site impacts, subject to recommendations including adequate separation distances are provided, both within the BESS (between components) and between the site and surrounding land use, relevant infrastructure and engineering controls are installed and maintained (such as fire-fighting equipment) and appropriate management processes are put in place during construction and operations. • The Department considers that the hazard risk for the development can be managed subject to the recommendations of the PHA and recommended conditions of consent.	• Implement the recommendations of the PHA. • Prepare and implement a Fire Safety Study and an Emergency Plan. • All chemicals, fuels and oils to be stored and handled in accordance with Australian Standards and EPA requirements.
Bushfire	
• The site is located within mapped bushfire-prone land. To actively manage risk, a 'fuel-managed' inner protection area and asset protection zone would be established and maintained. The curtilage of the switchyard, office and car park are also to be maintained as an inner protection area. • Vegetation clearance underneath the above-ground transmission line would be maintained in accordance with the relevant industry guideline, and internal roads would be established to meet property access standards under *Planning for Bush Fire Protection.* • The Department considers the bushfire risk manageable during operation, subject to the preparation of a Emergency Plan for the development, consistent with the recommendations of the RFS and Fire and Rescue NSW.	• Ensure that the development complies the RFS's *Planning for Bushfire Protection 2019* and Standards for Asset Protection Zones. • Incorporate bush fire management requirements into a detailed Emergency Plan.
Heritage	
<u>Aboriginal Cultural Heritage</u> • Site surveys undertaken in consultation with Registered Aboriginal Parties (RAPs) identified one isolated find within an associated Potential Archaeological Deposit (PAD), and two artifacts within a second associated PAD. • The construction footprint has been refined to avoid identified PADs and to preserve landforms with archaeological potential. <u>Historic Heritage</u> • The site is not subject to any historic heritage listings. The closest heritage listed items are located 30 m north of the site. • Two items of potential heritage significance were identified, being the embankment of the original Western Line railway alignment and an 80 cm wide sandstone culvert beneath the embankment.	• Prepare an unexpected finds protocol.

Findings	Recommendations
• The proposed works include removal of a section of the embankment to the south of the culvert and retention of the culvert. • Greenspot has committed to preparing a dilapidation report and unexpected finds protocol prior to construction, including mitigation measures to protect the sandstone culvert. • With these measures, the Department and Heritage NSW consider that the project would not significantly impact the heritage values of the locality.	
Land Contamination	
• Although the former power station site is listed on the NSW EPA Contaminated Land Record, the project site is approximately 100 m south of power station site at its closest point and is not listed as a known contaminated site. • Greenspot's analysis of historical resources and imagery indicate the project site was used for grazing paddocks from the 1820s to 1950s and as a pine plantation from the 1980s. • The Department is satisfied the site is suitable for the development given the historic use of the land for grazing and a pine plantation.	• No specific recommendations.
Decommissioning and Rehabilitation	
• The Department has developed standard conditions for a BESS to cover this stage of the project life cycle, including clear decommissioning triggers and rehabilitation objectives. • With the implementation of these measures, the Department considers that the BESS would be suitably decommissioned at the end of the project life, or within 18 months if operations cease unexpectedly, and that the site be would repurposed for other industrial uses (subject to separate approval).	• Include rehabilitation objectives requiring the site to be rehabilitated within 18 months of cessation of operations.

Socio-Economic Impacts	
• The project would generate direct and indirect benefits to the local community, including: • up to 100 construction jobs during the peak construction period, and up to five operational jobs for on-going maintenance; • expenditure on accommodation and businesses in the local economy by workers involved in the project; • the procurement of goods and services by Greenspot and associated contractors, noting Greenspot's preference to source workers locally wherever possible. • Greenspot has demonstrated that the Lithgow LGA holds sufficient accommodation to house the construction workers not already residing in the LGA. The project is unlikely to result in increased demand on community services and infrastructure such as roads, given Greenspot would be required to repair any damage to local roads resulting from the construction of the project, and the facility would only require infrequent maintenance visits during operations. • Greenspot and Council also intend to enter into a VPA with a total value estimated to be $2 million. • Noting the above, the Department considers that the project would have a positive socio-economic impact on the local community.	• Greenspot to enter into a VPA with Council in accordance with the terms of the letter of offer dated 6 July 2022.
Cumulative Impacts	
• Due to intervening topography, infrastructure and vegetation, as well as the distance of the proposed BESS from existing energy projects in the region (including the proposed Great Western BESS), there would not be any material cumulative noise or visual impacts. • Workforce accommodation would likely be sourced from the local and wider region, including neighbouring towns and local government areas. While the surrounding regional road network may experience an increase in traffic numbers, there would be no significant cumulative impact on the local roads along the proposed transport route from these projects. • Noting the above, the Department considers that there would not be significant cumulative impacts from nearby projects.	• No specific recommendations.
Planning and Approval Process	
• Issues regarding planning legislation (and by extension, the Wallerawang BESS project) consideration of claimants for private land were raised in the feedback provided outside of the project's exhibition period made on behalf of the Ibbai Waggan-Wiradjuri People. Whilst these broader matters are beyond the scope of this assessment, the Department notes Greenspot's engagement with Registered Aboriginal Parties through project development, and refinements to the design to avoid impacts on land having potential Aboriginal heritage value.	• No specific recommendations.

7 Evaluation

The Department has assessed the development application, EIS, submissions and Submissions Report provided by Greenspot and advice received from relevant government agencies. The Department has also considered the objectives and relevant considerations under section 4.15 of the EP&A Act.

The site is zoned IN3 (Heavy Industrial), SP2 (Infrastructure – electricity generating works/roads) and RU1 (Primary Production) zoned land. Electricity generating works, which includes battery storage, is a permissible land use in the SP2 zone under the LEP and is permissible in the IN3 and RU1 zones under the Transport and Infrastructure SEPP.

The project site is located within the broader landholding of the decommissioned Wallerawang Power Station, in close proximity to the Wallerawang substation and a major road corridor. The project site predominantly contained a pine plantation until harvesting in May 2022, with the surrounding landholding comprising cleared grassland and further pine plantations. The closest residential receivers are located to the south-east of the site, 150 m from the intersection of Castlereagh Highway and the site access road and 500 m from the development footprint of the proposed BESS.

The project layout largely avoids key constraints, including noise and visual impacts to nearby residences, remnant vegetation, Aboriginal and historic heritage sites, and bushfire risk. Any residual impacts would be minor and can be managed through the recommended conditions of consent.

The Department considers that there would be no significant visual impacts on surrounding residences, with distance, intervening topography and vegetation (existing and proposed) providing screening from these residences and the public road network.

Furthermore, Greenspot has committed to a suite of design measures and controls, including locating the battery components above flood prone land, maintaining setbacks and cleared areas to minimise bushfire risk, and committing to installing and maintaining technology controls, bunding and fire-fighting equipment on site. To support Greenspot's commitments, the Department has recommended a series of hazards management plans and studies be implemented during the life of the development consistent with industry guidelines.

The project would also provide flow-on benefits to the local community, including up to 100 construction jobs and a capital investment of $404 million. A Voluntary Planning Agreement involving payments to Council up to approximately $2 million is also proposed.

Given the distance of the project from other approved and proposed major projects in the region, there would be minimal localised cumulative impacts, including no visual impacts and minimal cumulative impact on local roads along the project's transport routes.

On balance, the Department considers the site to be appropriate for a BESS, as it has ready access to major electricity transmission network infrastructure, and the development is consistent with the character of the broader decommissioned Wallerawang Power Station landholding and the masterplan to redevelop it into an industrial eco-park redevelopment. Further, the BESS would provide an additional and substantial investment towards improving the reliability of the network, would provide storage and firming capacity to the NEM, and would provide additional services to assist grid stability, including frequency control ancillary services.

8 Recommendation

It is recommended that the Director, as delegate of the Minister for Planning:

- **considers** the findings and recommendations of this report;
- **accepts and adopts** all of the findings and recommendations in this report as the reasons for making the decision to grant consent to the application;
- **agrees** with the key reasons for approval listed in the notice of decision;
- **grants consent** for the application in respect of Wallerawang Battery Energy Storage System (SSD-14540514); and
- **signs** the attached development consent and recommended conditions (see **Appendix F**).

Prepared by:

Andy Nixey, Team Leader

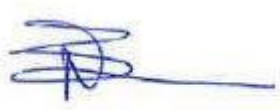
Recommended by:

 3/8/2022

Karl Okorn
Team Leader
Energy Assessments

9 Determination

The recommendation is **Adopted / Not adopted** by:



4/8/2022

Nicole Brewer
Director
Energy Assessments

Appendices

Appendix A – List of referenced documents

Wallerawang Battery Energy Storage System – Environmental Impact Statement, Arcadis Australia Pacific Pty Ltd (January 2022)

Wallerawang Battery Energy Storage System – Response to Submissions Report, Arcadis Australia Pacific Pty Ltd (May 2022)

Appendix B – Environmental Impact Statement

https://www.planningportal.nsw.gov.au/major-projects/projects/wallerawang-battery-energy-storage-system

Appendix C – Submissions

https://www.planningportal.nsw.gov.au/major-projects/projects/wallerawang-battery-energy-storage-system

Appendix D – Submissions Report

https://www.planningportal.nsw.gov.au/major-projects/projects/wallerawang-battery-energy-storage-system

Appendix E – Additional Information

https://www.planningportal.nsw.gov.au/major-projects/projects/wallerawang-battery-energy-storage-system

Appendix F – Recommended Conditions of Consent

https://www.planningportal.nsw.gov.au/major-projects/projects/wallerawang-battery-energy-storage-system

Appendix G – Notice of Decision

https://www.planningportal.nsw.gov.au/major-projects/projects/wallerawang-battery-energy-storage-system

Appendix H – Statutory Considerations

In line with the requirements of Section 4.15 of the EP&A Act, the Department's assessment of the project has given detailed consideration to a number of statutory requirements. These include:

- the objects found in Section 1.3 of the EP&A Act; and
- the matters listed under Section 4.15(1) of the EP&A Act, including applicable environmental planning instruments and regulations.

The Department has considered all of these matters in its assessment of the project and has provided a summary of this assessment in **Table 4** below.

Table 4 | Statutory Assessment

Aspect	Summary
Objects of the EP&A Act	The objects of most relevance to the Minister's decision on whether to approve the project are found in Section 1.3(a), (b), (c), (e) and (f) of the EP&A Act. The Department considers the project encourages the proper development of natural resources (Object 1.3(a)) and the promotion of orderly and economic use of land (Object 1.3(c)), particularly as the project: • is a dispatchable, renewable energy storage system with the potential to increase grid stability and energy security; • is a permissible land use on the subject land; • is located in a logical location within an established industrial buffer zone in close proximity to the TransGrid Wallerawang substation; • is able to be managed such that the impacts of the project could be adequately minimised, managed, or at least compensated for, to an acceptable standard; • would generate up to 100 construction jobs; • would contribute to a more diverse local industry, thereby supporting the local economy and community; • would not fragment or alienate resource lands in the LGA; and • is consistent with the goals of NSW's *Climate Change Policy Framework and Net Zero Plan Stage 1: 2020 – 2030* and would assist in meeting Australia's renewable energy targets whilst reducing greenhouse gas emissions. The Department has considered the encouragement of ESD (Object 1.3 (b)) in its assessment of the project. This assessment integrates all significant socio-economic and environmental considerations and seeks to avoid any potential serious or irreversible environmental damage, based on an assessment of risk-weighted consequences. In addition, the Department considers that appropriately designed BESS facility development, in itself, is consistent with many of the principles of ESD. Greenspot has also considered the project against the principles of ESD. Following its consideration, the Department considers that the project can be carried out in a manner that is consistent with the principles of ESD. Consideration of environmental protection (Object 1.3(e)) is provided in **section 6** of this report. Following its consideration, the Department considers that the project could be undertaken in a manner that would at least maintain the biodiversity values of the locality over the medium to long term and would not significantly impact threatened species and ecological communities of the locality. The Department is also satisfied that any residual biodiversity impacts could be managed and/or mitigated by imposing appropriate conditions and retiring the required biodiversity offset credits. Consideration of the sustainable management of built and cultural heritage (Object 1.3(f)) is also provided in **section 6** of this report. Following its consideration, the Department considers the project would not significantly impact the built or cultural heritage of the locality, and any residual impacts can be managed and/or mitigated by imposing appropriate conditions.
State significant development	Under Section 4.36 of the EP&A Act the project is considered a State Significant. Development. The Minister for Planning is the consent authority for the development. Under the Minister's delegation of 9 March 2022, the Director, Energy Assessments, may determine the project.

Aspect	Summary
Environmental Planning Instruments	The *Lithgow Local Environmental Plan 2014* (LEP) applies and is discussed in **section 4.2** and **6.2** of this report, particularly regarding permissibility and land use zoning. The Project is partly permissible under the LEP and fully permissible under the Transport and Infrastructure SEPP. In accordance with the Transport and Infrastructure SEPP, the Department has given written notice of the project to TransGrid and TfNSW. *State Environmental Planning Policy (Biodiversity and Conservation) 2021* applies to the project located within the Sydney Drinking Water Catchment. Greenspot have committed to a range of stormwater mitigation measures and the Department and WaterNSW are satisfied the project would have a neutral or beneficial effect on water quality. Greenspot completed a preliminary risk screening in accordance with the Hazards SEPP and confirmed the project was not categorised as potentially hazardous or potentially offensive development. The Department has considered the remediated land provisions of the Hazards SEPP. The site is not listed as a contaminated site in the NSW EPA Contaminated Land Record and list of NSW contaminated sites. Given the site is located 100 m from the former power station site (a listed contaminated site) at its closest point and has historically been used for grazing and as a pine plantation, the Department is satisfied the site would be suitable for the proposed development.