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- CIVIL ENGINEERS
- LAND SURVEYORS
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- PROJECT MANAGERS

ISO 9001 Certified Quality Management Systems
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Statement of Environmental Effects

Battery Energy Storage System

GREEN GOLD ENERGY

1 Wellingrove Street, Glen Innes
(Lot 73/Section 6/DP758447)

Ref: 24233

Ver. 1 | April 2025

Level 1, 135 Fryers Street, Shepparton, Vic, 3630
Telephone (03) 5820 7700 Facsimile (03) 5822 4878

- Visiting Offices: Shop 3, 11-13 Sydney Street, Kilmore, Vic. 3764 Ph: (03) 5781 1939
- Suite 7, 33 Nish Street, Echuca, Vic. 3564 Ph: (03) 5482 9100

Contents

Battery Energy Storage System
1 Wellingrove Street, Glen Innes

Version Control

Version	Description	Author	Approver	Date
1	Final	AS	DL	04/04/2025
2				
3				

1 Introduction

1.1 Overview

This Statement of Environmental Effects (SEE) has been prepared by Chris Smith & Associates for Green Gold Energy – referred to herein as “GGE”. The proposal is for a battery energy storage system (BESS), with a total development footprint of approximately 4,500 square metres on a property with a total area of approximately 15.31 hectares.

The property is known as 1 Wellingrove Street, Glen Innes, and is made up of seven (7) adjacent lots that form a contiguous property that collectively forms the "subject site".

The proposed facility is intended to supply the local distribution network with 4.95 megawatts (MW) of power. The proposal would occupy a small area of land to the west of the farmer's property to store electricity, retaining the rest of the farm for continued farming.

The subject site has been selected based on its suitable attributes, in accordance with the NSW Renewable Energy Action Plan 2018, and due to its proximity to an existing power station on the adjacent property and nearby transmission lines. Accordingly, this site represents an opportunity to co-locate infrastructure.

The Glen Innes Severn Shire Council is located within a region which presents an excellent opportunity for a regional municipality to capitalise upon and become a key player in the growth of the renewable energy industry due to its strategic geographical location and availability of grid connections.

This report is prepared in accordance with the various planning instruments and other planning controls that are relevant to the proposal. Consequently, this SEE provides an assessment and response under each of the respective sub-headings throughout the report.

Key reference documents used to guide the site selection and design process for this proposal are:

- NSW Renewable Energy Action Plan 2018
- Pre-Application Preliminary Assessment
- Glen Innes Severn Local Environmental Plan 2012
- New England North West Regional Plan 2041

The proposal is supported by the below-listed assessments, plans and documents:

- **Certificate of Title**
  Folio 6/73/758447
- **Proposed Development Plans**
  Revision C – 12/09/2024 – Green Gold Energy Pty Ltd
- **Noise Impact Assessment Report**
  by ADP Consulting, Proj. SYD3399, Rev. 1
- **Landscaping Plan**
  by CS&A, 24233, LS01, Rev. 1
- **Biodiversity Assessment**
  by Ozark, Job No. 4655, Ver. 3.0
- **Aboriginal Cultural Heritage Due Diligence Assessment**
  by Ozark, Job No. 4655, Ver. 3.0

1.2 Development Classification under EP&A Act

Private infrastructure, including electricity generating facilities that have a capital investment value of over $5 million, is declared regionally significant in *SEPP (Planning Systems) 2021* The proposed BESS has an estimated development cost of $3.72 million and is therefore identified as **Local Development**.

The proposal ***is not*** *classified as Designated Development* under Section 4.10 of the Act.

1.3 Scope of Statement of Environmental Effects

This Statement of Environmental Effects (SEE) accompanies a development application for the proposed development. On behalf of the applicant and includes the matters referred to in Section 4.15 of the *Environmental Planning and Assessment Act 1979,* and the matters required to be considered by the consent authority.

When considering the application, the consent authority will have regard to Section 4.2 of the Act which states:

"4.2 Development that needs consent

(1) General

If an environmental planning instrument provides that specified development may not be carried out except with development consent, a person must not carry the development out on land to which the provision applies unless:

(a) such a consent has been obtained and is in force, and
(b) *the development is carried out in accordance with the consent and the instrument."*

The purpose of this SEE is therefore to:

- Seek Development Consent from the consent authority;
- Describe the land to which the DA relates and the character of the surrounding area;
- Outline the scope and intention of the proposed development;
- Define the statutory planning framework against which the DA is to be assessed and determined; and,
- Assess the proposed development in the light of all relevant heads of consideration.

2 Green Gold Energy – Company Profile

Green Gold Energy is a South Australian-based company that takes a collaborative approach to renewable energy. GGE seek to partner with landowners to identify land that balances the farmer's needs with the requirements for any renewable energy project.

GGE's core business is centred around rural land that can support commercially viable small-scale renewable energy facilities with the necessary investment and infrastructure; however, GGE has begun to pivot toward battery energy storage due to the demand to support the renewable energy transition.

These renewable energy projects are designed to export generated energy into the grid, enabling it to be sold on the National Electricity Market using the latest state-of-

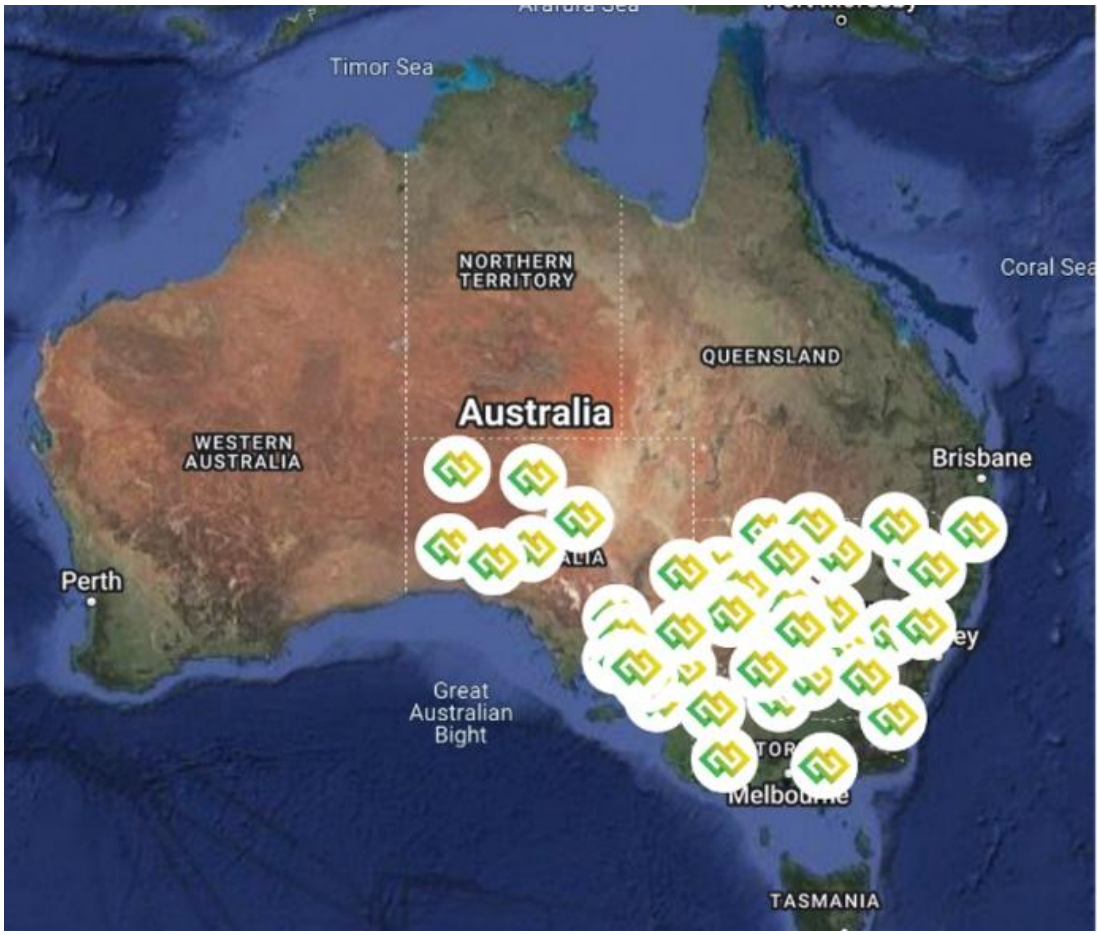
the-art PV technologies to ensure the most efficient, reliable power generation. Green Gold projects deliver:

- Long-term, secure supplementary income to landowners
- Access to the Australian renewable energy market to investors and shareholders
- Sustainable returns for investors

These projects also bring significant benefits to the regional communities they are located in, by creating jobs, providing local economies with the assets to improve energy infrastructure, and creating stronger, more sustainable communities.

The GGE executive team has commissioned a series of renewable energy facilities in South Australia. Green Gold states: “We are proud of the role we’re playing in powering our region’s green energy transition”.

GGE have successfully developed projects in South Australia, Victoria, New South Wales, and Queensland, as shown below. Many of these projects are currently in operation, whilst many more are under development. GGE has a current development pipeline of over 1.1 GW of solar and 1.2 GWh of battery energy storage systems.



Location of Green Gold Energy’s renewable projects
https://greengoldenergy.com.au/about/

3 Application Details

The decision by Green Gold to develop a battery energy storage facility included consideration of the region's trunk electricity network infrastructure and the region's desire for clean, efficient, and affordable electricity, as well as its proximity to a Renewable Energy Zone.

The subject land is largely flat and cleared with limited remnant vegetation, although there are none remaining on the development site itself.

The subject site was identified by Green Gold as it provides an opportunity to co-locate a battery energy storage system adjacent to the existing Glen Innes substation. Given that the subject site and surrounding area is within the RU1, the site is considered to be compatible with agriculture in the context of the development of a battery energy storage system.

The site is considered to have the required physical and electricity network attributes – a flat open site, adjacent powerlines with the capacity to support electricity stored by the adjacent facility and that can feed into the nearby electrical substation for use by the community. These factors ultimately led to an agreement to lease the site with the farmer.

Site visits and environmental assessments have confirmed the development site's suitability, including being largely cleared of any native vegetation and any areas of environmental sensitivity. Accordingly, it is submitted that a detailed and balanced approach to all relevant site and planning considerations has been undertaken to provide a sound planning proposal, as set out in this report and supporting documents.

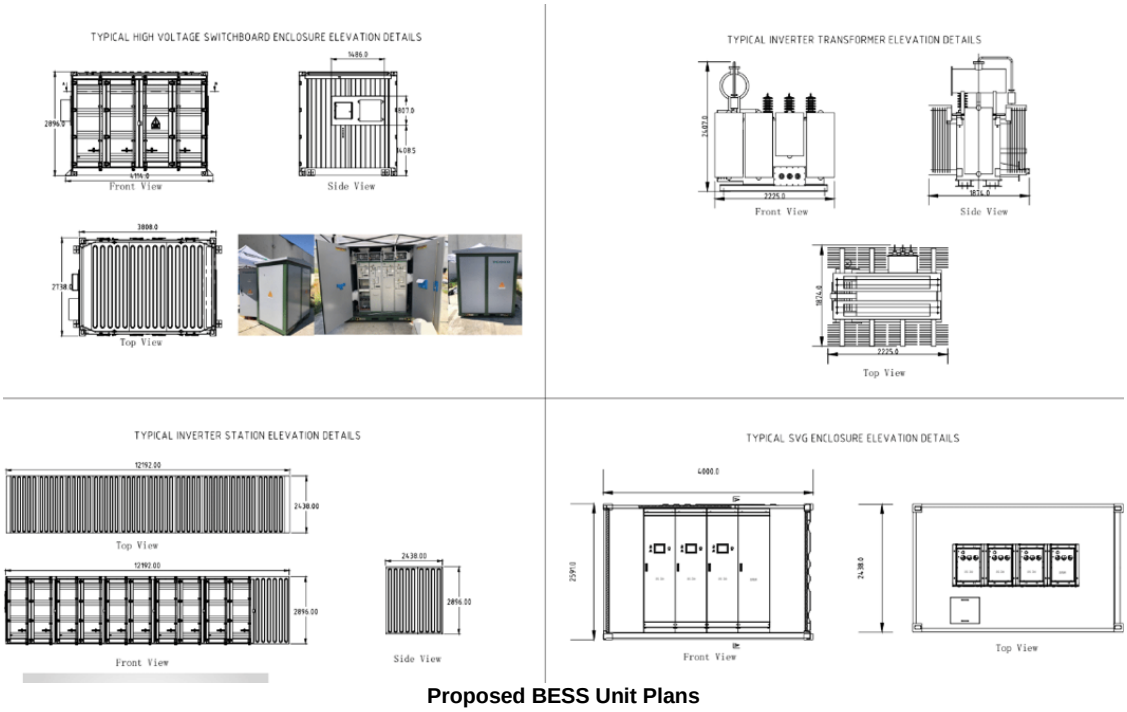
4 Proposal

4.1 Facility Equipment and Componentry

This application seeks consent to develop a footprint of approximately 4,500 sqm of land at 1 Wellingrove Street, Glenn Innes for a **battery energy storage system** – as shown on the attached plans and figures, below. The proposed BESS and associated works are to be as shown on the attached plans and supporting documents. Specifically, it will consist of:

- 1.8m high chain mesh perimeter fence around entire perimeter of facility, including a gate along the western boundary.
- Landscaping along the entire perimeter of the facility, as shown on Landscape Plan, directly outside the compound fence.
- One (1) new power pole with connection to the existing electricity distribution network.
- One (1) medium voltage power station, with a length of approximately 13m, width 2.5m and height of 3m
- Four (4) battery energy storage containers positioned centrally within the facility – each with a length of 10m, width of 2m, and height of 3m.
- 4-metre-high noise attenuation wall around the north side of the centrally-located inverter, internal to the facility, in accordance with the acoustic recommendations of the Acoustic report
- A noise wall around the inverter, internal to the facility.

Proposed Development Plans
BESS facility perimeter shown in red line



Proposed BESS Unit Plans

5 Design Considerations

5.1 Identifying Suitable Locations

GGE has embarked on the process of securing a suitable site in NSW for the development of a BESS. Factors such as land availability, proximity to the electricity network, accessibility, topography, and site constraints are all key considerations when first looking for potential sites.

Mapped Extents of the New England Renewable Energy Zone
Source: https://www.energyco.nsw.gov.au/ne-rez

The Glen Inness Severn region is forecast to see significant local renewable electricity investment that will be for the use and benefit of its local residents. This is reflected by the site's identification within the New England Renewable Energy Zone by the NSW Government, which outlines the advantages of the region:

> ***Why the region was chosen***
>
> *New England has some of the best natural energy resources in the country and some of the State's finest potential sites for pumped-hydro development.*
>
> *The indicative location of the New England REZ was chosen following a detailed statewide geospatial mapping exercise undertaken by the NSW Government in 2018. This initial analysis sought to identify optimal locations to host renewable energy generation around the State, including areas with strong renewable energy resource potential, proximity to the existing electricity network, and consideration of potential interactions with existing land uses, including agricultural lands and biodiversity conservation.*
>
> *Since then, EnergyCo has worked through a process to refine the geographical area of the REZ. Read more about the methodology for refining the geographical area here.*

The region has also attracted strong investor interest and is close to the existing transmission lines that connect to the NSW east coast, Upper Hunter and Queensland. This provides opportunities to increase NSW's energy resilience and to export excess energy to Queensland.

The NSW Government's Emerging Energy Program has also recently awarded pre-investment funding to several pumped-hydro projects in the New England region, including the Critical State Significant Infrastructure Oven Mountain Pumped Hydro project.

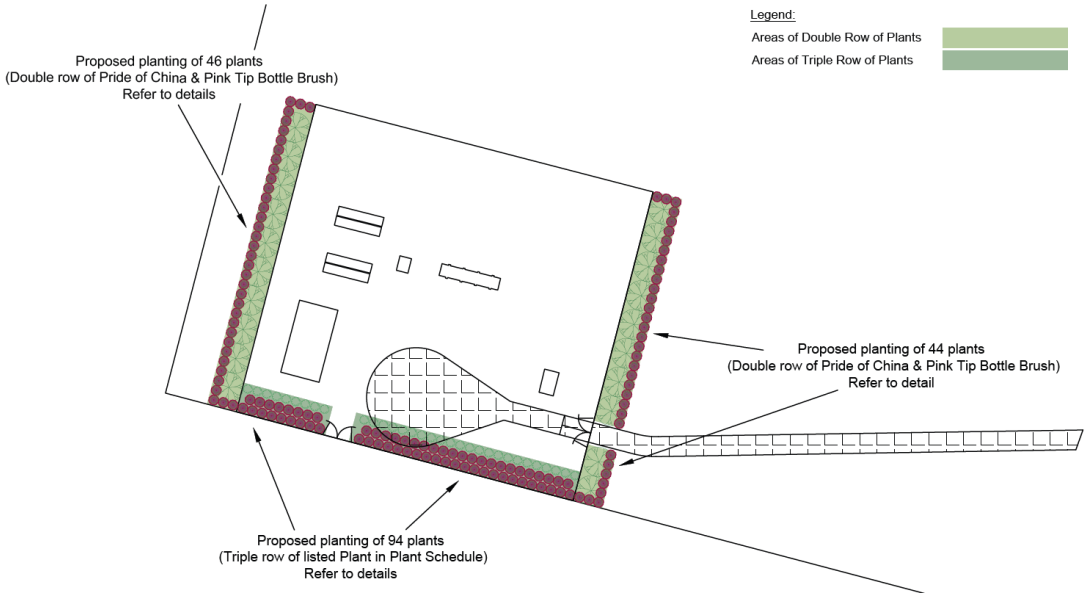
5.2 Visual Impacts and Site Context

The proposal is for a 4.95 MW battery and the ancillary equipment that will occupy approximately 0.55 hectares the 15.31-hectare property.

The nearest equipment is approximately 10 metres away from the nearest property boundary (in common ownership) – being the southern frontage to the Gwydir Highway.

Upon consideration of the nature of the proposed facility, the development would not lead to any undue cumulative visual impact on the surrounding area as a result of the proposed BESS.

This application is supported by a landscape plan, which proposes landscaping along the outside of the facility fencing on the east, south and west sides of the facility.



Proposed Landscape Plan
Prepared by Chris Smith & Associates (Rev. 1)

The visual impact of the facility has the potential to be further softened through the use of landscape screening, as well as existing vegetation along active/visible frontages. However, given this proposal is effectively for the installation of five (5) shipping containers, the visual impact will be limited.

Accordingly, it is submitted that when viewed in the context of their surrounds the cumulative impact of the approved renewable energy facilities, in terms of both land use and visual impact, is minimal.

5.3 Traffic Management

The peak of construction activities will occur during the mechanical and electrical installation phases of construction. During these times, workers will access the site in the morning and leave at the end of the working day in either their private car or work vehicle (ute or small truck). It is anticipated that there will be some car-pooling, therefore it is expectant that there would only be a limited number of construction workers during the construction period.

The Construction Environmental Management Plan prepared by Green Gold Energy Pty. Ltd. The direct road connection to the site is via Wellingrove Street – an unsealed road managed by the Glen Innes Severn Council which leads through Lots 5 & 4 on DP758447 and then through to the subject site.

Deliveries of components will be scheduled as required. The BESS units and equipment are prefabricated units that are delivered in pre-packed containers that are lifted from the delivery truck onto the lay-down area.

Outside of the construction period, the facility will be un-manned, other than intermittent periodical maintenance. The site will be remotely monitored in real time and local contractors would be rapidly deployed to deal with any fault or other matter, which provides the added benefit of local jobs for the local community.

6 Site and Context Description

6.1 Surrounding Context

The surrounding area is predominantly use for primary industry production along with public recreation, residential and industrial purpose. The land surrounding is primarily used for conventional agriculture – with grazing and some cropping evidenced through historical imagery.

Glen Innes locality (Source: SIXMaps)
Showing aerial context of the subject site, subject site outlined in yellow.

The notable land features relative to the site are as follows:

South

Immediately south of the site is the Gwydir Highway, which provides road access to the Glenn Innes township. Beyond the immediate highway, the Glen Innes Racecourse occupies approximately 2.3 ha of land, while the Glen Inness substation directly south of the site, to the west of the racecourse.

Beyond the racecourse is the Glen Innes Severn Council Pound and Glenn Innes Regional Saleyards.

There are some lifestyle properties beyond Lang Street/Furracabad Road – the nearest of which is approximately 2 km south of the proposed development site.

North

To the north of the site, the rural properties evidence association with dryland agriculture; however, the prevailing agriculture use appears to be grazing, with some cropping properties.

West

The land in immediate surrounding, Furracabad Creek flows south to the east of the boundary. The creek further flows towards the north while fragmented parts of the creek are covered with vegetation marking tracing of the creek.

Beyond the creek, the prevailing land use is agricultural. There are some dwellings associated with existing farms dispersed throughout the area; however, the nearest dwelling is approximately 820m west of the proposed facility.

East

The Glenn Innes town centre is located approximately 2.5 km east of the subject land, (measured at the intersection of the Gwydir Highway and New England Highway). Though the nearest residentially zoned land is approximately 300m east of the development, on the eastern side of Wellingrove Street.

Between the site and town centre, there is a mix of agricultural uses, as well as urban commercial, industrial, and residential land uses.

The site is proximate to existing overhead powerlines station which is around 400m to the east of the proposed facility.

6.2 Subject Site

The proposed battery energy storage system is to be built within the existing paddocks of a farming property at Gwydir Highway, Glenn Innes. This whole property consists of seven (7) parcels in common ownership – with a total area of approximately 15.31 hectares.

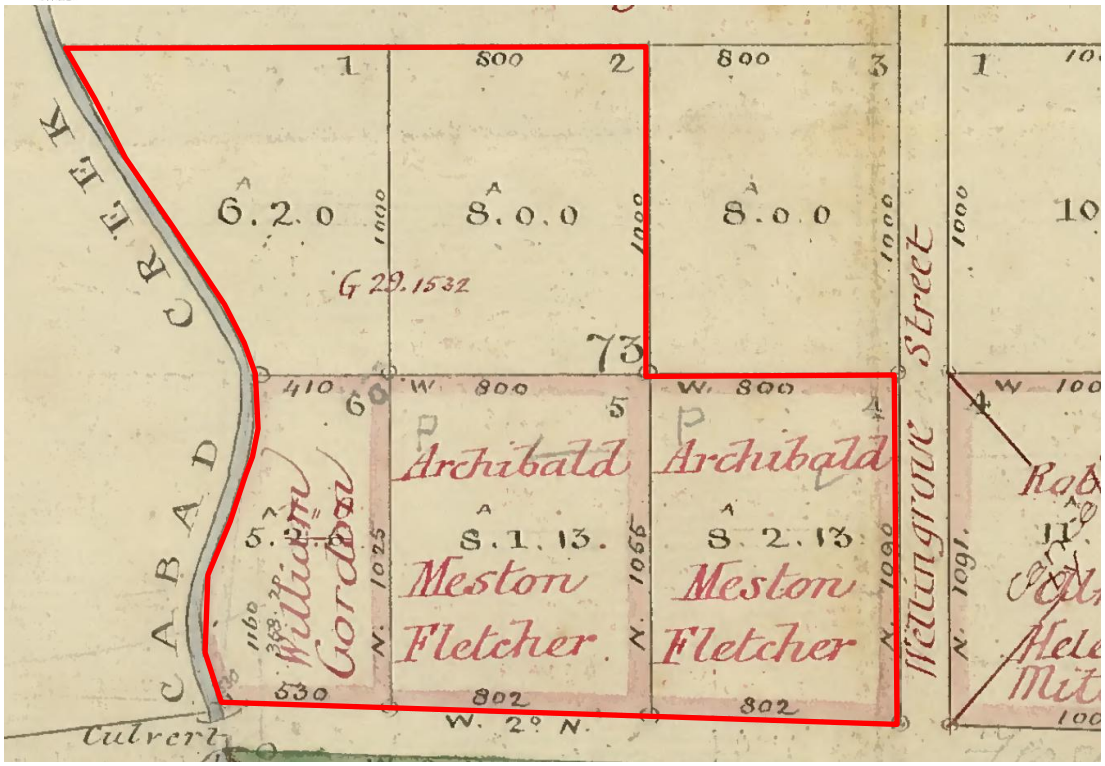
Green Gold Energy has agreed to terms with the current farmer to lease approximately 4,500 sqm to develop it for a BESS – for a period of approximately thirty (30) years.

The remaining allotments comprising the property are not considered to form part of this Development Application. These lots will continue to be managed seasonally in accordance with the ongoing agricultural use of the farm. The subject land is generally abutted by farming and rural land on most sides.

Development Site from the South (Google Streetview)
Approximate image of subject site's terrain

Subject Property – 1 Wellingrove Street, Glen Innes (Source: SIXMaps)
Landholder's property shaded yellow

The southern boundary of the property has a road frontage of approximately 400m with the Gwydir Highway. The proposed facility is accessible through an existing gate to the south-east of the property from Wellingrove Street The property is largely open, cleared land, with some remnant vegetation around waterways, tracks, and paddock fence lines.



Site Cadastre as shown on title (DP758447)
1 Wellingrove St current property boundaries indicated by red line

7 Development Details

7.1 Construction Stage

The construction program is anticipated to occur over an approximately four weeks period, as per the below table:

Period (Weeks)	Site Works
Week 1	• Drainage, road and fencing works • Installation of concrete footings
Week 2	• Cable installation • Delivery of battery shipping containers and inverter station • Installation of battery shipping containers and inverter station
Week 3	• Electrical installation and cable termination • Electrical testing
Week 4	• Commissioning / demobilisation

The proposed compound will be surrounded by a fully secured steel wire 1.8-metre-high fence, which can be covered with a shaded cloth to further mitigate any visual impacts (if required), as well as landscaping in accordance with the attached plans.

The ongoing security of the compound, and identification of any issues will be managed by a local security company – providing additional employment within the region.

3D Render of MVPS

The facility contains one (1) inverter/medium-voltage power station (MVPS), as illustrated above. This power station will comprise an inverter, a transformer and switchgears. The proposed power station will be located within the compound. There will be a HV kiosk as the primary conduit for electricity from the facility prior to being transferred via overhead lines into the nearby energy distribution network.

The proposed facility will have remote monitoring in real-time, allowing for constant surveillance and monitoring of the facility without the requirement for ongoing staffing.

The compound contains key infrastructure that requires a high degree of security. Therefore, the abovementioned control centre will remotely monitor in real-time to ensure that systems function as intended, and that security is not compromised. Upon identification of any potential issues, action can be taken indirectly from control centre or by deploying a local contractor to site.

7.2 Operational Phase

Beyond the four-week construction period, the facility will be largely unmanned, other than intermittent periodical maintenance. There is no intention to store any dangerous goods on site.

The site will be remotely monitored in real time and local contractors would be rapidly deployed to deal with any fault or other matter, which provides the added benefit of local jobs for the community.

Considering that the proposed facility will be unmanned, it is considered that it will have a very minimal impact on the landscape and surrounding road network.

7.2.1 Environmental, risk and emergency management

The proposed facility will be under constant surveillance by remote monitor in real-time. In the event of a fault or potentially dangerous situation an alarm will automatically report to 'on-call' staff. There will be no audible alarm at the facility. The procedures and protocols for these operational arrangements will be set out in an operational management plan, that will be an integral part of the operation of the facility.

The site is subject to planning controls pertaining to ground water vulnerability; however, it is considered that the proposed BESS development is unlikely to have negative impacts on the ground water resources.

7.2.2 Site access and traffic management

As set out above, during operation, the facility will be monitored remotely; there will be no permanent workers on site. The facility will remain largely unattended, other than periodical visits by maintenance contractors or the instance of a fault that requires site attendance.

These contractors will carry out seasonal site maintenance (slashing and ground fuel control, etc), and periodical visual checks of componentry and equipment. Accordingly, it could be weeks between site visits and most visits would be no more than one or two contractors in a single vehicle (likely a work ute), carrying out visual checks.

7.3 Waste Management

While there is no demolition to occur on the site, the construction waste generated will be limited to hole boring for pad footings, wire cut-offs and packaging waste.

7.3.1 Construction Phase

A project of this size is expected to have a construction period of four (4) weeks. It is anticipated that all components will be delivered by semi-trailer or B-double trucks scheduled across the project construction period.

Accordingly, GGE has advised that their sub-contractor agreements stipulate that each trade is to manage and remove their own waste. This agreement should also ensure that the waste is appropriately streamed, and materials recycled where possible to minimise waste going to landfill.

7.3.2 Operational Waste

Once the facility is up and running, it will be remotely monitored and will be unmanned, therefore the waste generated during operational phase will be relatively low.

There will be a need for mowing / weed removal as well as any general maintenance to ensure continue operation. It is anticipated that any operational waste will be limited to that generated by site contractors and any supplies required for maintenance or repair. All of which will be taken away with the contractor when they leave the site.

7.3.3 Site Decommissioning Waste

Most components of the proposal have a 30-year design life expectancy. If retrofit or upgrade is not proposed at the end of the proposal's useful life, the plant components would be decommissioned and removed from the site.

Operational waste would consist of that generated by site contractors and any supplies required for maintenance or repair. This waste would be disposed of appropriately by the contractors.

8 Strategic Context

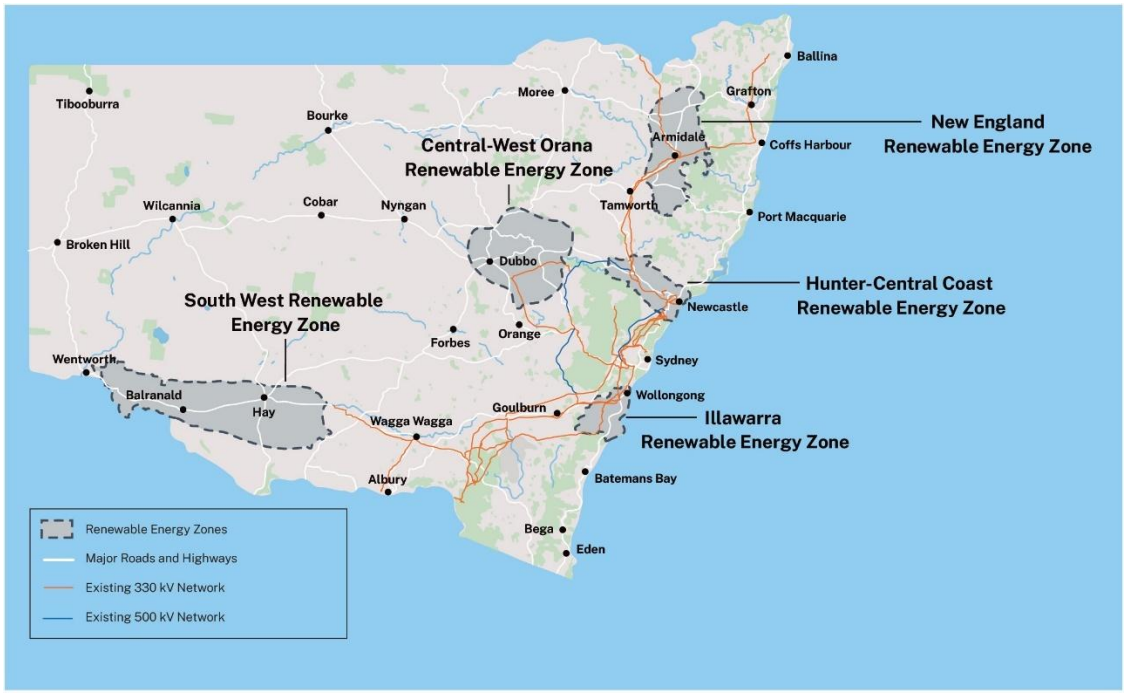
8.1 NSW Renewable Energy Action Plan 2018

The *NSW Renewable Energy Action Plan* outlines a comprehensive framework to achieve renewable energy targets by 2030 and details the opportunities and actions underway for renewable energy technologies in NSW.

The Plan also details three goals and 24 actions to facilitate the emergence of renewable energy generation most efficiently in NSW:

- Attract renewable energy investment and projects
- Build community support for renewable energy
- Attract and grow expertise in renewable energy technology

The *NSW Renewable Energy Action Plan 2018* identified Glen Innes **within the New England Renewable Energy Zone** (*see below figure*).



NSW Renewable Energy Projects and Potential Priority Zones
The Energy Corporation of NSW (EnergyCo)

The Renewable Energy Plan identifies that NSW has a range of competitive advantages as a location for solar power investment, including excellent solar resources and world-class solar research institutions.

The proposed development represents a step for NSW towards a renewable energy future, on land that is currently used for moderate agricultural use, contains limited identifiable biodiversity value and is adjacent to existing infrastructure.

The development would not require removal of established native trees or significant habitat and would provide a regional municipality with access to affordable renewable energy.

8.2 New England North West Regional Plan 2041

Glen Innes Severn is one of thirteen LGAs under the umbrella of the New England North West Regional Plan (NENWRP). The NENWRP sets out a regional framework that complements the state and local framework for the direction of planning and development across north-eastern NSW. Of direct relevance to this application, the forward to the NENWRP states:

> *"The future of energy is renewable, and the New England North West is already becoming a leader in sustainable and cost-effective electricity production with the building of Australia's largest hybrid solar farm in Uralla, but that's just the start. The NSW Government has set a clear objective of halving our emissions by 2030 and achieving net zero emissions by 2050. We are securing the economic prosperity of the region for the decades to come by putting it in a strong position to achieve net zero."*

8.2.1 Part 1 – Growth, Change and Opportunity

- *OBJECTIVE 1: Coordinate land use planning for future growth, community need and regional economic development*

The proposed development represents an opportunity to capitalise on the 4 key settlement principles of the Regional Plan, which seeks to:

1. Identify growth needs and opportunities
2. Identify and direct suitable land for planned growth
3. Determine the required structure for development, and
4. Encourage locally responsive, sustainable design.

The development of the site provides for investment within the local community as the energy transitions toward renewable energy. The nature of the development also avoids prejudicing future rural development of the site and would be unlikely to adversely impact surrounding rural land.

This BESS is one step further in establishing appropriate growth of renewable infrastructure in the local area.

8.2.2 Part 2 – Productive and Innovative

- *OBJECTIVE 2: Protect the viability and integrity of rural land*

The proposal is tied to a 30-year-lease of the farmer's property, at which point the property would be fully remediated to pre-development conditions. On the agricultural spectrum, the site is of moderate agricultural utility, capable of being grazed, though there is no formal irrigation infrastructure.

The level of ground disturbance will be limited to the installation of the central inverter, the four (4) battery units and the truck roundabout.

8.2.3 Part 3 – Sustainable and Resilient

- *OBJECTIVE 8: Adapt to climate change and natural hazards and increase climate resilience*
- *OBJECTIVE 9: Lead renewable energy technology and investment*
- *OBJECTIVE 10: Support a circular economy*

The inevitable transition toward renewable energy must be balanced by appropriate measures to ensure that the development of renewable energy alongside diversification on farming incomes.

The Glen Innes Severn LGA is within the New England Renewable Zone, and is envisioned to provide a substantial contribution to the renewable energy transition. The site is well served by existing infrastructure and would allow for the continuation of existing rural uses in the immediate vicinity.

8.2.4 Part 5 – Connected and Accessible

- *OBJECTIVE 22: Utilise emerging transport technology*

The need for electric vehicle charging stations is growing, this proposal will contribute to the necessary local infrastructure needed for region-wide implementation.

8.2.5 Local Government Narratives

Glen Innes

The relevant Council priorities is to "*identify and promote wind, solar, bioenergy and other renewable energy production opportunities as part of the REZ".*

This proposal is for the development of a BESS to support existing (and future) operational renewable energy facilities within the Renewable Energy Zone.

8.3 Glen Innes Severn Local Strategic Planning Statement

Our Local Advantages

Agriculture … and Emerging Renewable Energy

> *Growth has been seen from 2012 to 2018 in Tourism to 5.5% when reported as a separate sector. Output in Education and Training and Rental, Hiring & Real Estate Services has likely been driven by the construction phases of White Rock and Sapphire Wind and Solar Farms. In fact Renewable Energy is an emerging industry alongside established businesses…*

This proposal contributes to the orderly development of the Renewable Energy industry in the local area by constructing a BESS to support existing solar and wind farms in the locality, to allow the local community to "tap into" and make use of locally generated electricity.

Planning Priorities

Priority # 2	*Encourage diversification in agriculture, horticulture and agribusiness to grow these sectors and respond to domestic and international opportunities.*
Priority # 6	*Continue to develop service and logistics infrastructure demand and demonstrates how Council will align local infrastructure to planned growth.*
Priority # 9	*Adapt to natural hazard and climate change*
Priority # 10	*Promote and support renewable energy production opportunities.*

The development site is ancillary to a moderately productive agricultural site and will provide an appropriate rural use on one of the less productive paddocks. This

proposal responds to Priority #2 by responding to the local opportunities for the development of a BESS. As this BESS will service the nearby renewable energy facilities, it directly contributes to the diversification of the renewable energies industries while minimising hinderance upon existing agricultural business.

As demand for renewable infrastructure in the local area will increase, this BESS provides appropriate planned growth. Especially in the context of Priority #6 which provides renewable infrastructure as Council works towards a net zero target. Similarly, the development of renewable energy infrastructure demonstrates adaptation to climate change by shifting away from carbon dependent infrastructure.

9 Statutory Framework and Assessment

9.1 Environmental Planning & Assessment Act 1979

The proposal is subject to the provisions of the *Environmental Planning & Assessment Act 1979* No. 203 (*"the Act"* herein).

Under the Act, the consent authority is required to consider the full range of matters listed under Division 4.3, Section 4.15 of the Act in its assessment of a development application. Each of the relevant matters are addressed below:

Matters for Consideration – General

The consent authority must take into consideration:

(a) the provisions of:

(i) any environmental planning instrument, and

(ii) any proposed instrument that is or has been the subject of public consultation under this Act and that has been notified to the consent authority (unless the Planning Secretary has notified the consent authority that the making of the proposed instrument has been deferred indefinitely or has not been approved), and

(iii) any development control plan, and

(iiia) any planning agreement that has been entered into under section 7.4, or any draft planning agreement that a developer has offered to enter into under section 7.4, and

(iv) the regulations (to the extent that they prescribe matters for the purposes of this paragraph),

that apply to the land to which the development application relates,

(b) the likely impacts of that development, including environmental impacts on both the natural and built environments, and social and economic impacts in the locality,

(c) the suitability of the site for the development,

(d) any submissions made in accordance with this Act or the regulations,

(e) the public interest.

Accordingly, the proposal and potential impacts are now considered – in accordance with the above provisions of Section 4.15, under the following headings:

Impacts on the Natural Environment

The proposed development is to be undertaken on a property zoned RU1 for Primary Production, which consequently, is largely cleared for historical agricultural use. The proposal will therefore not require the removal of any significant vegetation.

The current DA is accompanied by conceptual plans and relevant assessments to demonstrate that there will not be any undue detrimental impacts as a result of the proposal – either on-site or off-site.

The site is approximately 20 metres away from the nearest bank of the Furracabad Creek. In considering the size and magnitude of the facility, as well as the flat topography of the site and the proposed built form, any adverse landscape impacts are considered to be unlikely.

The site is largely cleared of any trees; however, there are tracts of native vegetation that has regenerated across the site due to only intermittent cropping and grazing of the development site.

At the direction of Ozark, as ecological consultants, the development site has been located entirely outside of the Furracabad Creek biodiversity corridor. Consequently, the proposal would not adversely affect this ecologically significant area or depreciate its value.

There are no mapped flooding constraints that affect the land. In considering the nature of the proposed facility – comprising largely permeable fencing and ground-mounted installations – it would significantly impede natural flow paths and increase flood risk.

Impacts on the Built Environment

In considering the existing built environment of the immediate locality, the prevailing land use is that of agriculture, which is undertaken at a range of scales and intensities.

The nearest dwelling (not in common ownership) is located approximately 400 metres east of the development site. It is also noted that all of the nearest dwellings are in the RU1 Zone and are not considered to be sensitive uses for the purposes of planning, as they are used in conjunction with their respective farming uses.

The distance of the BESS from the Gwydir Highway, along with the proposed landscaping, is also considered to further soften any visual impacts to passersby from the road.

The proposal also includes one (1) centrally located inverter station, four (4) BESS units, and a switchboard within the compound at the electricity network connection point. None of these components are particularly large or visually intrusive and are considered comparable to a farm shed/shipping container.

It is submitted that the proposed development will have a negligible visual and noise impact on the locality, largely due to the significant distance from surrounding roads and buildings/dwellings. The site has been selected through a careful site selection and design process to ensure this. Additionally, the height and scale of the facility are such so as to further reduce any potential impacts.

There remains a possibility in the future to undertake perimeter landscaping; however, given the negligible impacts, it is considered that this will not be necessary.

Social and Economic Impacts

The proposed development will support the economic growth of Glenn Innes and the broader municipality.

The proposed BESS has been designed and located to maximise the electricity generation efficiency while limiting the use of rural land – retaining much of the

broader farming property for continued agricultural use and ensuring that the farm continues to be economically liable for the landholder.

It is estimated that during construction, a large portion of the work will be undertaken by local contractors. Where additional skilled workers from outside the region would need to be accommodated, this will create an influx of spending within the area. The proposal will also have a positive effect on NSW's electricity prices and lead to affordable energy.

Further, the proposed development will remain under lease from the current farmer, providing for a supplemental income for the farmer and allowing for further investment in agricultural operations on the property, while also supporting the emergence of renewable energy.

The Suitability of the Site

The subject site is a largely cleared farming property that contains limited topographical or environmental constraints. The proposed development site is to be in a location that minimises impacts on surrounding farming uses, the natural environment, and the built environment alike.

The site is located on a portion of the property that would prevent the fragmentation of farming land. With the creek to the west, the site is located at the interface between farming and environmental uses, without adversely affecting either.

There are limited land use conflicts that would arise as a result of the proposal, and due to the location of the proposed site, the BESS would be located a sufficient distance from all of the nearest surrounding dwellings and roads. Nevertheless, the relative proximity to the Glen Innes township will ensure that a ready supply of workers/contractors is provided, as well as easy access to a range of services.

The site has also been deemed a suitable candidate because of the existing electricity network and its close proximity to the Glen Innes Zone Substation.

The proposal is for a land use that will be fully contained within the subject land and has been designed in a site-responsive manner mindful of the context of the site (i.e. site constraints and existing servicing and public infrastructure assets in the vicinity).

Any submissions made in accordance with this Act or the Regulations

Any relevant representations will need to be considered by the Council in determination of the development application.

The public interest

The public interest is best served by the orderly and economic use of land for purposes permissible under the relevant context of the site within the Glen Innes Severn LGA and in accordance with the prevailing planning instruments.

9.2 State Environmental Planning Policy (Transport and Infrastructure) 2021

Part 2 – Division 4 – Electricity generating works or solar energy systems

2.36 Development permitted with consent

(1) Development for the purpose of electricity generating works may be carried out by any person with consent on the following land

(b) any land in a prescribed non-residential zone.

In response to the above provision of the SEPP, the RU1 zone is a prescribed non-residential zone under the 2.35 definitions.

The proposed use of the land for an energy storage facility is considered to be compatible with adjoining agricultural land uses and respectful of the nearby terrestrial biodiversity and wetlands.

The use and development of land would generate negligible impact on the surrounding area – the primary concern for solar energy facilities is the perceived visual impact that solar panels may have on surrounding amenity and the potential loss of agricultural utility. Given the proposed facility is for a BESS which does not involve solar panels, the design minimises any negative amenity or utility impact.

The proposal has been located to limit any impacts on existing agriculture within the surrounding area. The use of land for a BESS will be a low-impact use and has been carefully sited to avoid any adverse impact upon rural infrastructure, particularly the Gwydir Highway.

The proposal is intended to facilitate the transition toward the State government's renewable energy target by 2020. To this end, the proposed facility will contribute approximately 5MW of renewable energy into the NSW electricity grid.

Division 5 – Subdivision 2 – Development likely to affect an electricity transmission or distribution network

2.48 Determination of development applications—other development

The proposed development site has been selected due to its proximity to existing electrical infrastructure – which includes a substation and distribution network in close proximity to the site.

(1) This clause applies to a development application (or an application for modification of a consent) for development comprising or involving any of the following—

(a) the penetration of ground within 2m of an underground electricity power line or an electricity distribution pole or within 10m of any part of an electricity tower,

(b) development carried out—

(i) within or immediately adjacent to an easement for electricity purposes (whether or not the electricity infrastructure exists), or

(ii) immediately adjacent to an electricity substation, or

(iii) within 5m of an exposed overhead electricity power line,

(d) development involving or requiring the placement of power lines underground, unless an agreement with respect to the placement underground of power lines is in force between the electricity supply authority and the council for the land concerned.

(2) Before determining a development application (or an application for modification of a consent) for development to which this clause applies, the consent authority must—

(a) give written notice to the electricity supply authority for the area in which the development is to be carried out, inviting comments about potential safety risks, and

(b) take into consideration any response to the notice that is received within 21 days after the notice is given.

The financial viability of a BESS facility is dependent on the facility being within proximity to the distribution network infrastructure, as beyond this, network augmentation costs become prohibitive. The subject site was initially selected for its proximity to the Glen Innes zone substation, which feeds electricity for local consumption.

The facility design has considered all existing site conditions and features. It has been sited immediately adjacent to an easement for electricity purposes, to allow for effective transmission to the network. The facility location has also been chosen to limit the need for connection infrastructure. In this sense, the location is considered to be highly appropriate, in that it will increase the productivity of the facility.

Therefore, the siting of the facility in proximity to the existing transmission infrastructure will allow for the efficient transmission of the energy generated into the grid; and for a financially viable connection to be achieved.

9.3 State Environmental Planning Policy (Primary Production) 2021

Chapter 2 Primary production and rural development

Part 2.1 Preliminary

The aims of this Chapter are as follows—

(i) to facilitate the orderly economic use and development of lands for primary production,
(ii) to reduce land use conflict and sterilisation of rural land by balancing primary production, residential development and the protection of native vegetation, biodiversity and water resources,
(iii) to identify State significant agricultural land for the purpose of ensuring the ongoing viability of agriculture on that land, having regard to social, economic and environmental considerations,
(iv) to simplify the regulatory process for smaller-scale low risk artificial waterbodies, and routine maintenance of artificial water supply or drainage, in irrigation areas and districts, and for routine and emergency work in irrigation areas and districts,
(v) to encourage sustainable agriculture, including sustainable aquaculture,
(vi) to require consideration of the effects of all proposed development in the State on oyster aquaculture,
(vii) to identify aquaculture that is to be treated as designated development using a well-defined and concise development assessment regime based on environment risks associated with site and operational factors.

In response to these aims, the *proposal is not designated development*, nor is it development that is considered to unduly impact the ongoing use of the surrounding land for primary production. The proposed development footprint is approximately 4,500 square metres only, while the majority of the property will be retained for agriculture.

The land is partly mapped under the draft State Significant Agricultural Land mapping (SSAL). The site has some inherent agricultural utility; however, the footprint of the proposed battery energy storage system is considered unlikely to significantly impact agricultural use of the land.

Draft State Significant Agriculture Land Mapping
Source: NSW Department of Primary Industries & Regional Development (formerly Department of Primary Industries)

9.4 State Environmental Planning Policy (Planning Systems) 2021

Schedule 6 – Regionally Significant Development

5 Private infrastructure and community facilities over $5 million

Development that has a capital investment value of more than $5 million for any of the following purposes—

(a) air transport facilities, electricity generating works, port facilities, rail infrastructure facilities, road infrastructure facilities, sewerage systems, telecommunications facilities, waste or resource management facilities, water supply systems, or wharf or boating facilities,
(b) affordable housing, child care centres, community facilities, correctional centres, educational establishments, group homes, health services facilities or places of public worship.

Development that is state and regionally significant is identified in *State Environmental Planning Policy (Planning Systems) 2021*.

Private infrastructure, including electricity generating stations, that have a capital investment value of over $5 million are declared regionally significant. The proposed BESS development has an EDC of **$3.72 million** and is therefore identified as a **Local Development**.

9.5 State Environmental Planning Policy (Resilience and Hazards) 2021

Chapter 3 – Hazardous and Offensive Development

Section 7.1 of the NSW Department of Planning's 'Hazardous and Offensive Development Application Guidelines – Applying SEPP 33' details how to identify a potentially hazardous industry.

The proposal does not involve any of the hazardous materials listed in Table 1, Table 2 or Table 3 of the guidelines. Therefore, *the proposal is not considered to be a potentially hazardous industry*, and chapter 3 of the SEPP does not apply.

Chapter 4 – Remediation of Land

4 Objective of this Chapter

(1) The object of this Chapter is to provide for a Statewide planning approach to the remediation of contaminated land.

(2) In particular, this Chapter aims to promote the remediation of contaminated land for the purpose of reducing the risk of harm to human health or any other aspect of the environment—

(c) by specifying when consent is required, and when it is not required, for a remediation work, and

(d) by specifying certain considerations that are relevant in rezoning land and in determining development applications in general and development applications for consent to carry out a remediation work in particular, and

(e) by requiring that a remediation work meet certain standards and notification requirements.

4.6 Contamination and remediation to be considered in determining development application

(1) A consent authority must not consent to the carrying out of any development on land unless—

(a) it has considered whether the land is contaminated, and

(b) if the land is contaminated, it is satisfied that the land is suitable in its contaminated state (or will be suitable, after remediation) for the purpose for which the development is proposed to be carried out, and

(c) if the land requires remediation to be made suitable for the purpose for which the development is proposed to be carried out, it is satisfied that the land will be remediated before the land is used for that purpose.

The proposed development is proposed on a site which has historically been used for dryland agricultural activities for an extended period of time; this may include cropping or grazing. There is no evidence to suggest that the site is or might be contaminated to a level that would impact on the proposed use.

Therefore, it is considered that the proposed development is compliant with the SEPP.

9.6 State Environmental Planning Policy (Biodiversity and Conservation) 2021

Chapter 3 – Koala habitat protection 2020

3.3 Land to which Chapter applies

*"(1) This Chapter applies to land in the following land use zones, or an equivalent land use zone, in a local government area specified in Schedule 1 of State Environmental Planning Policy (Koala Habitat Protection) 2021, but not if the local government area is marked with an * in that Schedule—*

(a) Zone RU1 Primary Production"

The proposal does not seek removal of any trees, native or otherwise, as the site has been previously cleared for agriculture. Further, there is extensive cleared land on all sides of the development site, which renders the site unlikely to be conducive to koala habitat.

Chapter 4 – Koala habitat protection 2021

Pursuant 4.4(d)(i), *"this Chapter does not apply to land in the Zone RU1 Primary Production".*

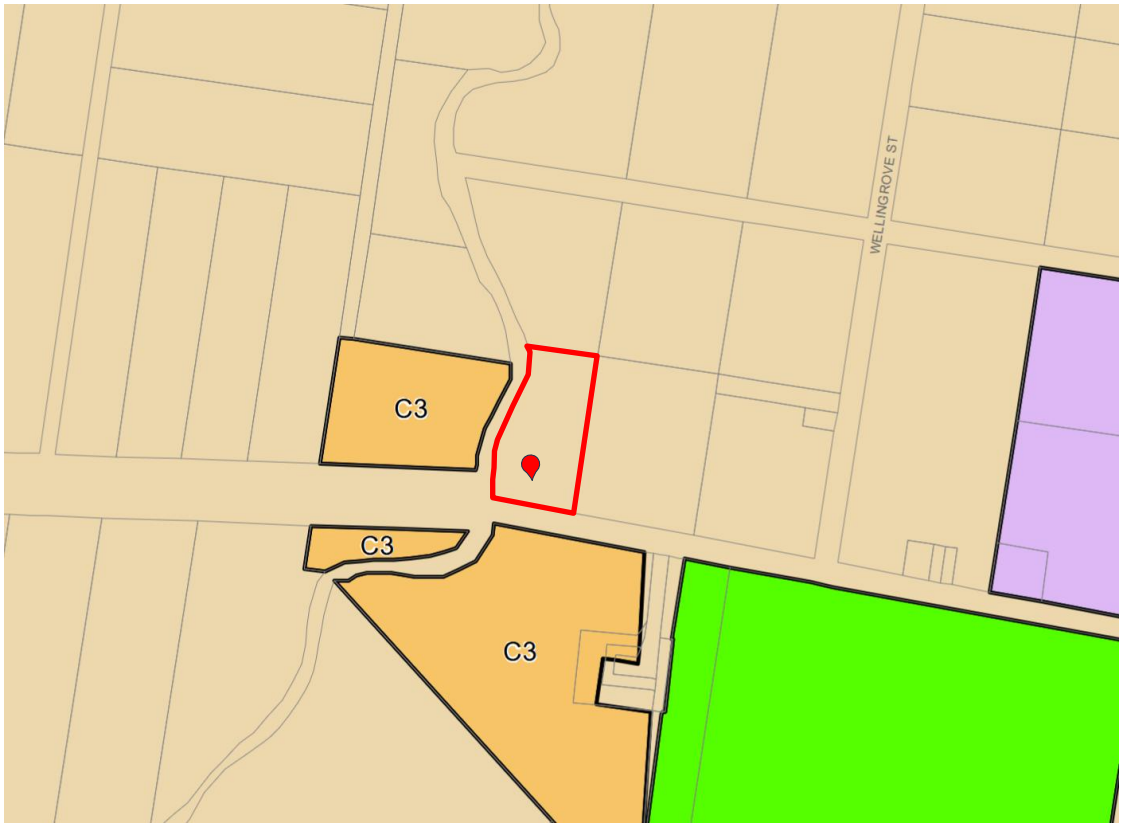
10 Glen Innes Severn Local Environmental Plan 2012

2.3 Zone Objectives and Land Use Table – RU1 – Primary Production

1 Objectives of zone

- To encourage *sustainable primary industry production by maintaining and enhancing the natural resource base.*
- *To encourage diversity in primary industry enterprises and systems appropriate for the area.*
- *To minimise the fragmentation and alienation of resource lands.*
- *To minimise conflict between land uses within this zone and land uses within adjoining zones.*

The proposed development is an unmanned use that will see limited traffic beyond the initial construction period. In consideration of the agricultural context of the site and the surrounding area, although agriculture is possible, the relatively small development footprint is unlikely to otherwise support any meaningful agricultural use.



Glen Innes Severn Zone Mapping
Subject site (marked with red pin) shown within RU1 Zone

The site is already adjacent to a mix of non-agricultural uses, including the Glen Innes substation, which presents as a compatible land use with the proposed development.

There is no subdivision or fragmentation of the land proposed, as the land will be operated under lease of the existing farmer.

7.7 Riparian land and watercourses

The western boundary of the subject site (reflecting the environs of Furracabad Creek) is mapped as riparian land and watercourses under the Glen Innes Severn LEP.

Riparian Lands Mapping
Source: eSpatial Viewer

(1) The objective of this clause is to protect and maintain the following—
- *(a) water quality within watercourses,*
- *(b) the stability of the bed and banks of watercourses,*
- *(c) aquatic and riparian habitats,*
- *(d) ecological processes within watercourses and riparian areas.*

(2) This clause applies to the land shown as "Riparian Land" on the Riparian ands and Watercourses Map.

(3) In deciding whether to grant development consent for development on land to which this clause applies, the consent authority must consider—
- *(a) whether the development is likely to have an adverse impact on the following—*
  - *(i) the water quality and flows within the watercourse,*
  - *(ii) aquatic and riparian species, habitats and ecosystems of the watercourse,*
  - *(iii) the stability of the bed and banks of the watercourse,*
  - *(iv) the free passage of fish and other aquatic organisms within or along the watercourse,*
  - *(v) the future rehabilitation of the watercourse and riparian areas, and*
- *(b) whether the development is likely to increase water extraction from the watercourse, and*

(c) appropriate measures to avoid, minimise or mitigate the impacts of the development.

(4) Development consent must not be granted to development on land to which this clause applies unless the consent authority is satisfied that—

(a) the development is designed, sited and will be managed to avoid a significant adverse environmental impact, or

(b) if a significant adverse environmental impact cannot be avoided—the development is designed, sited and will be managed to minimise the impact, or

(c) if a significant adverse environmental impact cannot be minimised—the development will be managed to mitigate the impact.

The proposed development is setback from the Furracabad Creek and will have no undue impact on the watercourse – this supported by the ecological assessment undertaken by Ozark.

11 Glen Innes Severn Development Control Plan 2014

11.1 Rural Development – Chapter 4

This section refers to all development permitted in the Rural and Environmental Zones contained within Glen Innes Severn Local Environmental Plan 2012 and applies to all Rural, Rural Residential and Environmental zoned land (RU1, RU2, R5 and E3) subject to a development proposal. The stated aims of this chapter are:

- *To enhance the character of the rural areas.*
- *To encourage the use of existing or potentially productive land for agricultural purposes.*
- *To reduce potential for rural land use conflict.*
- *To protect old-growth, significant hollow-bearing trees and conservation significant vegetation through recognition of their ecological value and scarcity in the landscape.*
- *To improve the ecological function of riparian areas within the landscape.*
- *To improve the stability of the bed and banks of waterways through the management of riparian vegetation.*

In accordance with abovementioned aims, the proposed development is sited in a location that would require no removal of high value vegetation and would be co-located with existing electrical infrastructure (refer to attached plans). The development will result in a permeable development ground footprint, and would largely retain the pre-development levels of runoff. Nevertheless, there would be some increase to runoff, which would be readily addressed through the detailed design process as a condition of consent of the sought DA.

4.5 Vehicular Access Requirements Where access from a public road to a private property is required:	
Access to a development shall be located having regard to its potential impact on the landscape and native vegetation and shall be unobtrusive and sympathetic to the existing landform and neighbouring development.	As discussed previously, the vehicle access point will be via the existing crossover at Wellingrove Street and will be built through lot 4, 5 and 6 on DP758447). This access will have minimal impact on the surrounding properties as this is internal to the site

	and the existing street is capable of accommodating the additional influx of traffic during the construction phase.
All development is required to have coincidental legal and physical access from a public road to the development site. In this regard, Council may require evidence from a registered surveyor that this is the case.	Existing legal access to Wellingrove Street is available, please see attached Title.
Where a part of any access is via an unformed Crown road, the road may first require dedication as a Council public road, and then construction to an appropriate standard once Council approval has been gained for the work. For a single residential dwelling, the minimum standard of construction where the owner will be responsible for ongoing track maintenance is in accordance with the former Department of Land and Water Conservation publication "Guidelines for the Planning, Construction and Maintenance of Tracks".	N/A – no unformed Crown land forms part of this application.
Road and drainage designs may need to be submitted to Council at the applicant's expense prior to approval of any roadworks within a Council public road reserve.	Road and drainage design will be submitted to the standard of the relevant authority.
The developer will be responsible for construction or upgrading of any vehicle access in accordance with Council standards, including: ○ *A suitable width all-weather pavement from the road to the entrance gate or stock grid.* ○ *Where the access crosses a table drain, a minimum 375mm diameter pipe with headwalls, or concrete dish drain on the alignment of the table drain.* ○ *Any entrance gate or stock grid should be set back a minimum distance of 15 metres from the edge of the traffic lane for single unit truck access, or 22 metres for semi-trailer access.* ○ *The access is to be located at where safe intersection sight*	The vehicle access will be upgraded to the standard of the relevant authority.

distances can be achieved, including a minimum gap sight distance of 5 seconds. ○ *A Council Road Opening Permit is required prior to performing any work within a public road reservation.*	
4.6 Environmental Considerations – Requirements	
Development shall not be carried out on slopes greater than 20%. If development on slopes greater than 20% is unavoidable, Council may require a geotechnical assessment.	The site has a relatively flat topography and therefore, will not require a geo-technical assessment
Clearing of native vegetation – applications are to identify the area and number of trees to be cleared as part of the application. Clearing which does not form part of a Development Application to Council must be approved by the relevant Local Land Services (LLS) (refer to Note below).	N/A – No native vegetation will be removed.
Where development is likely to have a significant impact on threatened species, populations or ecological communities, or their habitats within the meaning of the Threatened Species Conservation Act 1995, Environment Protection and Biodiversity Conservation Act (EPBC) Act 1999 and Fisheries Management Act 1994., Council will require the submission of the following: ○ *An ecological assessment prepared by a suitably qualified, experienced and independent person or persons; and/or* ○ *A preliminary Vegetation Management Plan (VMP) prepared by a suitably-qualified and experienced person such as an Ecologist, Bush Regenerator, Horticulturist or Landscape Architect with practical, demonstrated experience in bush regeneration., and/or* ○ *Compensatory planting prepared in accordance with Table 4.1.*	N/A – No significant vegetation will be removed/ impacted by this proposal.
Riparian lands within a subdivision are to be stabilised and revegetated according	

to stream order and buffer category. Water courses classified as stream order 3 or greater (Strahler method) require a riparian buffer of at least 40 m	
Roads are to be located outside riparian buffer areas where possible. Where roads traverse the riparian buffer area, the road design is to minimise the area of disturbance and demonstrate minimal impact on the riparian function and integrity.	N/A – This application will use the existing vehicle access point.
Driveway/roadway crossings/other infrastructure located over waterways are to have regard to the requirements for fish passage in accordance with relevant NSW State Government requirements under the Fisheries Management Act 1994.	N/A – This application does not have any infrastructure over waterways.
4.7 Flooding	
In low-lying areas a flood study may be required to determine appropriate floor levels for habitable structures. Waterway crossings on any access roadways should be designed to permit two-wheel drive access from a public road to the residence during a critical one (1) in 100 year storm event.	N/A – No habitable structures are proposed.
4.8 Land Use Buffers	
Buffers from development to rural land uses are to be established in accordance with the NSW DPI Land Use Conflict Risk Assessment Guide.	N/A – There are no nearby development areas in this application.
Where a proposed development for a dwelling or tourist accommodation will adjoin an agricultural enterprise on an adjoining property, a minimum 100m separation shall be provided. Where the 100m buffer cannot be achieved, Council will consider the use of vegetative buffers on the proposed development site	N/A – No habitable structures are proposed.
Any new residence should be located a minimum distance of 2km from any active or proposed wind turbine, unless suitable measures are taken in the design and construction of the dwelling to ameliorate any noise or other impacts	N/A – No habitable structures are proposed.

11.2 Access and Parking – Chapter 7

To ensure that new development:

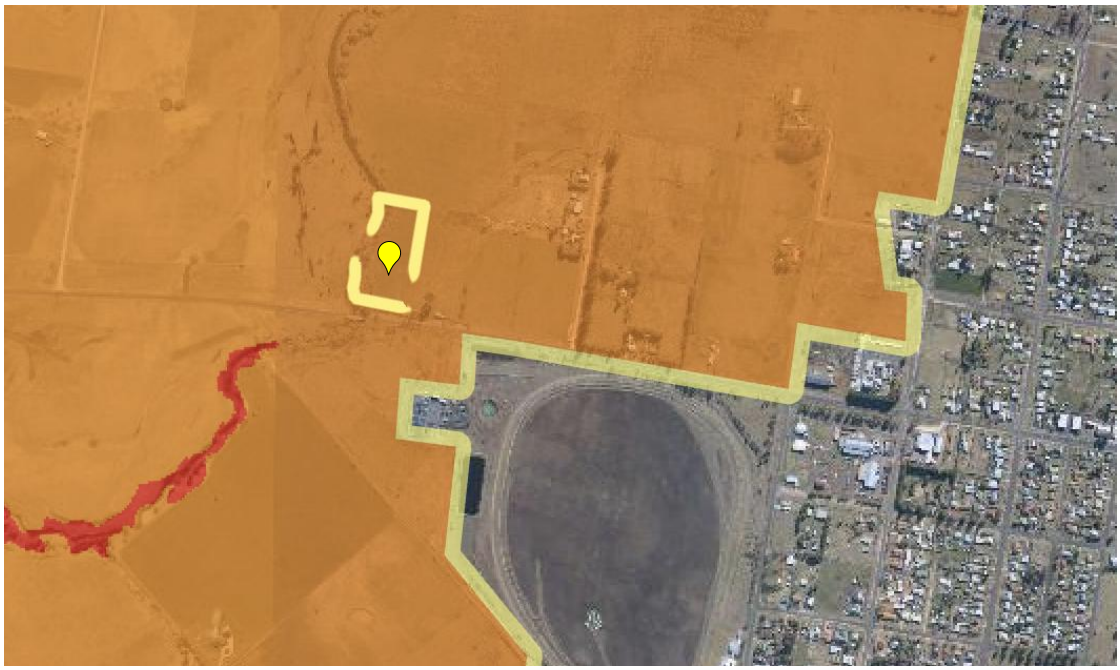
- *maintains or improves traffic safety and management;*
- *provides adequate provision for access and parking for people with disabilities;*
- *minimises the visual impact of on-site parking. and*
- *provides for the ongoing maintenance of on-site car parking and manoeuvring areas.*

There are no prescribed car parking rates that are relevant to electricity generating systems under the DCP.

The development includes a significant cleared area which will provide for a mix of informal car parking, as well as a dedicated car parking area post-construction, which is anticipated to be no more than 1-2 standard vehicles at any given time.

12 Planning for Bushfire Protection 2019

Planning for Bush Fire Protection 2019 (PBP) provides development standards for designing and building on bush fire prone land in New South Wales.



Bushfire Prone Land Mapping
Subject site outlined with yellow and marked with pin

The proposed development is within a mapped Bushfire prone area; accordingly, it considers Bushfire protections measures listed in the document, such as:

- Asset protection Zone (APZs)
- Access
- Construction, siting and design
- Services; and
- Emergency and evacuation planning.

The facility has incorporated these principles into the design and layout, with the facility having one point of access to Wellingrove Street to the east, as well as a 10-metre perimeter fire break between the facility fence and the BESS.

In considering the immediate landscape within the vicinity of the proposed facility (being managed grassland). The Furracabad Creek corridor is considered the primary bushfire risk for the site.

To mitigate any potential risks caused by grasslands from neighbouring paddocks following measures are undertaken:

- Appropriate location of access roads for the proposed development to enable safe egress for any individual attempting to leave the area at the same time that emergency service personnel are arriving to undertake firefighting operations.
- The existing road infrastructure shall provide sufficient width and other dimensions to ensure safe unobstructed access and allow firefighting crews to operate equipment around the vehicle.
- The design of internal tracks maintaining a 10-metre setback from the facility fence, ensuring a fire break surrounding the proposed electrical infrastructure.
- The facility will be located a suitable distance from the Furracabad Creek – therefore maintaining a significant distance from any potential bushfire risk.
- The subject site has access to all weather road and provision for continuous water supply, thereby ensuring protection of human life and property.

13 Conclusion

The proposal is for a new BESS facility within the Glen Innes Severn LGA that will provide affordable clean energy for the local community, including Glen Innes and beyond, effectively contributing to the implementation of New South Wales's transition to renewable energy.

The proposal is supported by the ***NSW Regional Energy Action Plan 2018*** to Net Zero Emissions that sets out a broader framework for achieving the region's aspirations and expectations for renewable energy by providing regional opportunities for the benefit of the regional community.

The 4.95 MW output will supply local businesses, industry and houses and will produce enough energy for use during peak consumer demand to support the Glen Innes Severn Council during the renewable energy transition.

The proposal will generate local employment opportunities for electrical and construction workers to build and install the facility; operations, maintenance and security jobs will be required ongoing.

The holistic considerations of the proposed BESS and the primary considerations of the proposal, including the merits of both preserving agricultural land against promoting renewable energy, have been addressed at length in the various sub-sections of this report and the appended documentation.

It is submitted that the information provided within this report and the various supporting documents demonstrate that the proposal warrants development approval.