SQUADRON ENERGY

Spicers Creek Wind Farm

Independent Planning Commission
Presentation – 14 August 2024

Acknowledgement of Country

Squadron Energy acknowledges the Traditional Custodians on whose lands we live and work.

We recognise and respect their continuing connection to land, waters and community.

We pay respect to all Aboriginal and Torres Strait Islander peoples throughout Australia, and to their Elders past, present and emerging.

Agenda

- Applicant introductions
- Overview of Application:
  - Project evolution and timeline
  - Project overview
  - Project benefits
- Key issues
- Other matters
- Response to DPHI recommended conditions of consent

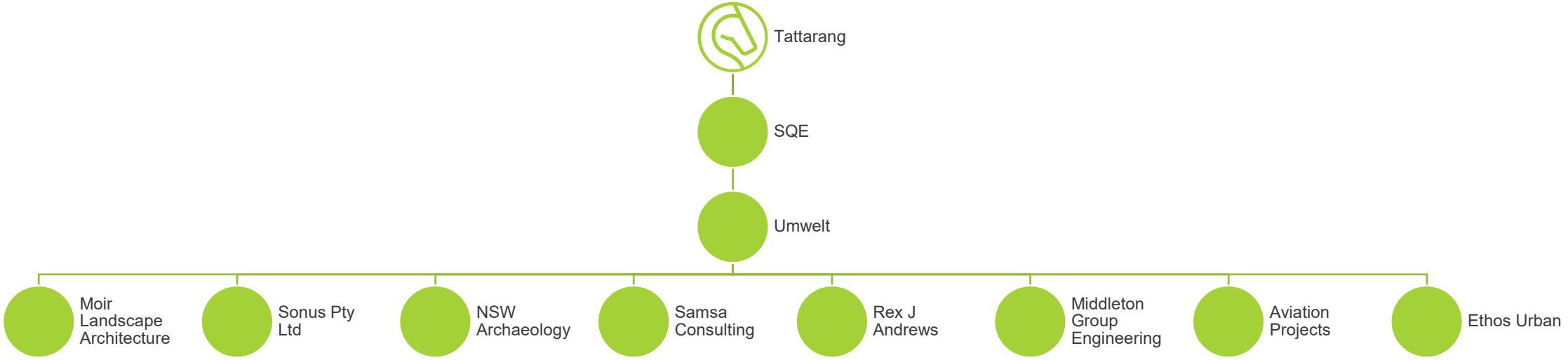
Applicant introductions

Applicant Representatives

- **Trish McDonald** A/Head of Project Development, Squadron Energy
- **Kristy Old** Senior Project Developer, Squadron Energy
- **Kate Thomson** Project Officer, Squadron Energy
- **Kirsty Davies** Manager Planning & Assessments, Umwelt Environmental and Social Consultants

Our team

- Spicers Creek Wind Farm Pty Ltd is the proponent for the **State Significant Development Application SSD-41134610** and is a wholly owned subsidiary of Squadron Energy, part of the Tattarang group of companies.
- **Tattarang** is the private investment group of Andrew and Nicola Forrest – it is one of Australia's largest private investment groups.
- The Spicers Creek Wind Farm team has worked with Umwelt as our lead environmental and social consultant, along with a team of specialists, to prepare the SSD application.



About Squadron Energy

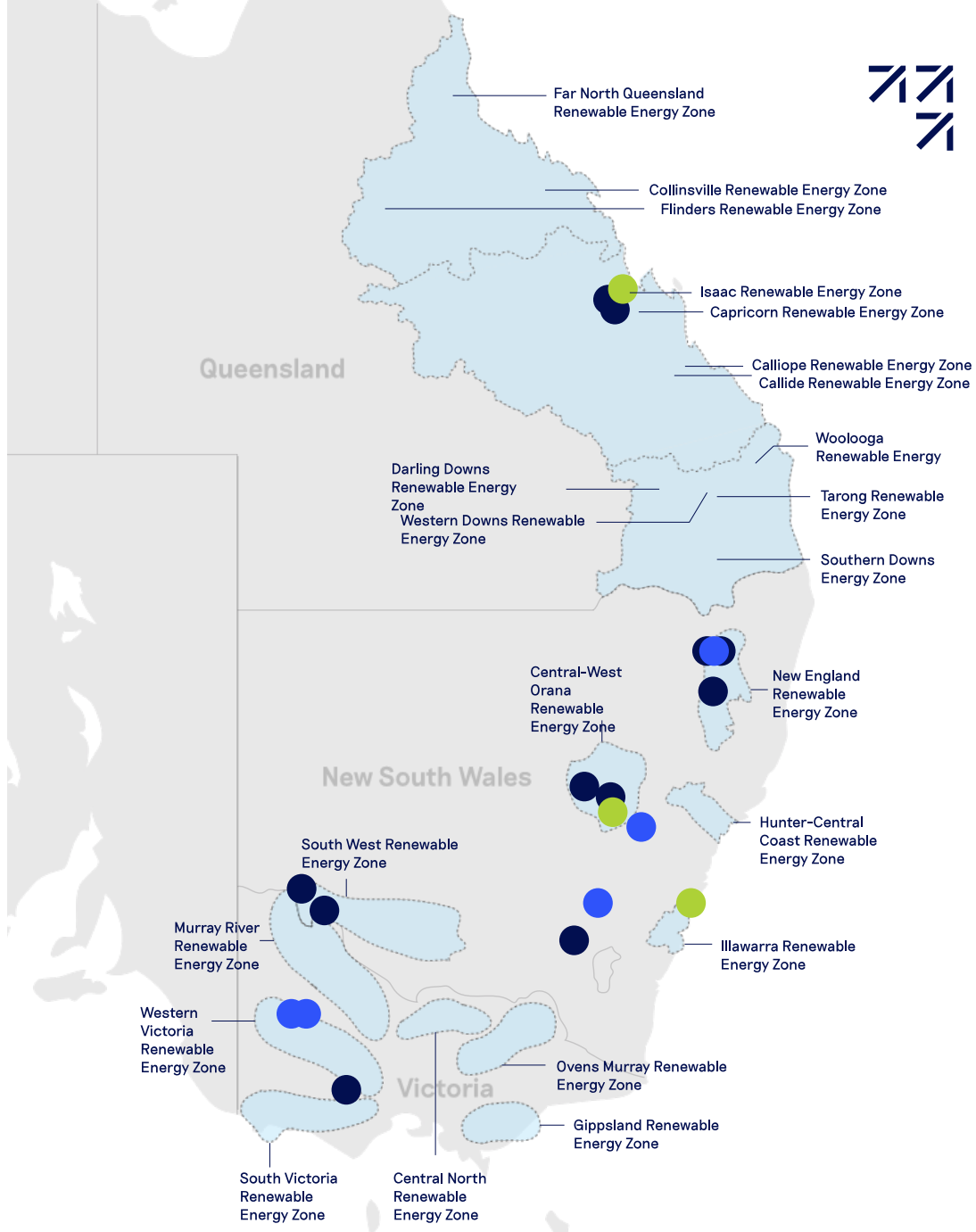
Squadron Energy is Australia's leading renewable energy company that develops, operates and owns renewable energy assets in Australia.

We are 100% Australian owned and have 1.1 gigawatts (GW) of renewable energy assets in operation and 900 MW under construction.

We are committed to launching 14 GW of projects by 2030, powering the equivalent of six million homes.

This will deliver one third of the renewable energy required for Australia to meet its 2030 renewable energy target of 82%.

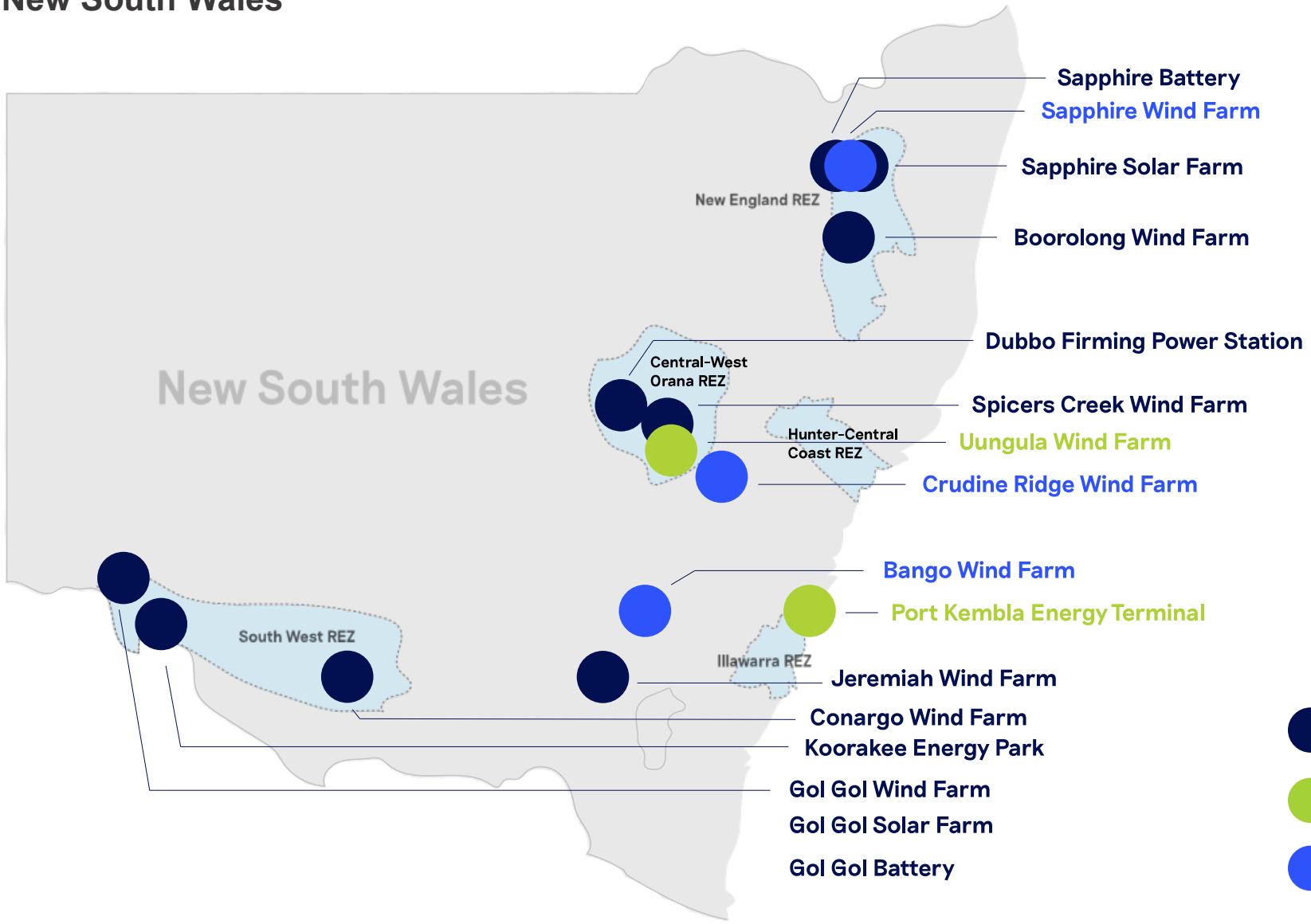
With proven experience and expertise across the project lifecycle, we work with local communities and our customers to lead the transition to Australia's clean energy future.

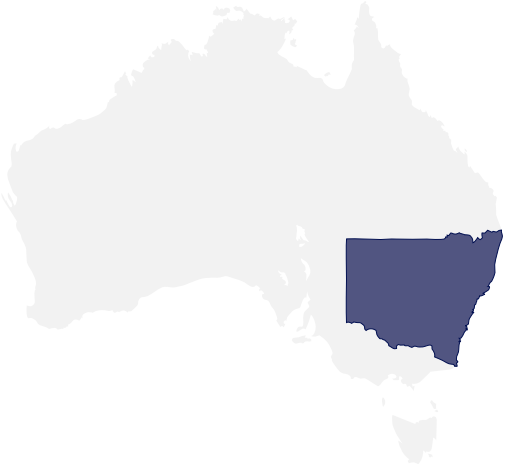


In development
Under construction
Operating

Our projects

New South Wales





In development

Under construction

Operating

Overview of Application

Spicers Creek Wind Farm

Project Evolution and Timeline

Project Definition

- The Project has been designed through a comprehensive process that incorporates community and stakeholder feedback, and the findings of environmental and social studies to maximise positive social, economic and environmental outcomes while minimising adverse impacts.
- Squadron Energy has undertaken extensive engagement with residents in the area and other stakeholders throughout the Project planning and assessment process.
- The Project has been designed using an iterative approach incorporating community and other stakeholder feedback from the ongoing engagement undertaken Squadron Energy since 2019, with the design of the Project changing as a result of this feedback.

Project evolution

Design philosophy

The Project location has:

A reliable wind resource suitable for the development of a commercial scale wind farm

A low density of surrounding rural residential dwellings

Proximity to the proposed transmission infrastructure and existing road network

Mostly cleared landscape

Throughout the Project design, the avoid-minimise-mitigate-offset design hierarchy was adopted, incorporating the following specific principles:

- minimise vegetation clearing
- minimise land disturbance area
- protect functional riparian zones
- use previously disturbed land
- protect cultural heritage values
- protect agricultural values
- minimise direct and indirect impacts
- adopt a flexible approach to design.

Project Evolution

Design changes since EIS submission

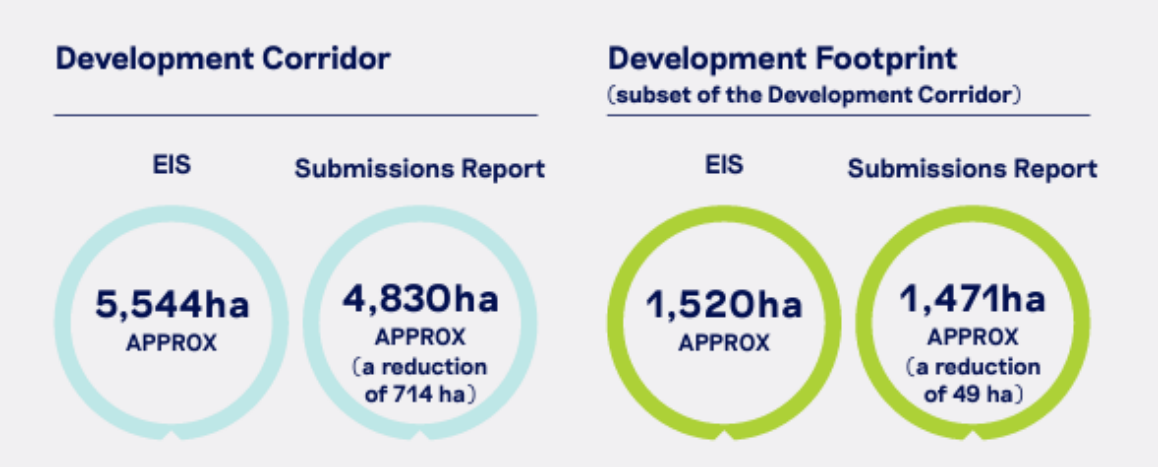
The Project design evolution has included **material impact minimisation steps** to account for feedback received during discussions with stakeholders and as knowledge of the Project Site and constraints increased.

Since submission of the EIS, changes have included:

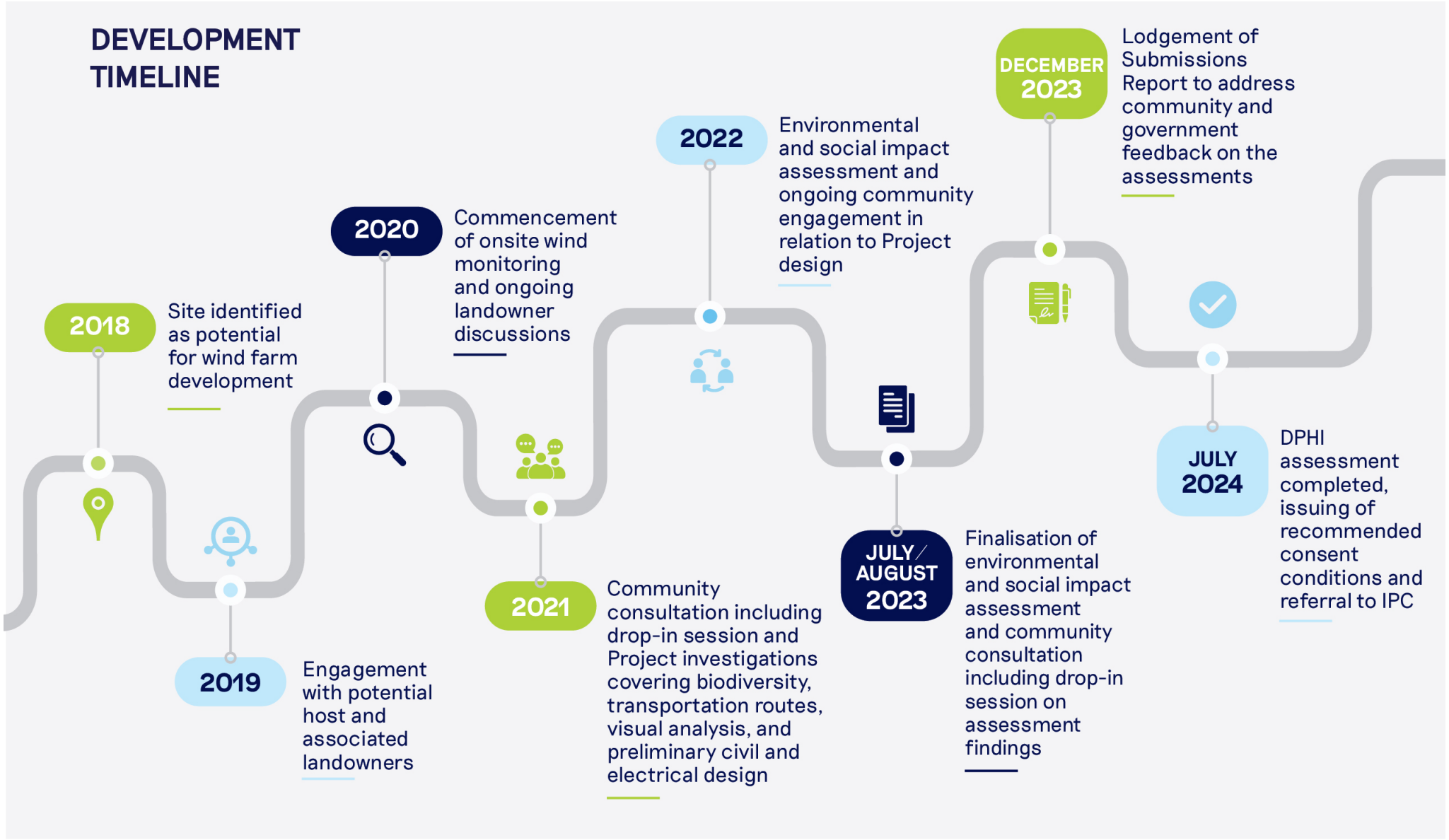
- Refinement of the Project Site, Development Footprint and Development Corridor to further avoid biodiversity impacts (i.e. a reduction in these areas)
- Additional commitments in relation to construction worker accommodation and employment
- Additional mitigation measures

The Development Footprint of the Project, (where the work will take place), has been reduced to 1,471 ha, a **reduction of about 49 ha** from that identified in the EIS.

A buffer area of around 100 m has also been included around the Development Footprint to create the Development Corridor, to provide flexibility for locating wind turbines and site infrastructure during the detailed design and construction process. This has been **reduced by about 714 ha** since EIS submission.



Timeline

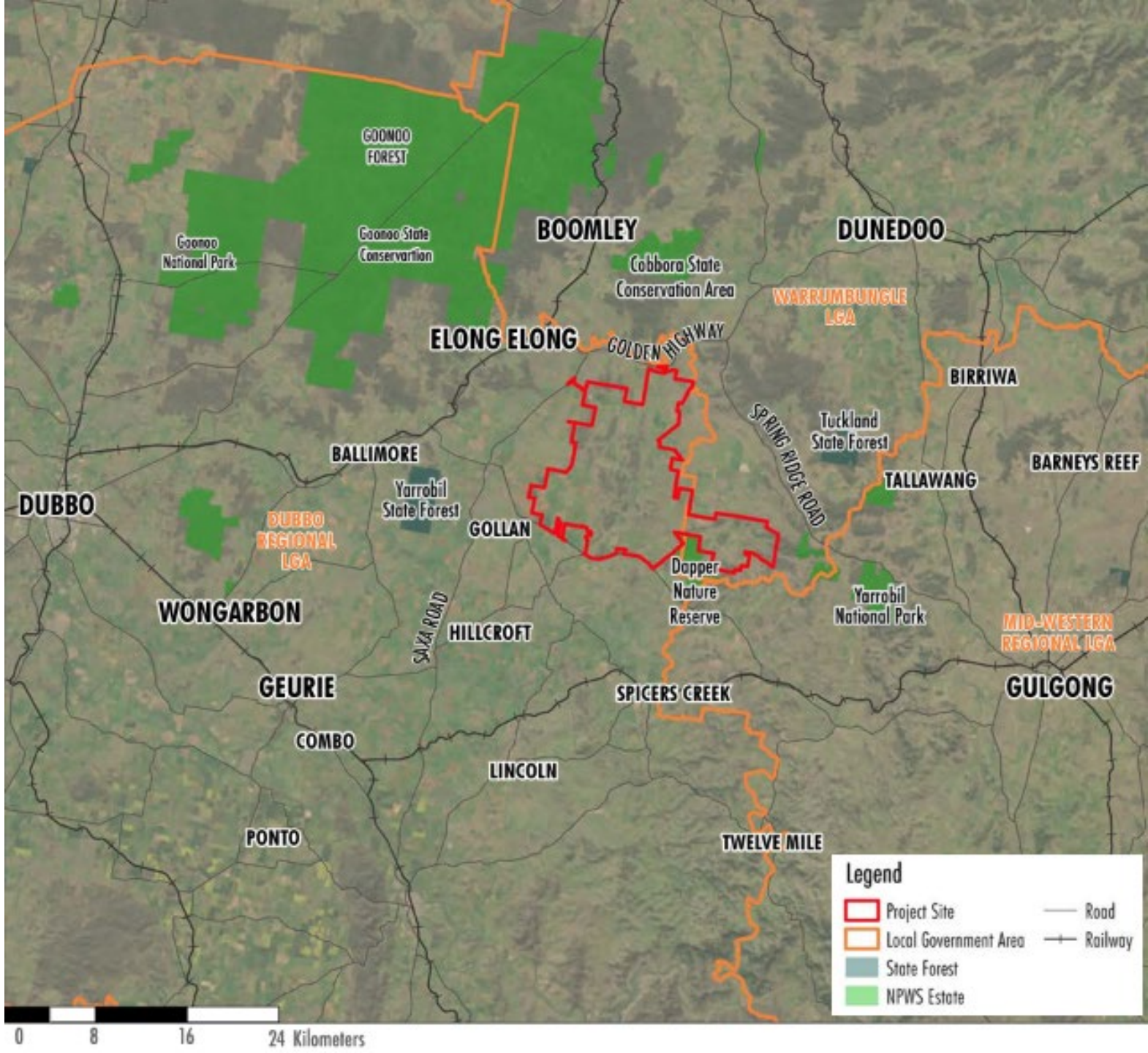

DEVELOPMENT TIMELINE
2018
Site identified as potential for wind farm development
2019
Engagement with potential host and associated landowners
2020
Commencement of onsite wind monitoring and ongoing landowner discussions
2021
Community consultation including drop-in session and Project investigations covering biodiversity, transportation routes, visual analysis, and preliminary civil and electrical design
2022
Environmental and social impact assessment and ongoing community engagement in relation to Project design
JULY / AUGUST 2023
Finalisation of environmental and social impact assessment and community consultation including drop-in session on assessment findings
DECEMBER 2023
Lodgement of Submissions Report to address community and government feedback on the assessments
JULY 2024
DPHI assessment completed, issuing of recommended consent conditions and referral to IPC

Project overview

Location

The Project is located approximately 25km north-west of Gulgong and 35km north-east of Wellington within the Dubbo Regional and Warrumbungle Shire Council areas.

It is also located within the Central-West Orana Renewable Energy Zone (CWO REZ).

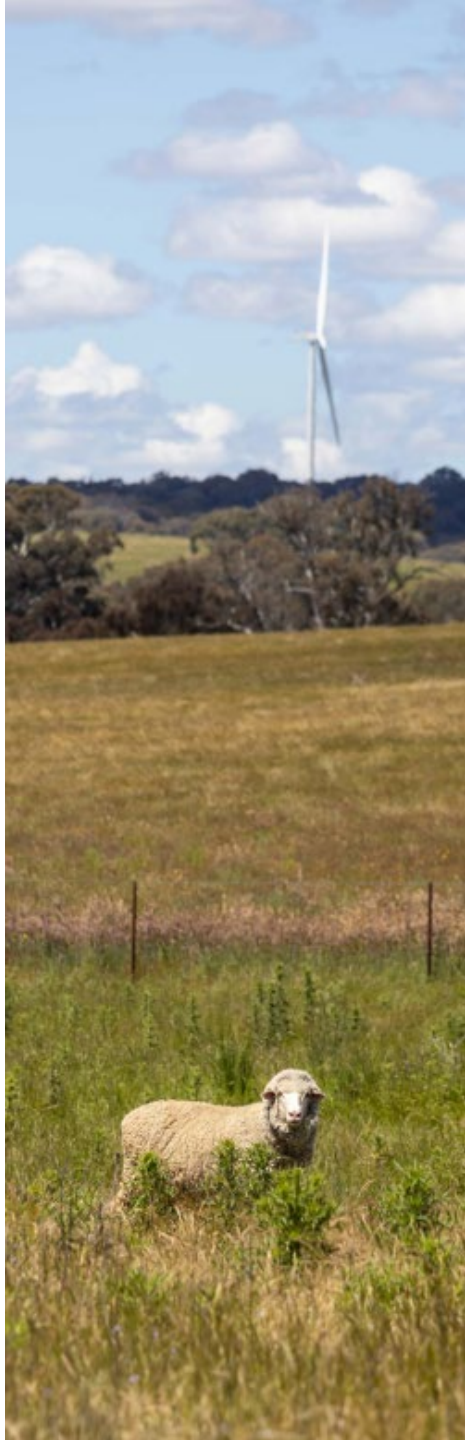


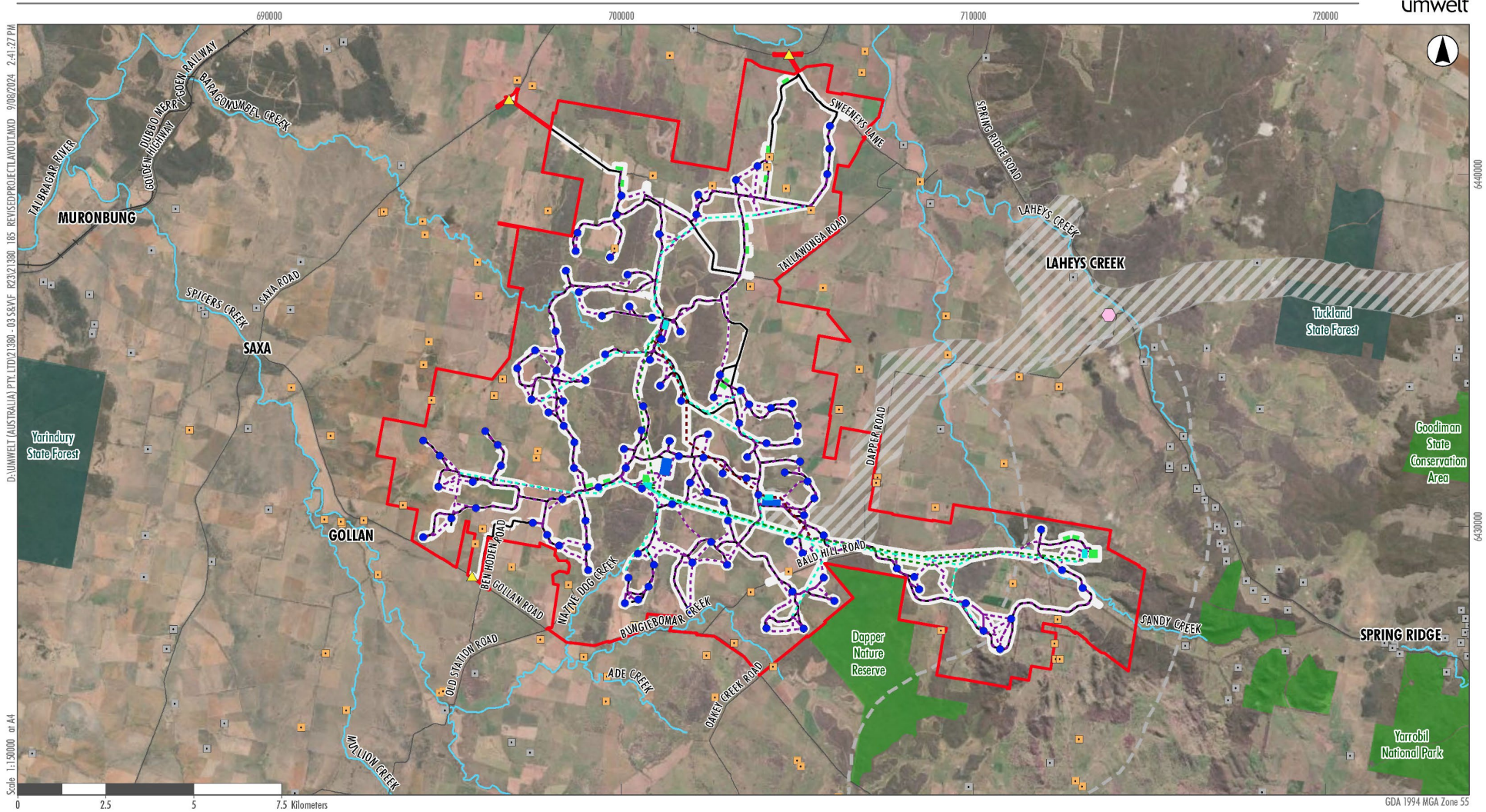
Project overview

Spicers Creek Wind Farm

In summary, the Project includes:

- Up to 117 wind turbines
- Battery storage
- Temporary construction facilities, including on-site concrete batching plants during the construction phase
- Local road network upgrades
- Roads and tracks
- Electrical infrastructure to connect the Project to the electricity grid, including underground cables and overhead powerlines, substations and transmission lines
- Buildings used to operate the wind farm





Legend

- Project Site
- Wind Turbine Generator
- Associated - House
- Non Associated - House
- Development Corridor
- Site Access Point
- Overhead Powerline (HV or MV)
- Overhead Powerline (HV)
- Overhead Powerline (MV)
- Underground Powerline
- Access Track
- Substation
- Site Compound
- Electrical Plant Compound
- EnergyCo Elong Elong Energy Hub
- EnergyCo Indicative REZ Transmission Corridor
- EnergyCo Potential Southern Extension
- State Forest
- NPWS Estate
- Road
- Railway
- Waterway

Spicers Creek Wind Farm
Revised Project Layout

Image Source: ESRI Basemap Data source: NSW DFSI (2021), CWP Renewables (2022)

Project overview

Life of Project	30 years
Wind turbine generators (WTGs)	117 WTGs (3-blade) with a tip height of up to 256 m
Generating capacity	700 MW
Battery storage	400 MW up to 1,800 MWh of storage
Ancillary infrastructure	• Substations • Permanent office and site compounds • Underground and overhead electricity transmission lines • Permanent wind monitoring masts • Communication facilities and cables • Water storage tanks • Hardstands • Internal roads
Temporary construction facilities	• Concrete batching plants • Rock crushing facilities • Site compounds and offices • Stockpiles and material storage compounds • Temporary field laydown areas • Temporary meteorological masts
Site access	Two main entry locations for OSOM and light/heavy vehicles: • Sweeneys Lane (accessed directly off the Golden Highway) • Tallawonga Road (accessed from the Golden Highway followed by Saxa Road). Secondary access on Gollan Road for light/heavy vehicles only.
Construction workforce	Peak of approximately 590 FTE positions (average 323 FTE over the duration of construction, 40 months)
Operational workforce	12 FTE positions
Operational hours	24 hours, 7 days per week
Capital investment	Approximately $2 billion

Project benefits

SQE and Dubbo Regional Council plan to deliver water security to the region through a public-private partnership to build a new advanced wastewater treatment facility at Dubbo Sewage Treatment Plant.

Project benefits

The Project will:

- Contribute significant capital investment within the CWO region
- Generate jobs during the construction and operational phases
- Provide benefits to local services throughout the life of the Project
- Deliver additional income to host and other associated landowners
- Provide benefits to the local community through the implementation of the proposed Community Benefit Sharing Program and planning agreements with local Councils
- Include payment of network infrastructure access fees to EnergyCo for the CWO REZ which will include a component to fund community benefit and employment programs

Key issues

> **The Department notes that the assessment of a wind farm of this size in this location has been comparatively straightforward to other wind farm projects given the project has been sited and designed to minimise potential impacts, including locating turbines and associated infrastructure within areas of relatively low biodiversity values, and reducing the amenity impacts to the landscape and surrounding non-associated receivers by implementing minimum setback distances from turnines in accordance with the NSW government guidelines.**

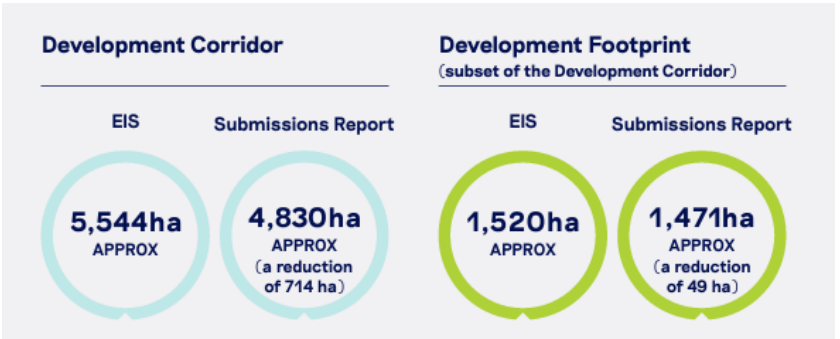
NSW Department of Planning, Housing and Infrastructure, Spicers Creek Wind Farm State Significant Development Assessment Report (SSD 41134610), July 2024.

Biodiversity

Squadron Energy considers that significant effort has been made to minimise biodiversity impacts as far as practicable through Project design. This is supported by DPHI’s assessment report. This has been achieved by:

- Locating infrastructure within areas of non-native vegetation
- Adopting buffers for important habitat features
- Avoiding threatened species habitat, including pine donkey orchid habitat and substantial areas of high-quality Box Gum Woodland.

The Project will result in residual direct impacts to native vegetation communities and threatened species habitats within the Development Footprint as a result of vegetation clearing works for infrastructure establishment in the construction phase.



Biodiversity

The Project would generate a credit liability of 7,798 ecosystem credits and up to 1,677 species credits requiring offset.

SQE is developing a biodiversity offset strategy to ensure that the credit liability of the Project can be acquitted in accordance with the requirements of the Biodiversity Offset Scheme and the Bilateral Agreement and prior to the commencement of construction.

The following options are under investigation:

- establishment of Biodiversity Stewardship Sites
- retirement of credits sourced by the NSW Credit Supply Taskforce (CST)
- sourcing and purchase credits available on the market payment into the Biodiversity Conservation Fund (BCF) for any residual credits not obtained via methods described above.

Threatened ecological communities

- White Box – Yellow Box – Blakely's Red Gum Grassy Woodland and Derived Native Grassland in the NSW North Coast, New England Tableland, Nandewar, Brigalow Belt South, Sydney Basin, South Eastern Highlands Critically Endangered Ecological Community
- Inland Grey Box Woodland in the Riverina, NSW South Western Slopes, Cobar Peneplain, Nandewar and Brigalow Belt South Bioregions Endangered Ecological Community

Threatened species

- Barking owl *(Ninox connivens)*
- Superb parrot *(Polytelis swainsonii)*
- Glossy black-cockatoo *(Calyptorhynchus lathami)*

Biodiversity

SQE has also committed to the design and implementation of a comprehensive management strategy to minimise the unavoidable biodiversity impacts of the Project. This includes additional measures above and beyond current policy to ameliorate the impacts of the Project.

SQE will deliver a comprehensive biodiversity management plan to minimise the impacts of the Project. This includes:

- salvage of biodiversity features, including habitat resources (e.g., hollow logs, tree hollows, fallen timber and rocks/boulders)
- pre-clearance and tree-felling procedures
- non-inhibiting fauna fencing
- traffic control
- water management
- weed management
- fencing and access control
- bushfire management
- erosion and sediment control
- workforce education and training.

SQE will also implement a Bird and Bat Adaptive Management Plan (BBAMP) – an integral part of managing impacts to bird and bat species and a key mitigation measure to address the impacts associated with turbine strike.

Visual

Visual impacts were a key issue for stakeholders, including the size and scale of the wind farm, views from residences and cumulative impacts.

Prior to submission of the EIS, the number of turbines was reduced from 138 to 117 to reduce visual impacts to neighbouring properties.

The Visual and Landscape Impact Assessment (LVIA) was carried out in accordance with the guidelines of the *Wind Energy: Visual Assessment Bulletin for State significant wind energy development* (the Bulletin) (DPE, 2016).

The Visual Bulletin identifies zones to examine the visual impacts of a wind farm on dwellings or key public viewpoints. As the turbines proposed for the Project have a maximum tip height of 256 m, the two assessment zones were:

- 3,400 m (black line or Zone 1) from each turbine
- 5,000 m (blue line or Zone 2) from each turbine.

Within Zone 1 (0 to 3,400 m) there are three non-associated dwellings, and within Zone 2 (3,400 to 5,000 m) there are 18 non-associated dwellings. The LVIA assessed the potential visual impacts of the Project on each of these dwellings.

Visual impact assessment – non-associated dwellings

Potential level of impact	Zone 1	Zone 2
Nil/negligible	0	5
Low	1	10
Moderate	2	3

Visual

Mitigation measures (including screen planting) have been recommended for the non-associated dwellings with a potential **moderate** visual impact rating. These measures are expected to significantly reduce the level of visual impact once established.

Further site assessments and consultation with the owners of these dwellings regarding mitigation measures will be carried out as part of implementing the Project.

DPHI is satisfied that the Project would not result in significant visual impacts on surrounding non-associated receivers. The Project is suitable for the site, would meet the visual performance objectives in the Visual Bulletin and would not materially alter the landscape.

Traffic and transport

The main increase in Project-related traffic would occur during the 40-month construction period with a peak period of approximately 6 months.

For most of the construction period, maximum daily traffic generation would be 236 light vehicle trips and up to 248 heavy vehicle trips per day, inclusive of 10 OSOM vehicle trips and 80 bus (return) trips. Even during peak construction activities, all affected public roads would maintain satisfactory levels of service and adequately absorb construction-generated traffic.

Operational traffic will be minimal.

OSOM traffic movements will be overnight or in non-peak times.

Current traffic volumes near the Project Site are not high and all roads have significant additional capacity. Regardless, local road users will notice increased traffic during the construction phase.

Traffic and transport

SQE proposes to undertake road and intersection upgrades to facilitate construction vehicle access to site, including:

- Golden Highway / Sweeneys Lane intersection
- Saxa Road / Tallawonga Road intersection
- Gollan Road / Ben Hoden Road intersection
- Tallawonga Road
- Ben Hoden Road
- Sweeneys Lane.

The local community identified the completion of road upgrades as a key benefit of the Project.

A traffic management plan will manage vehicle movements and ensure road safety and road network operations are maintained.

In addition, SQE has committed to a number of management and mitigation measures, including:

- engagement of a licensed and experienced transport contractor with experience in transporting similar wind farm component loads
- provision of bus services for construction staff
- road infrastructure upgrade works
- Drivers' code of conduct

The Transport Assessment concluded that with the proposed road network upgrades and implementation of proposed construction traffic management measures, the Project would not create any significant adverse impacts with respect to transport issues such as traffic operations, road capacity on the surrounding road network, site access and road safety.

Other matters

Other matters

Noise and vibration

- Most **construction** activities are located some distance from non-associated dwellings and are unlikely to result in significant noise impacts.
- Noise from **road upgrade works** and **construction traffic**, which occur closer to non-associated dwellings, may require the implementation of noise management measures at some residences for a short period of time.
- **Operational** noise levels from turbines and ancillary infrastructure will achieve noise criteria at all non-associated dwellings

Heritage

- Ten Aboriginal artefact sites within the Development Corridor will require a combination of avoidance and/or salvage to protect heritage values, in line with a heritage management plan. Most were of low significance within a local context.
- No items of State or local historic heritage significance were recorded, however where heritage items occur within the Development Corridor they will be managed in accordance with the heritage management plan.

Other issues

Land Use Compatibility

The Project site has the ideal combination of:

Water and Soils

- No impact on local or broader catchment flood regimes.
- Surface water quality impacts are most likely to occur during construction and decommissioning phases. Impacts will be managed through erosion and sediment controls and materials storage and handling requirements.
- Waterway crossings will be designed to minimise impacts on stream stability and fish passage, in line with relevant guidelines and in consultation with DPI Fisheries.

Social

A full Social Impact Assessment was completed as part of the EIS. Social impacts that were considered to be significant were:

- Concerns about the incoming construction workforce causing strain on local services and changes to the composition of the community
- Concerns about public safety due to increased traffic
- Visual amenity concerns related to Project infrastructure and its affect on ‘sense of place’.

The benefits raised by the community were:

- Payments to landholders
- Improvements to local road infrastructure
- Provision of a reliable and affordable source of renewable energy.

SQE has incorporated several mitigation and enhancement approaches to address social impacts through the implementation of a benefit sharing program, including:

- Neighbour agreements (29 agreements, 45 dwellings)
- Community sponsorship program
- Planning agreements with local Councils
- Accommodation and Employment Strategy
- Community co-investment program
- Telecommunications upgrades.

Economics

The Project will involve around $2 billion in investment and have the capacity to supply sufficient clean energy to power around 397,000 homes per annum, which represents around 12% of all NSW homes.

The Project would contribute to:

- 840 full time equivalent (FTE) construction jobs and 47 FTE operational jobs (including both direct and indirect).
- New participation opportunities for businesses and workers located in the region which have a good match of skills and resources.
- Around $46.9 million in new spending into the regional economy over the construction phase, due to construction workers relocating to the region. This includes around 235 FTE jobs (direct and indirect) in the service sector in the three LGAs over this time.
- Net economic stimulus around $410 million (over 30 years of operations, CPI adjusted) relating to operational wage stimulus, host landowner and neighbour agreement payments, planning agreements and net land tax revenue.

Material Sourcing

Water

Squadron Energy has entered a Public Private Partnership (PPP) with Dubbo Regional Council (DRC) for an Advanced Wastewater Treatment Plant (AWTP) at the Dubbo sewerage treatment plant. The AWTP will treat 700ML per annum and will be suitable quality to be used in public spaces. Estimated project completion date is Q3, 2025.

SQE has committed $3.6m to fund the AWTP. This is the entire project budget.

SQE has access to 1,500ML of recycled water (max 250ML per annum) - suitable for construction purposes.

Quarry Materials

Aggregates will be required for the construction of the Project, primarily for use in concrete, road base and hardstand areas. There are a number of quarries in the area, including Dubbo and Wellington.

There are also Council quarries close to the Project including:

- Tallawonga Pit – Tallawonga Road, Elong Elong
- Storey Pit, Triangle Road, Gollan

Sourcing of quarry materials is part of standard detailed construction design process.

> **“The Department considers the project would not result in any significant impacts on the local community or the environment, is located on a suitable site for a wind farm development, and any residual impacts can be managed through the implementation of the recommended conditions.”**

NSW Department of Planning, Housing and Infrastructure, Spicers Creek Wind Farm State Significant Development Assessment Report (SSD 41134610), July 2024.

Conclusion

The Project is consistent with the principles of ESD and the objectives of the NSW Electricity Strategy and Infrastructure Road Map.

It will provide long-term strategic benefits to the State of NSW including:

- renewable energy supply to assist with fulfilling the current obligations under State and Commonwealth renewable energy targets
- providing for cleaner reliable electricity generation, assisting with meeting current load demand while reducing greenhouse gas emissions and the impacts of climate change
- providing regional investment in the NSW renewable energy sector
- making a positive contribution towards achieving the target of at least 3 GW of renewable energy generation from the CWO REZ.

Response to DPHI recommended conditions of consent

Draft conditions feedback

SQE are generally comfortable with the proposed draft conditions for the Project.

Condition B1 provides for visual impact mitigation measures for any residence within 5 km of any wind turbine.

SQE has committed to mitigation measures for residences within 5 km where there is a **moderate visual impact**. As outlined above, there are 21 non-associated dwellings within 5 km, with **only 5 having a moderate visual impact.**

SQE understand that this is a standard consent condition.

We request that consideration be given to ensuring the this condition reflects the **level of assessed impact** in relation to mitigation measures upon request.

VISUAL

Visual Impact Mitigation

B1. For a period of 5 years from the commencement of construction, the owner of any non-associated residence within 5 km of any wind turbine identified in the Final Layout Plan may ask the Applicant to implement visual impact mitigation measures on their land to minimise the visual impacts of the development on their residence (including its curtilage).

Upon receiving such a written request from the owner of these residences, the Applicant must implement appropriate mitigation measures (such as landscaping and vegetation screening) in consultation with the owner.

The mitigation measures must:

(a) be reasonable and feasible;
(b) be aimed at reducing the visibility of the wind turbines from the residence and its curtilage and commensurate with the level of visual impact on the residence;
(c) consider bushfire risk (including the provisions of *Planning for Bushfire Protection 2019*); and
(d) be implemented within 12 months of receiving the written request, unless the Planning Secretary agrees otherwise.

If the Applicant and the owner cannot agree on the measures to be implemented, or there is a dispute about the implementation of these measures, then either party may refer the matter to the Planning Secretary for resolution.

Notes:

- *To avoid any doubt, mitigation measures are not required to be implemented to reduce the visibility of wind turbines from any other locations on the property other than the residence and its curtilage.*
- *The identification of appropriate visual impact mitigation measures will be more effective following the construction of the wind turbines. While owners may ask for the implementation of visual impact mitigation measures shortly after the commencement of construction, it is recommended owners consider whether there is benefit in delaying such a request until the relevant wind turbines are visible from their residence or its curtilage.*

Potential level of impact	Zone 1	Zone 2
Nil/negligible	0	5
Low	1	10
Moderate	2	3

Draft conditions feedback

Minor update

Update to Appendix 2, Schedule of Lands:

- Since submission, a Crown Road closure has been completed and a new Lot/DP created.
- Additional land parcel to be added to the Schedule of Lands – Lot 1 DP 1298649.

Correction to DPHI's Assessment Report:

- GH008 is an **Associated** dwelling (as stated in Section 3.2.3 of the Submissions Report).
- Incorrectly noted in Figure 4 and Table 10 of the Assessment Report as Non-Associated.

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Thank You

Any Questions?

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