



Uungula Wind Farm

Community Consultative Committee Presentation 2nd November 2018



CWP Renewables



*Delivering Energy, Powering
Communities*

www.cwprenewables.com

CWP Renewables is a leading renewable energy developer, owner and asset manager with full project life-cycle expertise. Our team holds a wealth of experience in the renewable energy sector, accumulated through the successful delivery of projects in Europe and Australia.

We develop and own utility-scale renewable energy facilities incorporating wind, solar and storage technologies, oversee project delivery and commissioning, and provide long-term operational asset management services. Our unique approach to own and manage each project from inception through to full operation ensures genuine engagement with all stakeholders at every stage of development.

CWP Renewables has been developing projects in Australia since 2007. Key development activities are coordinated from our offices in Newcastle and Sydney, with asset management services delivered from Canberra.

CWP Renewables is developing the Uungula Wind Farm project on behalf of Uungula Wind Farm Pty Ltd, a related body corporate.



✓ Strong focus on firm generation dispatchability & scale



✓ Hybrid generation at the project level and across the portfolio



✓ Growing team in NSW, QLD, SA, ACT



✓ Multi award winning



One of Australia's largest development portfolios

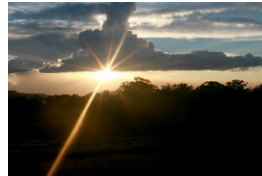
Under Development



Sapphire Solar
c. 200 MW



Bango Wind
c. 200MW



Sundown Solar
c. 600MW



Parkesbourne Solar
c. 600MW



Glenellen Solar
c. 200MW



Uungula Wind
c. 400MW

**+ other projects
in QLD, NSW,
ACT & SA**

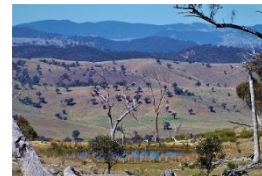
Construction & Operations



Boco Rock Wind
113MW



Sapphire Wind
270MW



Crudine Ridge
135MW

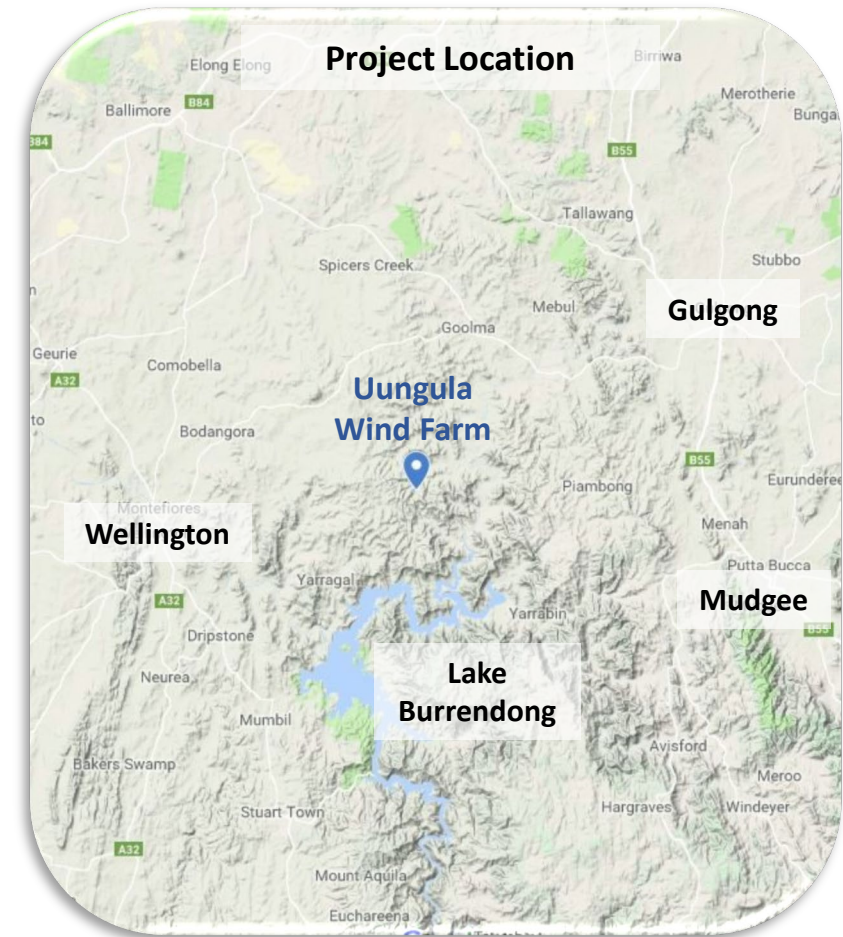
**518 MW
financed since
2013**

Uungula Wind Farm

Uungula Wind Farm is proposed between Wuuluman and Twelve Mile, north of Lake Burrendong approximately 14 east of Wellington, NSW.

- Generating capacity of approximately 400 MW.
- Up to 125 wind turbine generators (WTGs).
- Ancillary infrastructure: site offices, internal roads, hardstands, underground and overhead cabling, monitoring masts, substation, a battery and a switching station.
- Temporary facilities: site compounds, laydown areas, stockpiles, rock crushing and concrete batch plants, temporary roads.
- Primary site access will be a new site entrance from Twelve Mile Road, approximately 17km east of Wellington. Secondary access points on Twelve Mile Road, Uungula Road and Ilgingerry Road.

The Project Design has changed extensively in response to community feedback, environmental investigations, market dynamics and technological advancements changes over time.



Community Consultation



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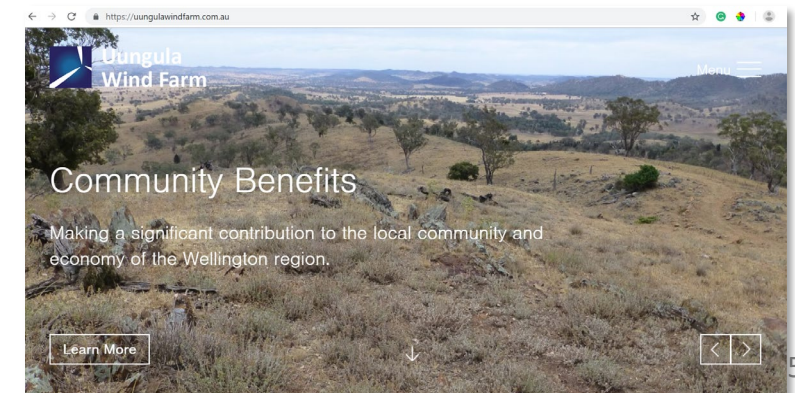
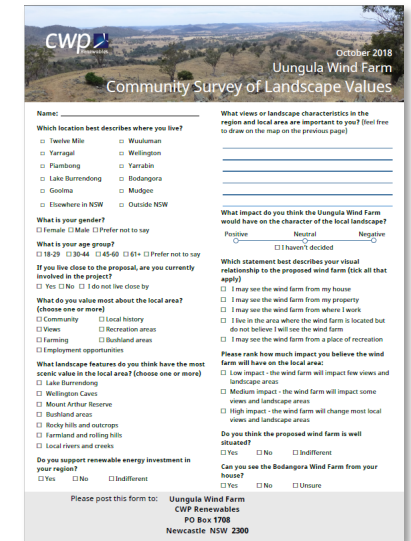
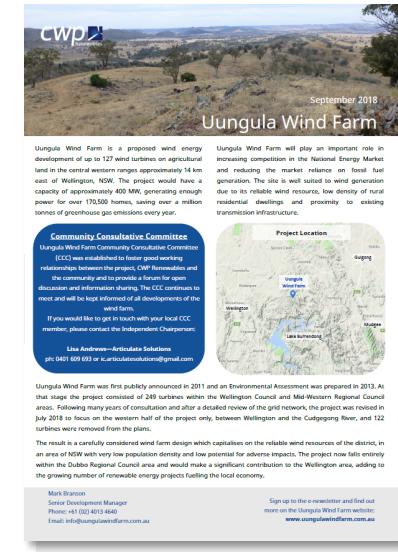
Community consultation has been underway since 2011. The lengthy development period has allowed for detailed consultation and extensive revision of the Project in response to community feedback.

Community consultation in the region is ongoing:

- Project announced in 2011 with newsletters and door knocking.
- Community Open Day held in Goolma in February 2012 (attended by almost 100 people).
- Community Consultative Committee established in 2013, three meetings were held.
- Direct visits to landowners who may be affected by the project to discuss potential impacts.
- Website established with regular updates, e-newsletter signup, contact forms, contractor enquiry form.
- 6 x E-newsletters sent to 144 subscribers since 2011.
- Website revitalized in early 2018 with more advanced information and a better interface.
- CCC re-advertised in August and re-established in October 2018.
- Newsletters mailed to all dwellings within 8km and along the transport route in September 2018.
- Community landscape values survey distributed in October 2018.
- A Public Open Day will be held prior to the EIS exhibition period.
- E-newsletters, mailing lists, landowner visits will continue to be used.

The CCC is an important forum for information sharing and feedback with the community.

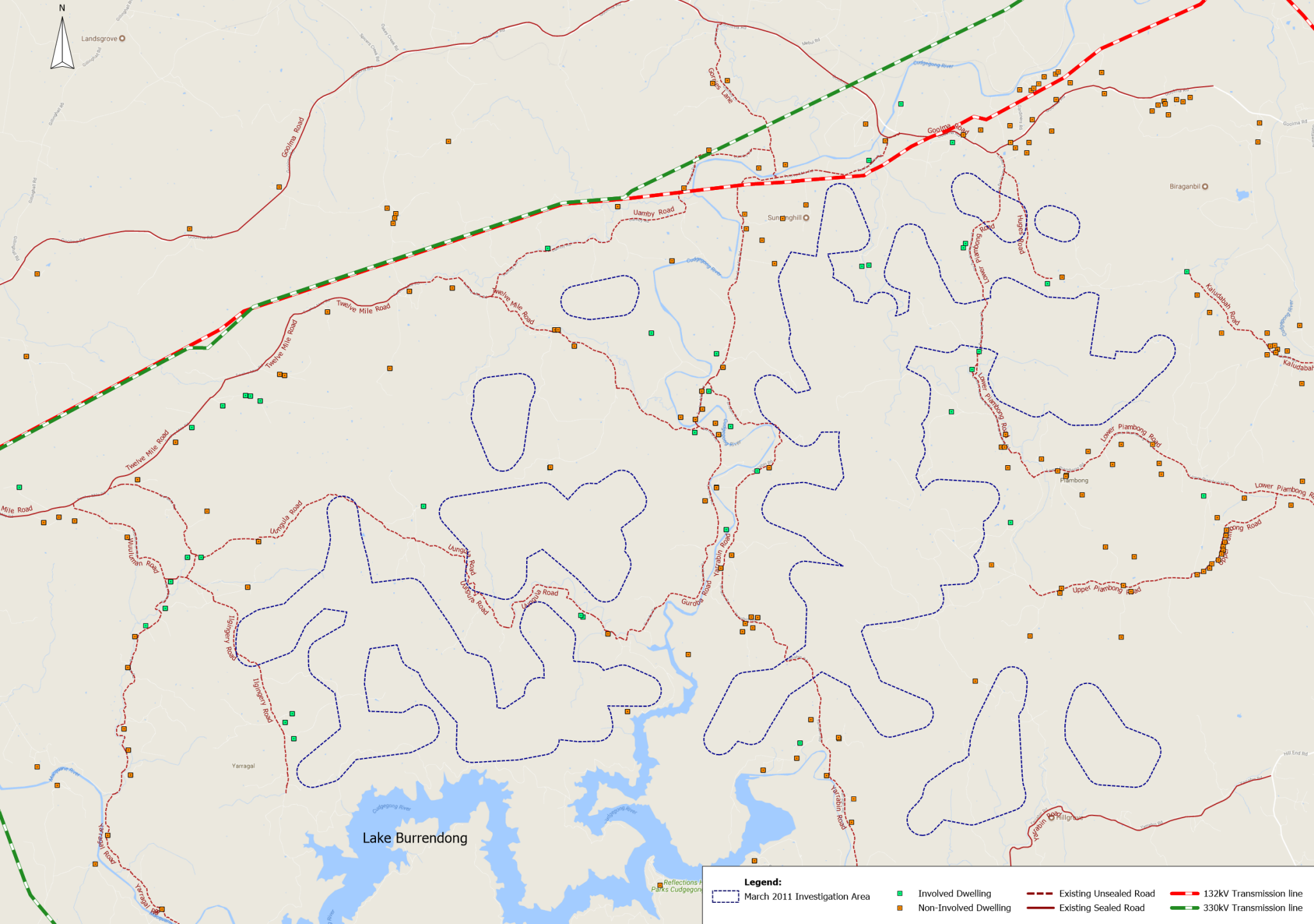
Commercial in Confidence



Iterative Design

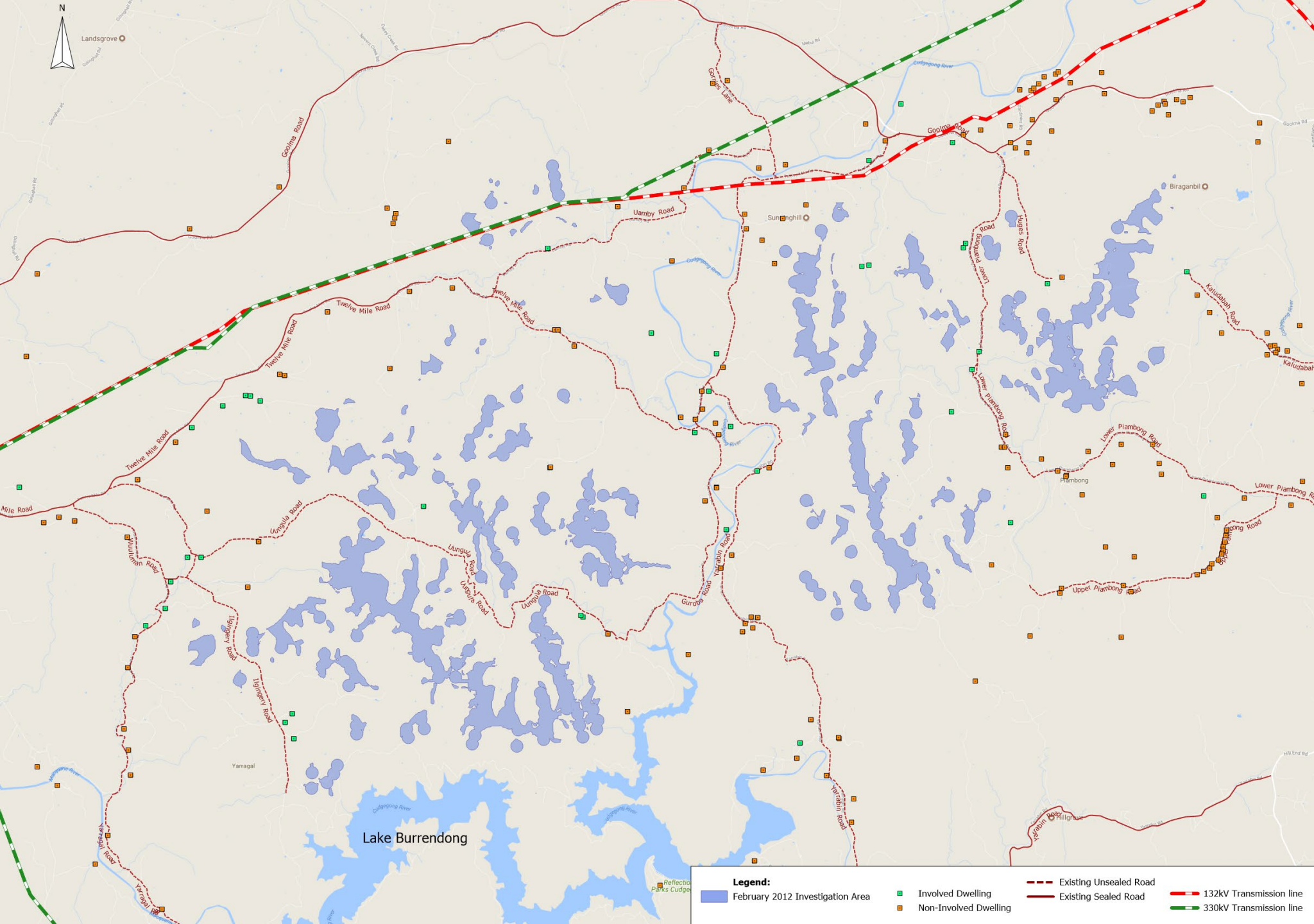
- In 2011 Uungula Wind Farm consisted of approximately 330 WTGs.
- In 2013 the draft Environmental Assessment refined the Project to 249 WTGs, avoiding highly sensitive areas and reducing visual impacts.
- After many years of consultation and a detailed review of the transmission network, the project was significantly revised in July 2018: 122 WTGs were removed, leaving 127 WTGs proposed.
- Ongoing consultation has further refined the Project to 125 WTGs, giving consideration to visual amenity, noise, biodiversity, heritage, traffic and transport and communications impacts.
- The result is a carefully considered wind farm design which capitalizes on the reliable wind resources of the district but is sympathetic to the regions aesthetics and rural lifestyle.
- The following maps demonstrate the iterative design process to date. Consultation and iterative design continues, and further changes may occur.





March 2011

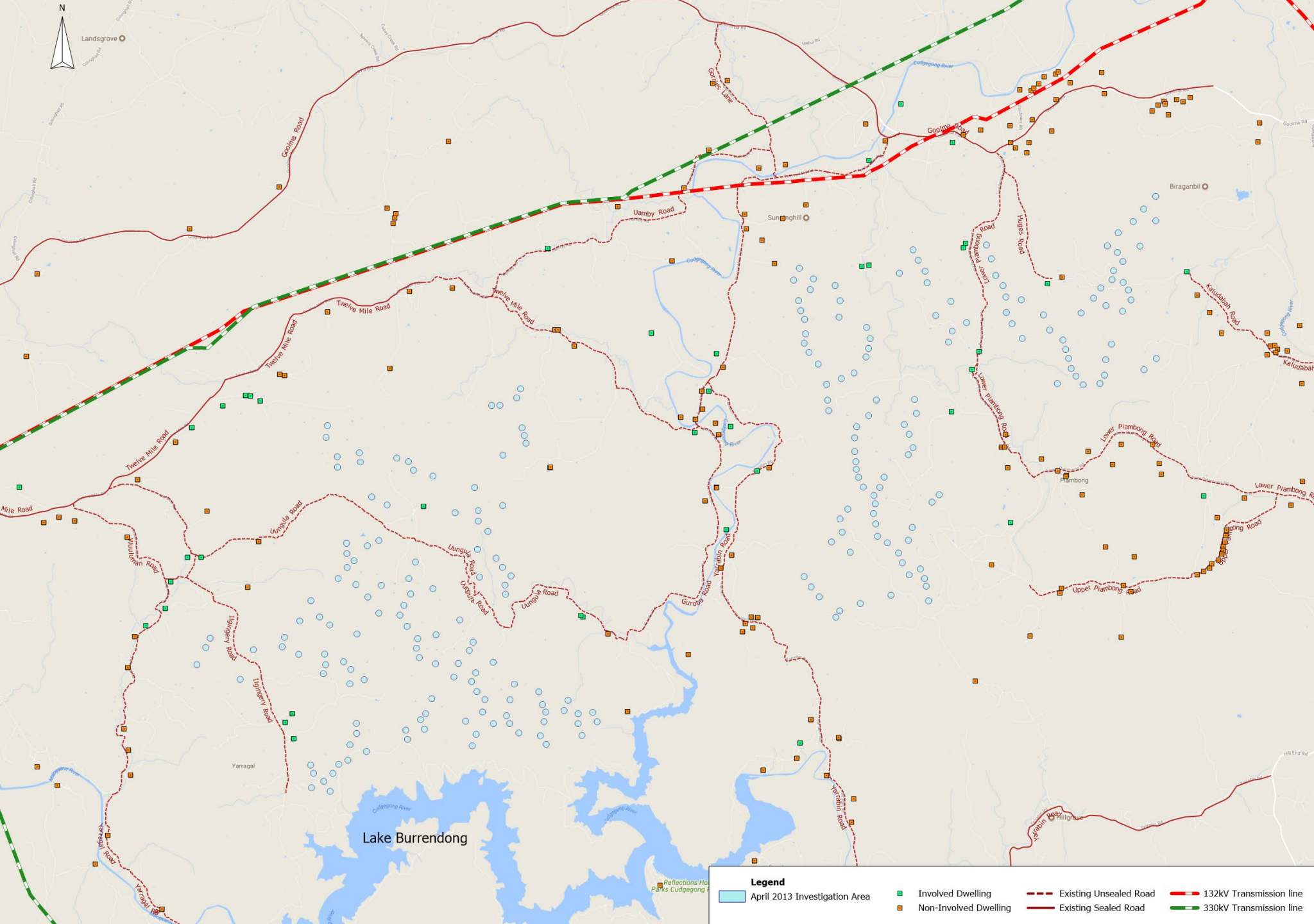
Preliminary Environmental
Assessment investigation area.



February 2012

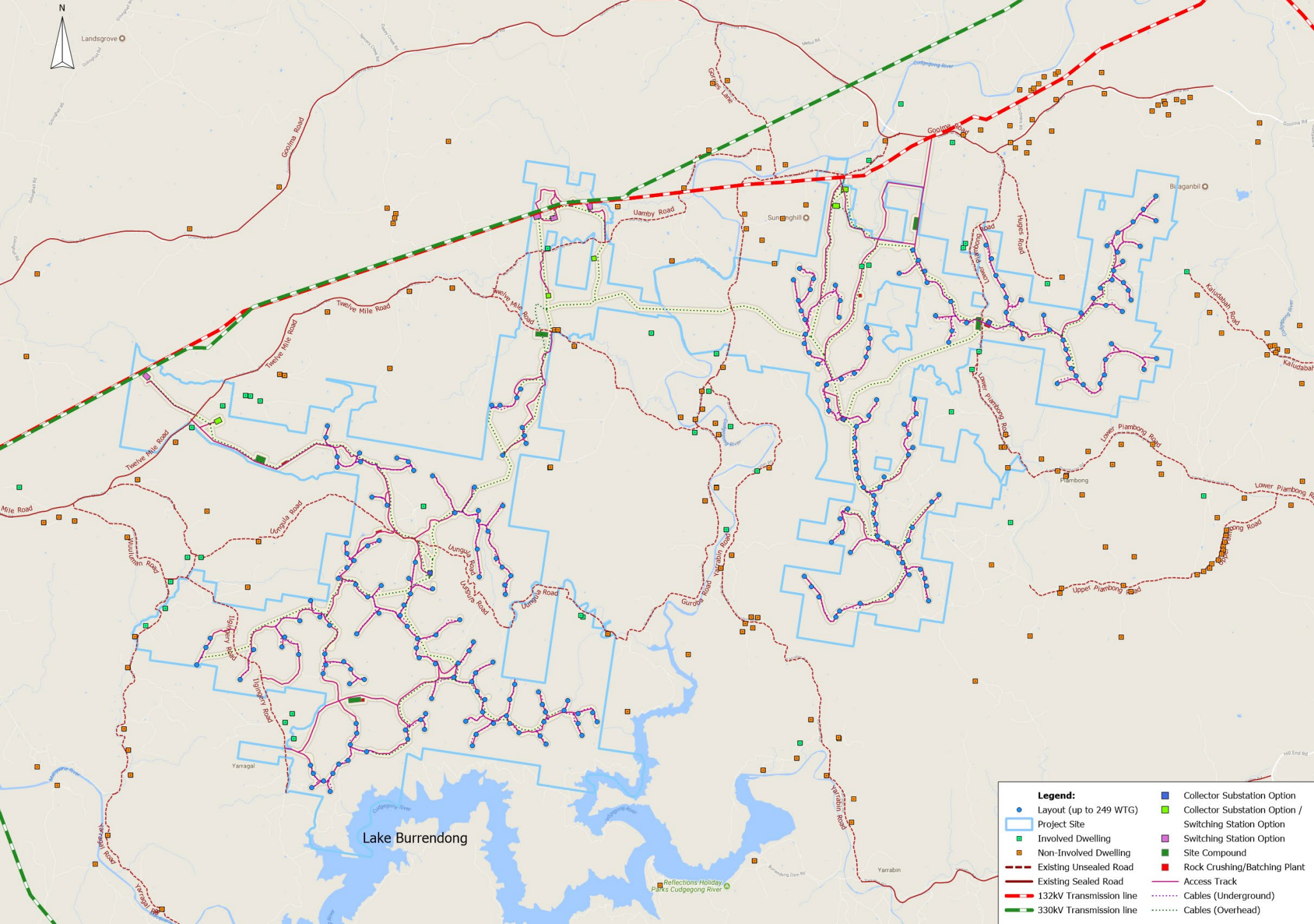
Investigation area is refined avoiding highly sensitive areas and reducing visual impacts.

Up to 330 WTGs under consideration.



April 2013

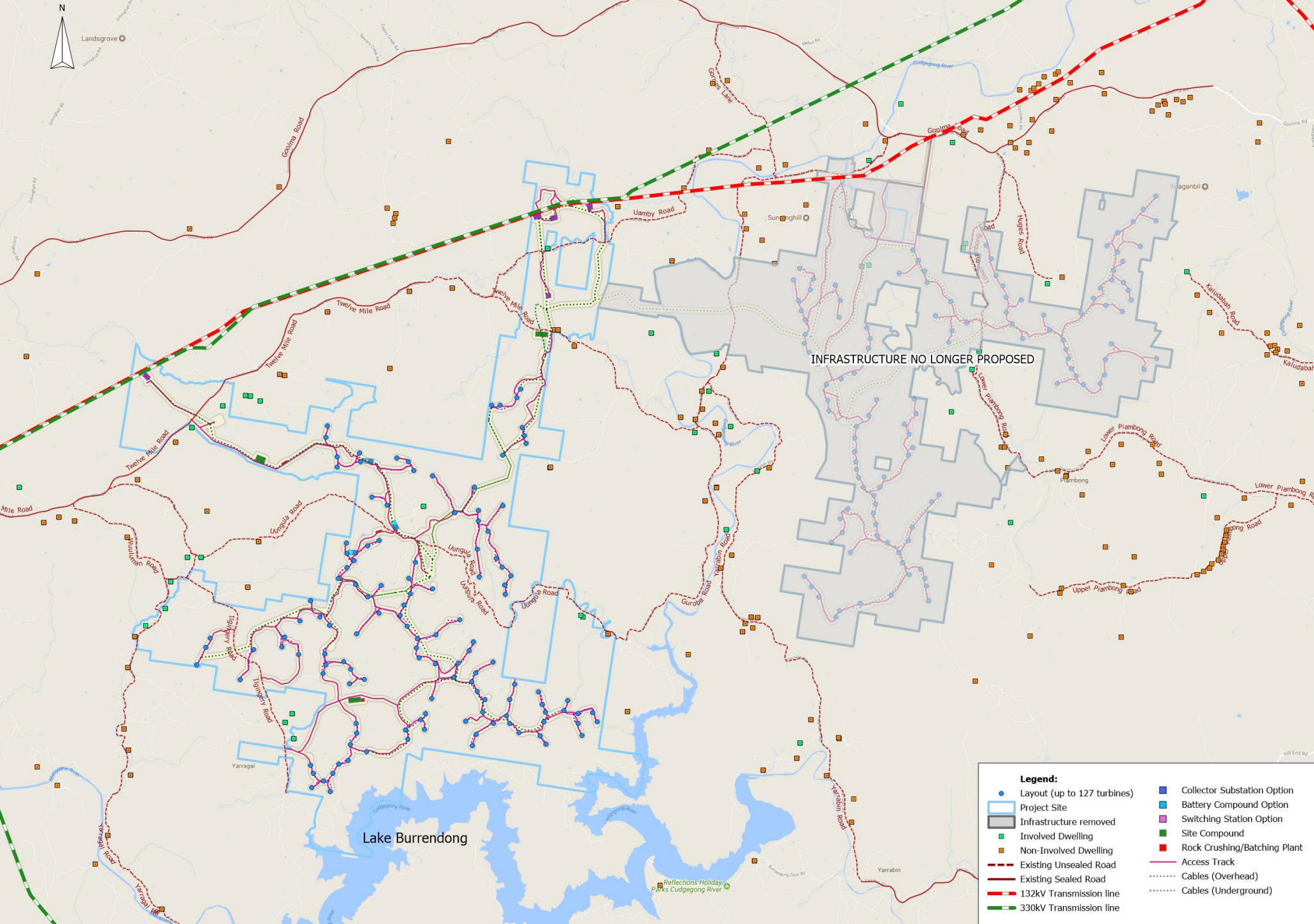
249 turbine sites under investigation.



May 2013

Project design refined to include access tracks, electrical layout and other infrastructure areas.

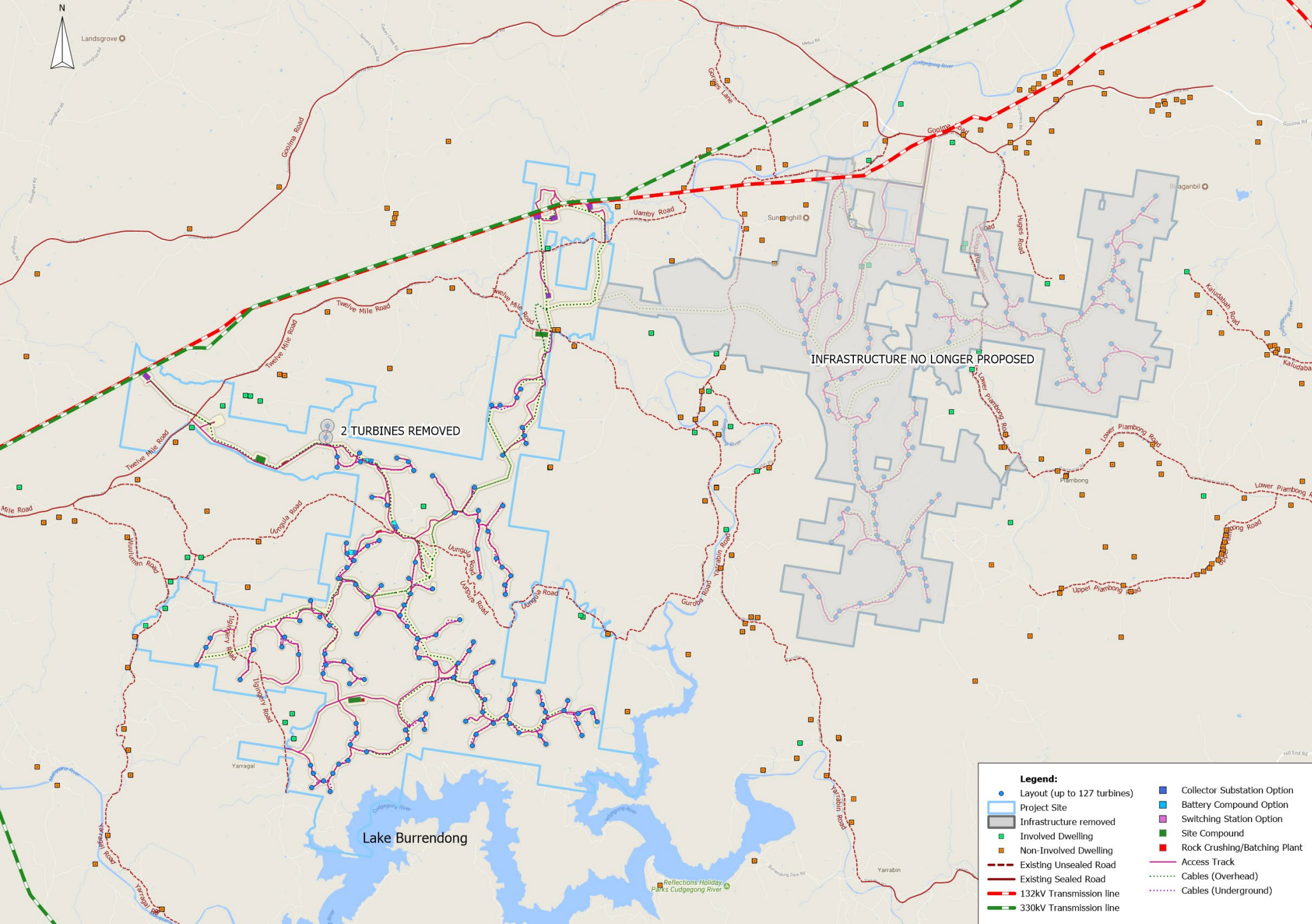
Draft Environmental Assessment prepared and submitted for Adequacy.



July 2018

Following extensive consultation with local community, eastern half of project infrastructure is removed.

122 WTGs were removed, leaving 127 WTGs proposed.

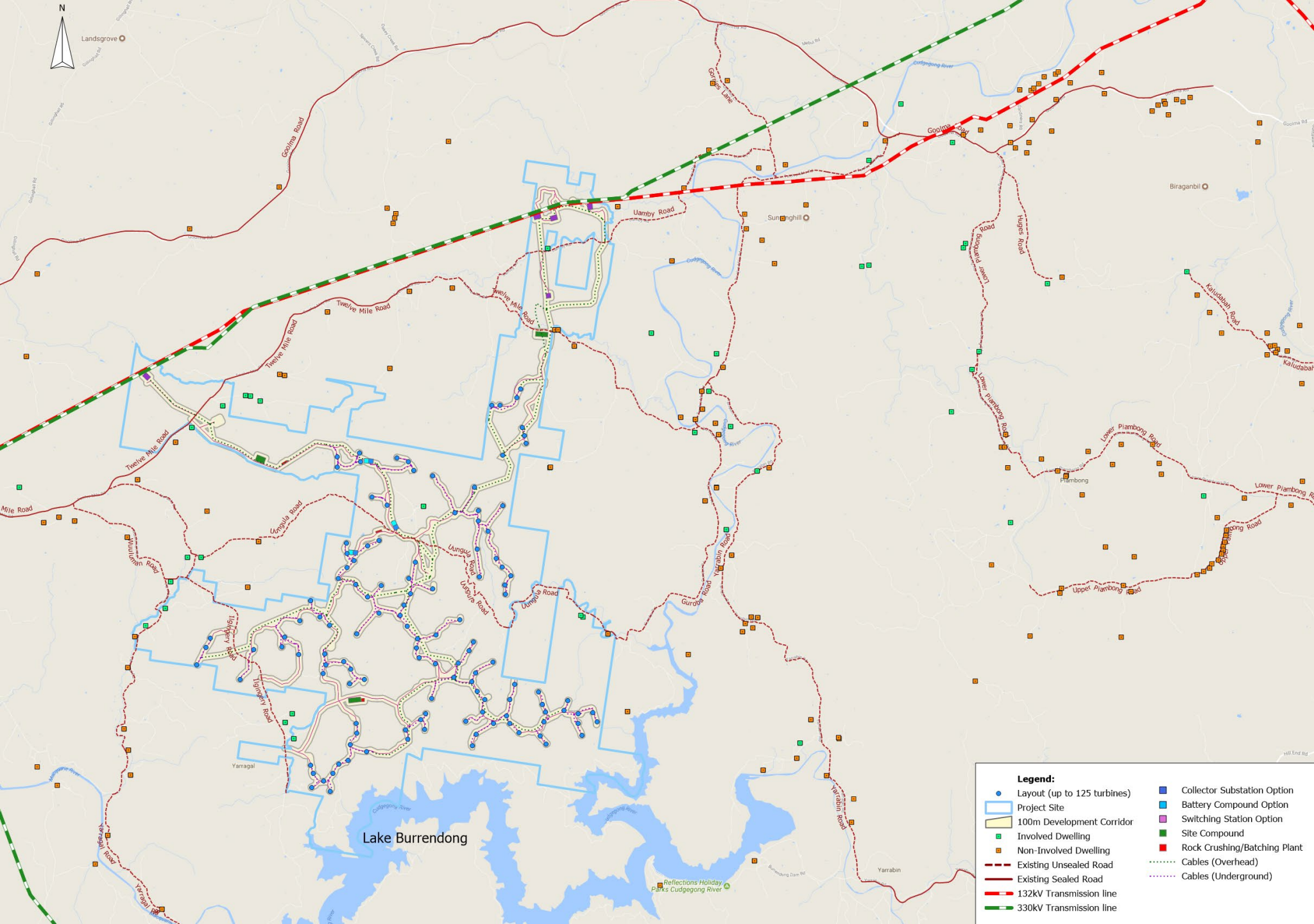


September 2018

2 WTGs removed from the north west following consultation with neighbouring landowner.

125 WTGs remain proposed.

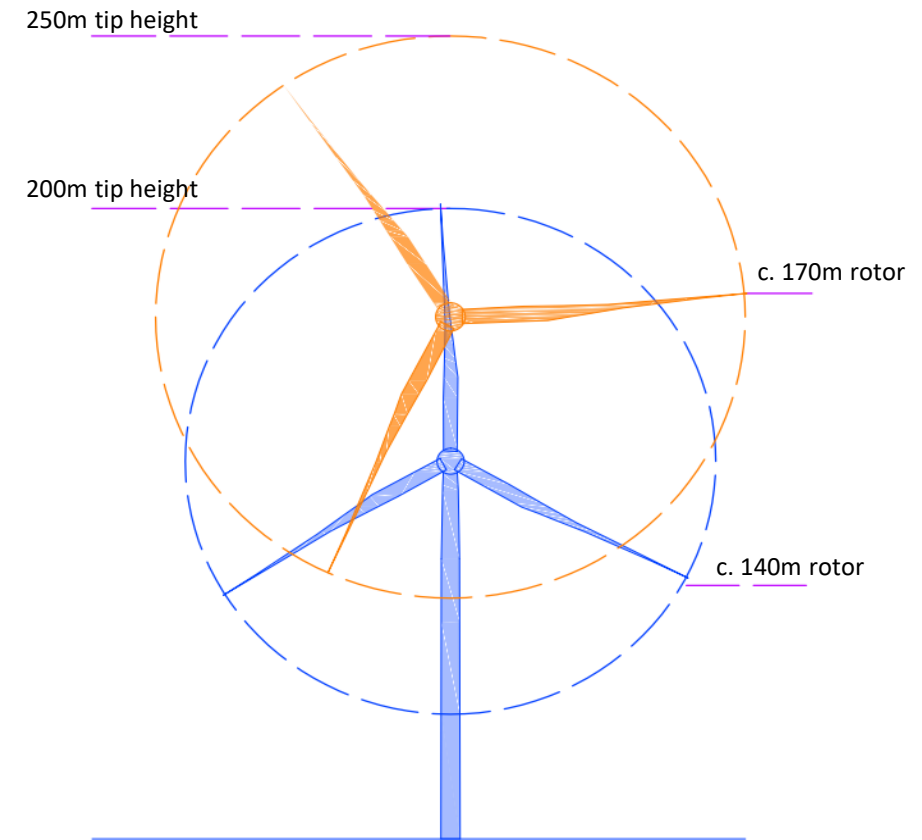
Locations for a large scale battery compound added to layout.



October 2018
 Current project layout.
 125 WTGs proposed.

Project Description

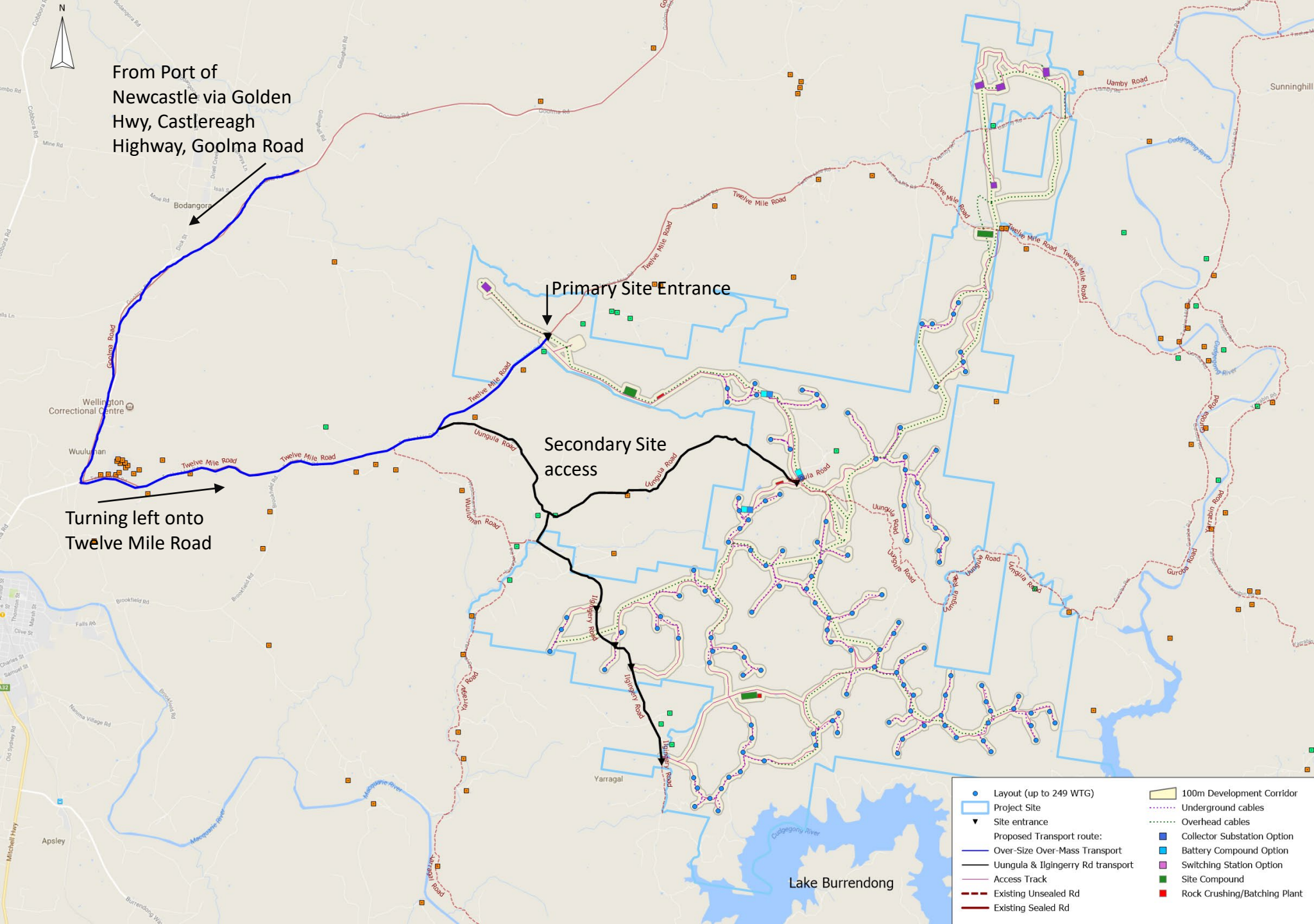
- The proposed Project would comprise up to 125 WTGs, ancillary infrastructure and temporary facilities.
- The dimensions of the WTGs anticipated to be on the market in 2021 are currently under review. Turbine technology continues to advance trending toward longer blade lengths and higher hub heights. Selection of WTGs will occur through a competitive tender process pending Development Approval.
- A WTG between 200 m and 250 m is being considered, with anticipated dimensions as follows:
 - Maximum blade tip height 250 m
 - Rotor diameter of approximately 170 m
 - Hub height approximately 125 – 165 m
 - Ground clearance approximately 40 – 80 m
 - Generating capacity upwards of 4MW per WTG
- Larger WTGs provide greater generation from fewer WTGs, lowering the levelized cost of electricity.
- We are working closely with neighbours and the community to assess the impacts of the larger WTGs, including a Landscape Values Survey and direct consultation.
- Currently undertaking a thorough analysis of all associated Project impacts, particularly visual amenity.
- The Project design will comply with the requirements of the *NSW Wind Energy Guideline* (DPE 2016), *Wind Energy: Visual Assessment Bulletin* and *Wind Energy: Noise Assessment Bulletin*.



Roads and Transport

- WTG components will most likely be delivered to site from the Port of Newcastle.
- The over-dimensional transport route to site would be via Golden Highway, Castlereagh Highway, Goolma Road turning onto the western end of Twelve Mile Road.
- Ungula Road and Ilgingerry Road are currently being evaluated for their capacity to handle over-dimensional equipment and standard heavy vehicles.
- The Project will reach agreement with Dubbo Regional Council about upgrades and maintenance of these roads to ensure they can safely handle the required Project transport.
- Road dilapidation assessments will be used to inform the upgrade and maintenance procedures.
- Dust suppression and noise controls will be used to minimize impacts on local residences.
- Transport will be tightly controlled with a Transport Management Plan (TMP) and use of a specialized wind farm logistics carrier. The TMP will include:
 - Traffic Control Procedures
 - Dust and Noise mitigations
 - Bus routes and other safety considerations
 - Management measures to mitigate impacts on local residences





Community Benefits

- The Project will yield significant benefits for the Wellington community and Dubbo Regional Council over the life of construction and operations:
 - Approximately 250 full time jobs during construction.
 - Approximately 20 full time jobs during operations.
 - Numerous large supply and service contracts.
 - Neighbour Agreements providing direct remuneration to Project neighbours.
 - Rates and levies paid by the Project direct to Council.
 - Road upgrades and maintenance agreements between the Project and Council.
 - Increased employment providing flow on effects for local business and service providers.
- A community investment program currently being rolled out at Sapphire Wind Farm in northern NSW will be investigated for this Project to enable the local community to become a part owner of the wind farm.
- A community benefits fund focused on scholarships and internships is being investigated, with tertiary institutions including Charles Sturt University involved, to reduce long term unemployment and increase workforce participation in the local renewable sector.
- An economic impact assessment is currently underway which will provide further detail on the anticipated flow on effects for the Wellington region from the project.



Project approval process



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The Project will be assessed by the NSW DPE as a State Significant Development (SSD).

- In December 2016 Secretary's Environmental Assessment Requirements (SEARs) were issued to guide the preparation of the Project EIS.
- The SEARs include Commonwealth Environmental Assessment Requirements which will be assessed under the Accredited Assessment approach.
- An Environmental Impact Statement (EIS) is currently being prepared and will be on public exhibition in early 2019.
 - The EIS will be on public exhibition for approximately two months to receive public submissions.
 - A Response to Submissions (RtS) will be prepared by the Proponent to address every submission.
 - The DPE will evaluate the EIS and the RtS and prepare an Assessment Report for the NSW Independent Planning Commission (IPC) and Commonwealth Government.
 - The IPC and Commonwealth Government will independently consider and assess the Project in accordance with their own process, on the basis of the Assessment Report, before making their own determination.
- Further information can be found on the DPE website: <http://majorprojects.planning.nsw.gov.au/>



Environmental Impact Statement

An Environmental Impact Statement (EIS) is currently being prepared in accordance with SEARs, the NSW Wind Energy Framework (DPE 2016), Wind Energy: Visual Assessment Bulletin and Noise Assessment Bulletin.

The following technical studies are currently underway and will be included in the EIS:

- **Landscape and visual impact assessment** - Moir Landscape Architecture Pty Ltd
- **Noise and vibration impact assessment** – Sonus
- **Biodiversity assessment report** - Eco Logical Australia
- **Cultural heritage impact assessment** - NSW Archaeology
- **Economic Impact Assessment** – Essential Economics
- **Transport Route Study** – Rex J Andrews
- **Traffic and transport impact assessment** - Samsa Transport Consultants
- **Hazards / risks** – (Aviation, Telecommunications, Health, Bushfire, Blade Throw)

The EIS is expected to be released for public exhibition in early 2019 (available online and in hard copy).

Public submissions will be welcomed, and the community will be notified when it is released. CWP Renewables will then respond to all submissions in a Response to Submissions, which will be reviewed by the Department of Planning and Environment and the Independent Planning Commission.



Timeline



Key next steps:

- Community consultation is ongoing
- Landscape values survey being undertaken
- Technical studies being undertaken for the EIS
- Engagement with Council regarding road upgrades
- CCC meeting in early 2019
- Public Open Day to be held
- Public Exhibition of the EIS in first half of 2019

Contact Us



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The project website will be updated regularly as the project progresses

<https://uungulawindfarm.com.au>

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