

ASSESSMENT REPORT

White Rock Wind Farm

Modification 4 (10_0160 MOD 4)

1 INTRODUCTION

The White Rock Wind Farm (the project) is an approved renewable energy development located approximately 20 kilometres (km) west of Glen Innes in the Northern Tablelands, within the Inverell and Glen Innes Severn local government areas (see **Figure 1**).

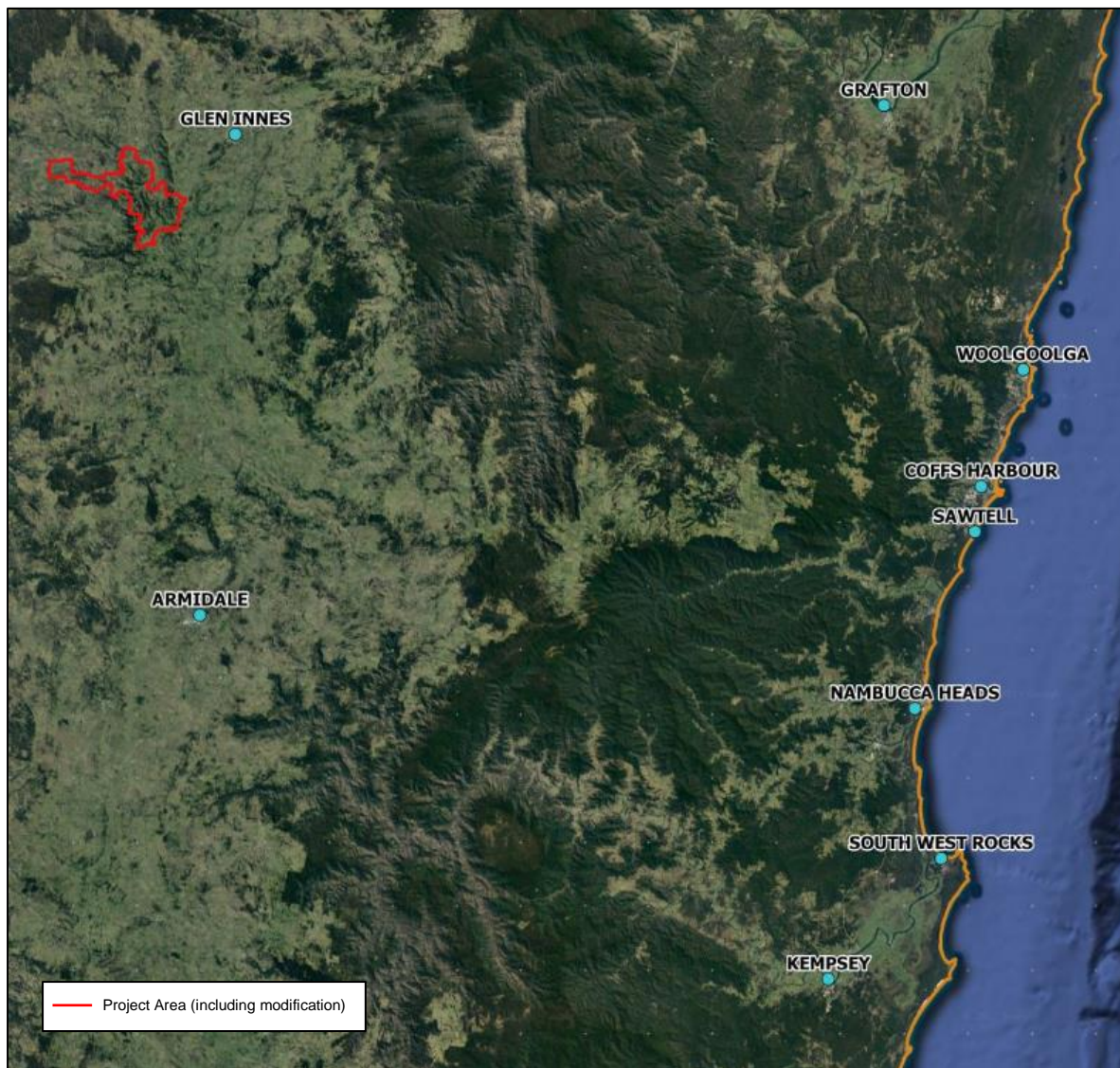


Figure 1: Regional Location

White Rock Wind Farm Pty Ltd (White Rock), a jointly owned subsidiary of Goldwind Capital (Australia) Pty Ltd (Goldwind) and CECEP Wind-Power Corporation, is responsible for managing the construction and operation of the project.

Other wind farms that have been approved in the region include the Glen Innes Wind Farm (approximately 5 km to the east) and the Sapphire Wind Farm (approximately 5 km to the north-west). Construction has recently commenced at the Sapphire Wind Farm, and the Glen Innes Wind Farm has not yet started construction.

The project was approved by the then Deputy Director-General of the Department of Planning and Infrastructure, as delegate of the Minister for Planning on 10 July 2012. A modification application for an alternative transmission line connection (Modification 1) was lodged in September 2012. However, following an investigation and subsequent determination by the proponent at the time (Epuron), the modification was withdrawn in January 2015 prior to determination. This application is discussed further below. A second modification (Modification 2) was approved in 2015 that updated the vegetation clearance limits and operational noise conditions. Modification 3 was approved in 2016 and allowed several changes and additions to construction and operational infrastructure.

The project as currently approved involves:

- construction and operation of up to 119 wind turbines, associated infrastructure and access tracks; and
- up to 8 km of on-site powerlines connecting to TransGrid's existing 132 kV Inverell – Glen Innes transmission line at the northern end of the site.

White Rock proposes to construct the project in two stages:

- Stage 1 – 70 turbines and associated infrastructure; and
- Stage 2 – 49 turbines and associated infrastructure.

Construction of Stage 1 commenced in May 2016 and the project is expected to be operational in the second half of 2017.

Once both stages are operational, the project will have a generating capacity of 297.5 megawatts (MW) of electricity¹.

The project is also declared to be a “critical infrastructure project” under the *Environmental Planning and Assessment Act* (EP&A Act), in accordance with a declaration made by the then Minister for Planning on 11 November 2009 concerning energy generating developments with capacity to generate at least 30 MW.

The declaration of the project as “critical infrastructure” means that the project is, in the opinion of the Minister, essential for the State of NSW for economic, environmental or social reasons.

The approved White Rock Solar Farm (WRSF), also owned by Goldwind, is located within the project area. The WRSF has approval to share critical infrastructure (including any transmission line connection) with the project.

2 PROPOSED MODIFICATION

White Rock is seeking to modify the project approval for the White Rock Wind Farm to facilitate an alternative grid connection and to amend its vegetation clearance limits, as described below.

The proposed modification is described in detail in the Environmental Assessment (EA) that accompanied the application (see **Appendix C**) and supplementary information provided by White Rock (see **Appendix D**).

2.1 Alternative Grid Connection

The proposed modification involves:

- a new 132 kV double circuit electricity transmission line extending approximately 13 km west of the project site; and
- a new switchyard and substation to connect the 132 kV transmission line to the existing 330 kV Armidale - Dumaresq transmission line (operated and managed by TransGrid) that forms part of the Queensland - NSW interconnection system.

¹ Assumes 119 turbines with generation output of 2.5 MW per turbine.

The alternative grid connection would require an extension of the project area, involving four additional private landholdings covering approximately 3,367 hectares (see **Figure 2**). These landholders have been notified of the modification application, and White Rock would be required to reach access agreements with these landholders prior to construction of the transmission line and associated infrastructure.

The proposed transmission line also crosses several Crown roads, reserves and waterways. White Rock's consultation in relation to this land is discussed in Section 4.

Of the proposed modification area, the proposed development footprint would require an easement of 50 m, and a substation footprint of approximately 4 hectares, resulting in a potential disturbance of up to 69 hectares (~2% of the modification area).

The transmission line easement would include a 15 m wide clearance zone, temporary access tracks and support footings for each pole. Single concrete poles would be spaced at approximately 250 m, and would be maximum height of 35 m. Individual pole support footings would generally sit at a depth of 5 m, with a typical diameter measuring 1.2 m.

The pole components would be delivered to the site in sections approximately 12 to 16 m in length. The substation component would also be delivered to the site under police escort. The construction period would be approximately 12 months, and is scheduled for completion prior to the commencement of Stage 2 operations.

The proposed modification area would comprise of mostly cleared agricultural land used for light grazing and some cropping, with some patches of remnant woodland vegetation (see **Figure 3**). The alignment of the proposed transmission line has been selected to avoid areas of vegetation as much as possible.

The topography in the proposed modification area is undulating, with two non-associated receivers located within 2 km of the proposed transmission line corridor (R124/AX110 and R123/A125). The closest non-associated residence (R124/AX110) would be located approximately 0.9 km from the transmission line and 2.7 km from the proposed substation location. An existing 132 kV transmission line runs between the proposed transmission line corridor and the Gwydir Highway to the north.

The major transport link in the region is the Gwydir Highway (State Road), which runs in an east-west direction to the north of the modification area and provides a link to the site from Glen Innes and Inverell.

A series of local unsealed roads, including Spring Mountain Road and Sturmans Road, would also provide access to the modification area.

As noted above, Modification 1 contemplated a similar grid connection proposal, but was withdrawn prior to determination. White Rock has considered the submissions received from the government agencies for that application and sought to address these issues in selecting the final design put forward in the current modification application. Specifically, the proposed transmission alignment now avoids an area of endangered ecological vegetation and two identified indigenous heritage sites (scar trees). These aspects are discussed further in Section 5.

2.2 Vegetation Clearing

During the assessment process, White Rock also identified the need to account for additional vegetation clearance as part of the approved Stage 1 construction works.

White Rock has acknowledged that since the clearing limit was established in 2012, it has developed a more detailed knowledge of the site and subsequent clearing requirements for the project. The project approval currently includes a clearance limit of 22 hectares of Ribbon Gum Woodland endangered ecological community (EEC). Following detailed desktop analysis, White Rock has identified that a further 6 hectares of Ribbon Gum Woodland EEC would need to be cleared to enable the construction of Stage 1. As a result, White Rock is seeking to increase its vegetation clearance limit for the project to a maximum of 28 hectares of Ribbon Gum Woodland EEC, which it proposes to offset using its existing offset located on the 'Tangari' property, adjacent to the wind farm.

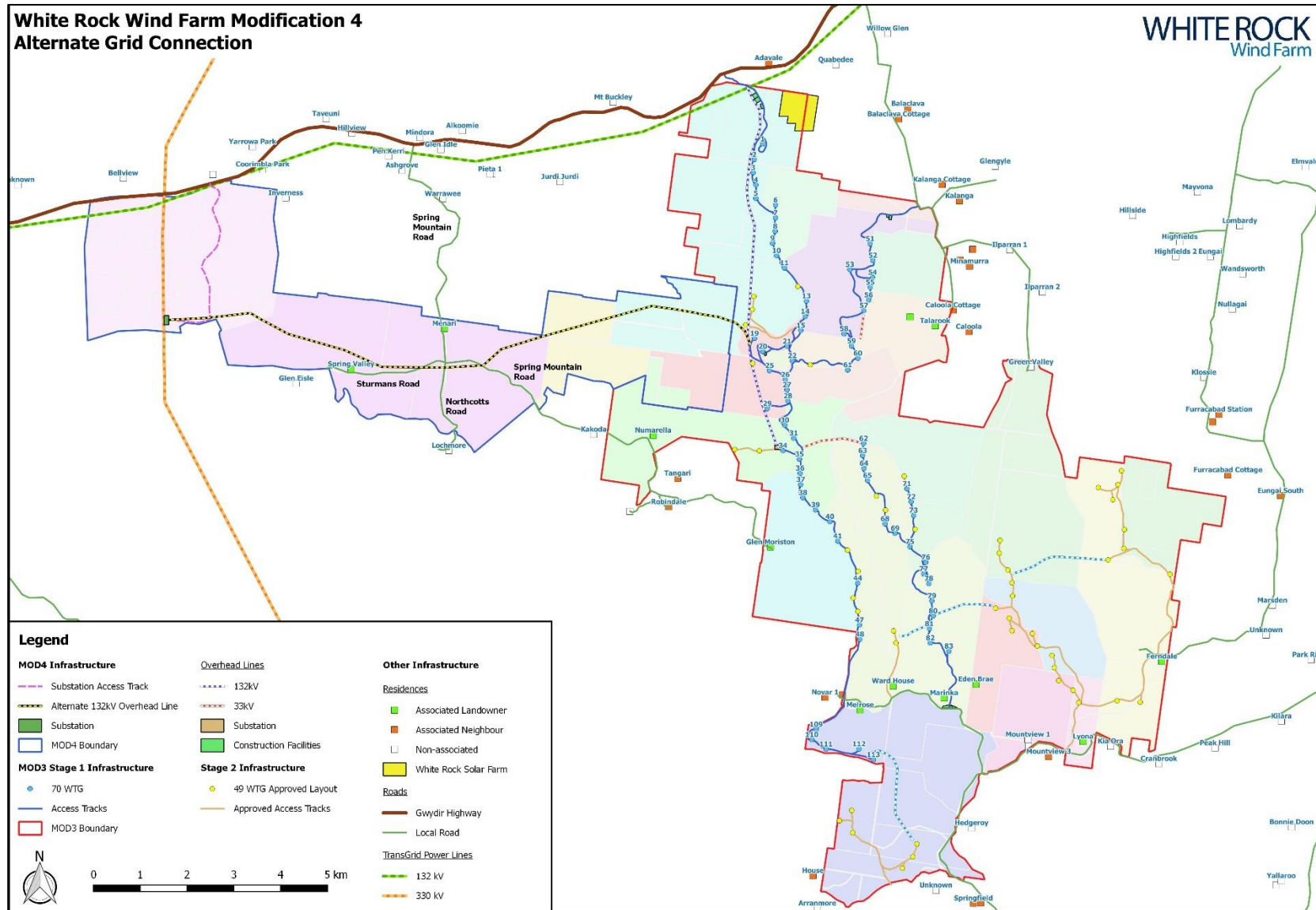


Figure 2: Land Ownership

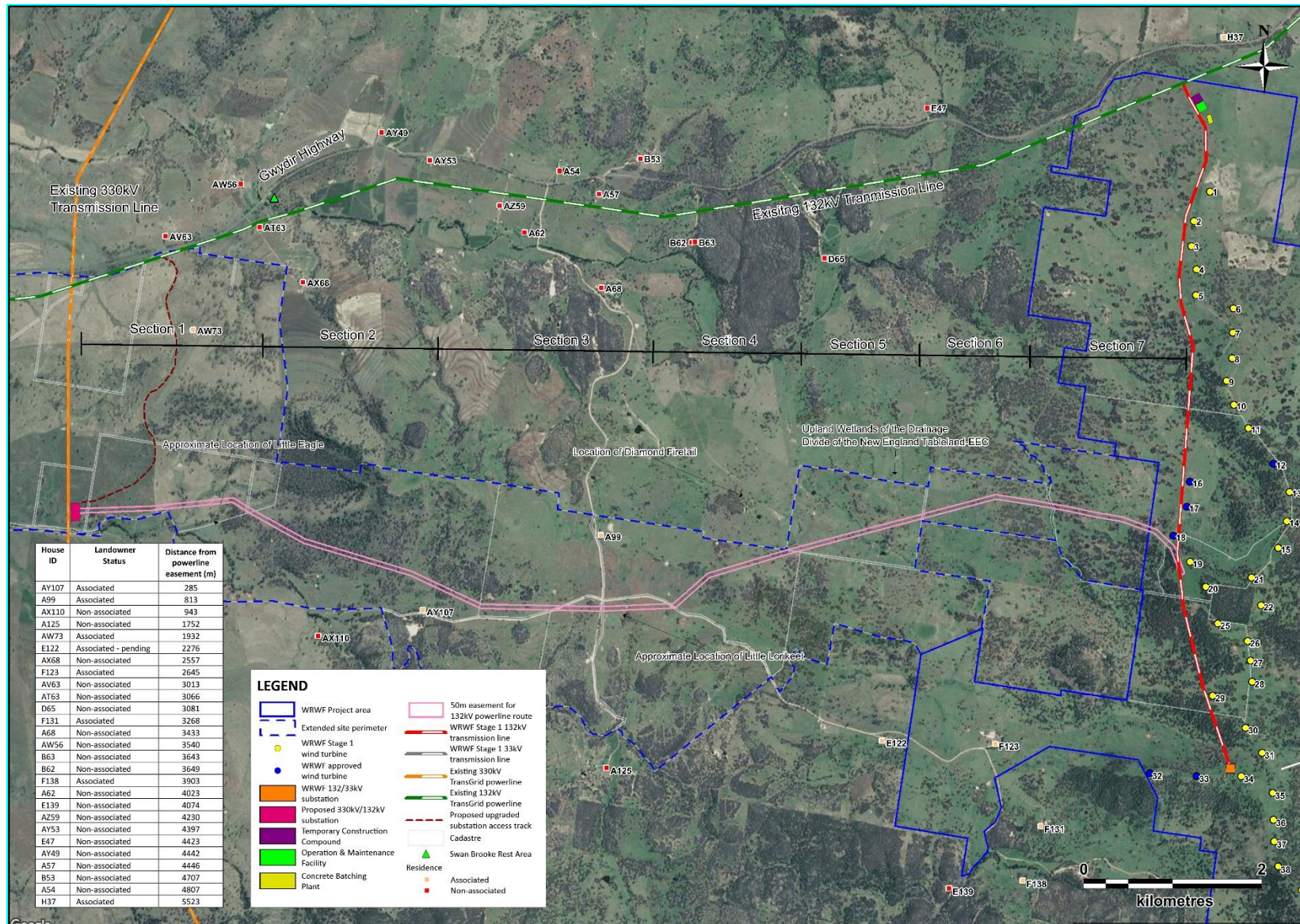


Figure 3: Proposed Alternative Grid Connection Layout

3 JUSTIFICATION

The New England region of NSW has been highlighted in the NSW Renewable Energy Action Plan as a prime area for developing renewable generation. **Figure 4** shows the current available grid connection options for renewable energy projects in north-eastern NSW.



Figure 4: High voltage transmission line network of north-eastern NSW

Currently, the local 132 kV transmission line from Glen Innes to Inverell has a capacity limit of approximately 170 MW. This capacity limit is equivalent to the combined output of the turbines from Stage 1 of the project and the WRSF. Without an alternative grid connection, future development of Stage 2 of the project and/or the solar farm would be limited.

The main reason behind the currently identified capacity restriction is that since planning approval was granted for the project in 2011, turbine technology has continued to advance in which similar energy outputs can be achieved with fewer, larger turbines.

The original project Environmental Assessment (2011 EA) conservatively estimated the potential output and emissions savings of the project assuming a 2 MW wind turbine. This conservative approach aligned with the potential for capacity constraints on the 132 kV transmission line.

White Rock's justification for the proposed modification is that it would allow the project to connect to the existing 330 kV line, which has a significantly higher capacity (i.e. approximately 1000 MW), and therefore would support the full optimization of the project. Specifically, it would allow more efficient performance of the Stage 1 turbines and allow for the full development of both the Stage 2 turbines and the WRSF.

By enabling the complete development of the project's 119 turbines using current technology, the proposed modification would enable the social and economic benefits of the project to be maximized without any material increase in environmental impacts.

In this regard, the calculated output of the project in the 2011 EA was estimated at around 238 MW (i.e. 2 MW/turbine), with electricity generation of approximately 830,000 MWh a year. By allowing the full development of Stage 2, White Rock has calculated that the actual benefits of the project would be closer to 297 MW (ie. 2.5 MW/turbine), which would generate enough electricity to supply around 162,500 households based on average consumption levels (which represents an additional 32,500 households compared to what was approved in 2012).

Further, subject to future planning approval, the proposed modification would enable White Rock to explore further opportunities to optimise the output of the Stage 2 turbines (for example, with larger more efficient turbines up to 3.4 MW). This would have the potential to increase the total energy output of the project to around 341 MW, which is enough energy for up to 185,900 households based on average consumption levels.

White Rock also notes that the proposed modification would provide indirect benefits for the neighbouring Glen Innes Wind Farm. Due to the current capacity restrictions outlined above, it is unlikely that the Glen Innes Wind Farm would be able to transmit its full output potential once operational. By freeing up capacity on the existing 132 kV transmission line, the modification would not only facilitate the full output from the Glen Innes Wind Farm, but also the development of other renewable energy projects in the region.

4 STATUTORY CONTEXT

4.1 Section 75W Modifications

The project was originally approved under the former Part 3A of the EP&A Act. Although Part 3A was repealed on 1 October 2011, the project remains a “transitional Part 3A project” under Schedule 6A of the EP&A Act and is to be assessed and determined under Section 75W of the EP&A Act.

Based on its assessment (see Section 5), the Department is satisfied that the application can be characterised as a modification. The modification request does not seek approval for a new or fundamentally different project, but for an extension of the project area to accommodate the project’s ancillary infrastructure that would facilitate full optimisation of the approved project. The proposed modification would not alter the approved wind turbine locations, and would be located on land similar to the current project. The additional disturbance footprint would only represent a small proportion of the currently approved project area and would not significantly increase the environmental impacts of the approved project (see Section 5). Consequently, the Department considers that the proposed modification is within the scope of Section 75W of the EP&A Act.

4.2 Approval Authority

The Minister for Planning was the approval authority for the original project application. Consequently, the Minister for Planning is the approval authority for this modification request. However, under the Minister’s delegation of 16 February 2015, the Director, Resource Assessments, can determine the proposed modification, as neither of the relevant Councils made an objection, White Rock did not make any reportable political donations and there were no public objections.

4 CONSULTATION

The Department publicly exhibited the application and accompanying documentation from 24 January 2017 until 21 February 2017. The supplementary information regarding the vegetation clearance was made available on the Department’s website on 27 April 2017.

To supplement the formal exhibition process, White Rock also undertook its own consultation with the local community and government agencies. White Rock has provided regular updates to the project Community Consultative Committee and made information about the proposed modification available via the project newsletter (distributed to all residences within 10 km of the project), website and its local shop front in Glen Innes. White Rock advised it received no comments from the general community or the Community Consultative Committee on the proposed modification. White Rock also directly notified the landowners within the proposed modification area.

The Department received advice from 10 government agencies, none of which object to the proposed modification. A summary of the advice is provided below. Full copies of the submissions are provided in **Appendix E**. White Rock’s response to the issues raised in submissions is provided in **Appendix F**.

Although TransGrid did not make a formal submission, a letter of support was provided as part of the modification application.

The **Office of Environment and Heritage (OEH)** initially raised some concerns about the biodiversity assessment methodology and calculation of impacts (specifically ecosystem credits), which White Rock responded to in its response to submissions. Following further consultation, OEH confirmed it had no residual concerns subject to White Rock updating the project's biodiversity offset package to incorporate the agreed offset calculations. The Department has considered this matter further in Section 5.1 of this report. In relation to Aboriginal heritage impacts, OEH supported the recommendations made in White Rock's heritage assessment, including the proposed update of the project's Construction Heritage Management Plan.

The **Roads and Maritime Services (RMS)** initially raised some concerns about potential construction traffic impacts and the capacity of the proposed site access points/intersections. The RMS initially requested an updated Traffic Impact Assessment and expressed concerns about the intersection safety of the main site access intersection off the Gwydir Highway. However following review of additional information provided by White Rock and further consultation with the Department, the RMS agreed that its concerns could be addressed via an update of the CTAMP. The Department has considered this issue, and the RMS' recommended road upgrade requirements, in Section 5.2 of this report.

The **Environment Protection Authority (EPA)** noted that White Rock has committed to implementing all feasible and reasonable work practices to minimise construction noise impacts. The EPA also recommended that the relevant project management plans be updated to reflect the modification. The Department agrees and has updated the conditions to include a condition relating to updating and staging of management plans.

The **Department of Industry – Division of Resources and Energy (DRE)** (now Division of Resources and Geoscience) noted that the proposed modification would impact land covered by an existing mining lease (Mining Lease 1505) and recommended consultation with the applicant. DRE also recommended that White Rock should consult with the relevant Councils regarding three local quarry development applications (including one application for increased extraction at Fraziers Quarry located within the proposed modification area), and consider utilising locally sourced construction materials. White Rock subsequently confirmed that it has, and would continue to seek opportunities to use locally sourced construction materials. White Rock also contacted the proponent for Fraziers Quarry (also the leaseholder for Mining Lease 1505), who confirmed its support for the proposed modification. DRE advised it was satisfied with White Rock's response.

The **Department of Primary Industries (DPI)** has no residual issues with the proposed modification but recommended that White Rock update the relevant management plans (specifically the Construction Soil and Water Quality Management Plan) to incorporate the proposed modification.

The **Civil Aviation Safety Authority (CASA)** did not object to the proposed modification, noting it would not pose any increased risk to aviation safety.

Airservices Australia (Airservices) noted that as the maximum height of the transmission line would be 100 m lower than the approved project turbine heights it would not impact the performance of any Airservices Communication, Navigation and Surveillance (CNS) facilities.

The **Rural Fire Service (RFS)** did not raise any objection to the proposed modification but requested that the project's Bushfire Risk Management Plan be updated to incorporate the proposed modification.

Inverell Shire Council raised no concerns with the proposed modification and was satisfied that the existing conditions of approval included adequate requirements to mitigate any potential impacts relating to traffic and road dilapidation.

Glen Innes Severn Council acknowledged the modification application but did not provide any comments.

The Department of Industry – Lands also did not make a formal submission on the application, but provided separate advice to White Rock during the application process. It advised that White Rock would initially be required to obtain a licence to authorise the occupation of the Crown land within the modification area. The Department notes the existing conditions of approval require White Rock to consult with and comply with the requirements of the Department of Industry - Lands in relation to any Crown land affected by the project, and that this obligation would apply to the modification area.

5 ASSESSMENT

In assessing the merits of the modification application, the Department has considered the:

- existing conditions of approval;
- previous EAs for the project, including previous modifications;
- EA for the proposed modification;
- adequacy of White Rock's proposed impact avoidance and mitigation measures;
- submissions and White Rock's response to submissions;
- applicable government policies and guidelines; and
- requirements of the EP&A Act.

The following is a summary of the findings of this assessment.

5.1 Biodiversity

White Rock has sought to avoid and minimise the biodiversity impacts of the proposed modification by locating the proposed transmission line and substation in land that is mostly cleared and disturbed, and refining the design of the transmission line to avoid woodland vegetation where possible. The transmission line alignment has also been designed to avoid any impacts to a small area of vegetation identified as Upland Wetlands of the Drainage Divide of the New England Tableland Bioregion EEC.

The proposed 330 kV substation (comprising 4 hectares of the proposed disturbance footprint) would be in an area of cultivated agricultural land, therefore avoiding the need to clear any vegetation.

Much of the 50 m wide easement for the transmission line would not require any vegetation clearing. Components of the transmission line corridor that would require vegetation clearing include temporary access tracks, a 15 m wide clearance zone and support footings for each pole.

White Rock proposes to further minimise the potential biodiversity impacts of the modification through micro-siting of the transmission line poles and ongoing implementation of the Construction Flora and Fauna Management Plan (CFFMP) that includes measures to minimise vegetation clearance and impacts on threatened fauna and habitat, control noxious weeds and rehabilitate disturbed areas.

The ecological assessments undertaken in 2013 and 2016 identified two EECs listed under the *Threatened Species Conservation Act 1995* (TSC Act) within the proposed transmission line corridor, specifically:

- White Box Yellow Box Blakely's Red Gum Woodland EEC (Box Gum Woodland EEC); and
- Ribbon Gum Mountain Gum Snow Gum Forest Woodland of the New England Tableland Bioregion EEC (Ribbon Gum Woodland EEC).

Approximately 2 hectares of moderate-to-poor condition Box Gum Woodland EEC and 0.13 hectares of moderate-condition Ribbon Gum Woodland EEC would need to be cleared for the transmission line. The Department acknowledges that further avoidance of EEC would be difficult given the most direct alignment is required to ensure maximum transmission efficiency, and that this alignment has been agreed based on the preferences of the host landowners in consultation with White Rock.

OEH noted in its submission that in addition to the direct clearing impacts, a further 11 hectares of derived native grasslands (derived from both EEC woodland communities) would be impacted indirectly, and therefore should be included in the offsetting calculations. White Rock subsequently agreed to offset these impacts, which has been captured in the agreed offset calculations discussed further below.

One threatened flora species, Blackbutt Candlebark (*Eucalyptus rubida* subsp. *Barbigerorum*), was also provisionally recorded near the proposed transmission line. The Department considers the existing micro-siting provisions would enable White Rock to avoid any impacts to this species should it be identified during construction. Notwithstanding, the Department has recommended the CFFMP be updated to include measures to avoid any impacts on this species.

Three threatened bird species listed under the TSC Act (Diamond Firetail, Little Lorikeet and Little Eagle) were also recorded near the proposed transmission line. The EA included tests of significance

for each of these species, which concluded that the proposed modification would be unlikely to have a significant impact on any threatened species known or predicted to occur on the site.

The existing approval requires White Rock to limit clearing of native vegetation for the overall project (Stage 1 and Stage 2) to the minimum extent practicable and limits the clearing of Ribbon Gum Woodland EEC to 22 hectares.

As noted in Section 2, White Rock is seeking to increase its vegetation clearance limit for the project to a maximum of 28 hectares of Ribbon Gum Woodland EEC.

Both the Department and OEH have accepted White Rock's justification for needing to increase its vegetation clearance limits for the Stage 1 construction works, subject to the impacts being appropriately offset.

OEH agreed with White Rock's calculations that a total of 1,269 credits would be required to offset the impacts of Stage 1, comprising the 767 credits in the already approved biodiversity offset package, an additional 251 credits for the estimated additional vegetation clearing for Stage 1 and a further 251 credits for the vegetation clearing required for the alternative grid connection.

White Rock's approved offset package includes a 180 hectare offset area located within the 'Tangari' property, which is adjacent to the project site. White Rock considers that the offset area has sufficient available credits to adequately compensate for the additional biodiversity impacts for the proposed modification. Both OEH and the Department note White Rock would be required to update the offset package and demonstrate that it adequately compensates for the impacts of the proposed modification as part of its staged approach to offsetting the impacts of the project.

Overall, the Department's assessment has concluded that the proposed modification would not significantly increase the biodiversity impacts of the approved project, and that any residual impacts can be managed via implementation of the CFFMP and biodiversity offsetting measures.

5.2 Transport

In its application, White Rock identified that construction and operational traffic for the proposed modification would require access from three separate points off the Gwydir Highway (see **Figure 5**).

In its response to submissions, White Rock prepared an updated CTAMP that detailed predicted traffic inventories and identified upgrade requirements.

White Rock's traffic assessment noted that:

- the proposed modification would generate traffic flows less than 20% of the volume for the WRWF Stage 1 project;
- construction traffic would extend over around 12 months but noted that with variation in phases of the construction, traffic numbers would fluctuate;
- the modification would typically involve 20 to 40 vehicle movements per day (up to a maximum of approximately 60 per day);
- the Gwydir Highway average daily (2 way) traffic flows for the closest recording site (6133) to the west of the proposed substation site is 1446 – comprising around 80% cars and 20% trucks;
- on this basis, the traffic flows attributable to the proposed modification represent about 4% of (2 way) traffic flows on the Gwydir Highway; and
- the timing for construction of the alternative grid connection is such that traffic flows for Stage 1 of the project would have largely been completed and would be focused on the southern end of the site, away from the proposed modification works.

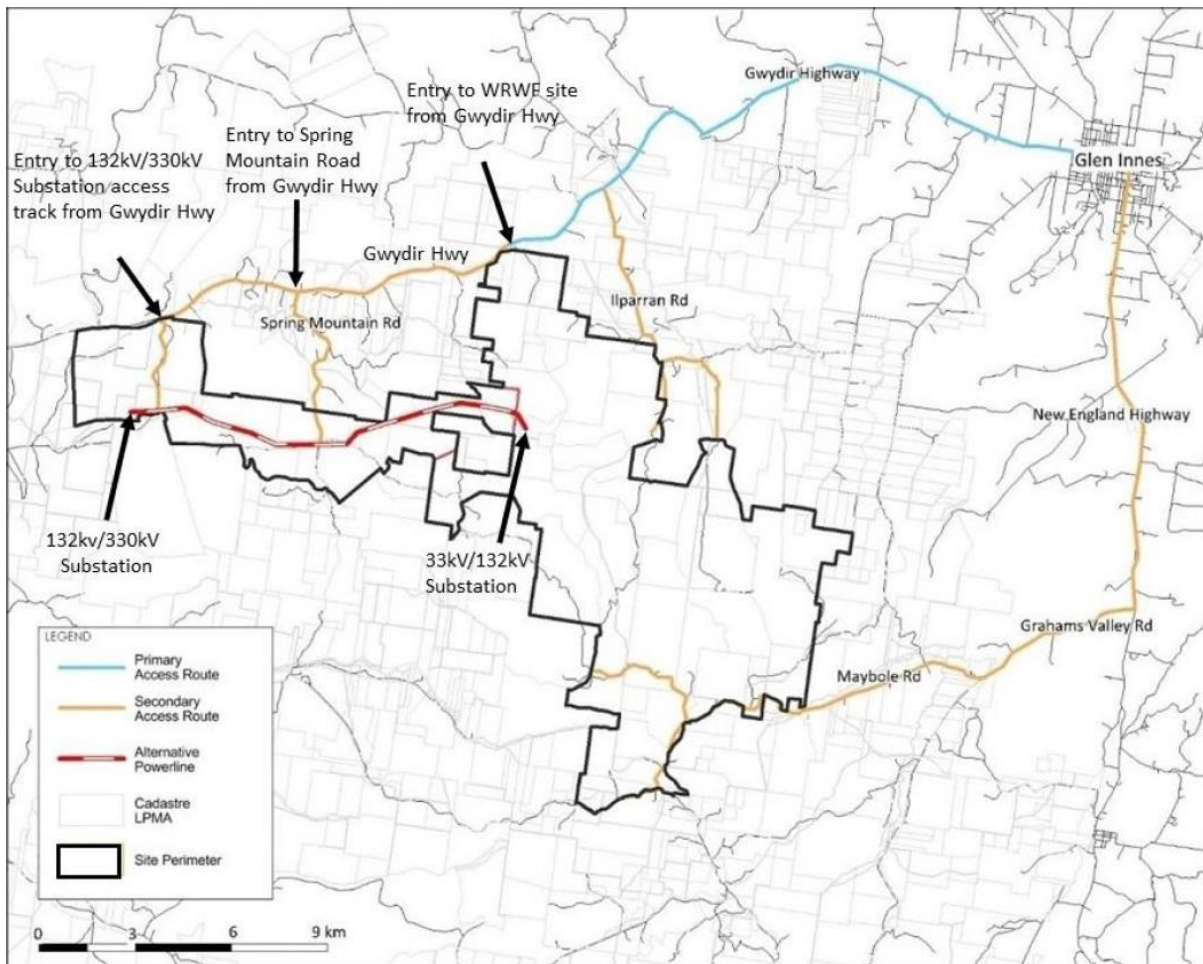


Figure 5: Modification Site Access Points

White Rock also noted that most of the construction traffic (estimated around 90%) would travel from Glen Innes and enter at the western entry point (ie. the substation access road), thereby minimising right-hand access turns off the Gwydir Highway. One over-sized/over-mass delivery of the substation would also occur via this access point. To ensure safe transport of this component, White Rock has proposed to implement the standard traffic control and oversized vehicle arrangements. RMS has indicated that it has no concerns in this regard.

Inverell Shire Council and Glen Innes Severn Council (as the relevant local road authorities) did not raise any objections to the proposed modification, and were satisfied that the current conditions of approval relating road dilapidation and traffic management would adequately address and avoid any impacts.

In relation to road safety, the RMS raised concerns about the lack of detailed assessment of traffic volumes and potential road safety impacts at the intersection of the project site access point and the Gwydir Highway. RMS requested that this information be addressed via an update of the CTAMP, which it requested should be prepared by a suitably qualified person endorsed by the RMS. The RMS also requested that White Rock be required to implement any necessary road upgrades required to address road safety at this intersection.

In the absence of a detailed traffic analysis and taking a conservative approach to ensuring the additional construction traffic (albeit estimated to be relatively low volume) does not cause any increased road safety impacts, the Department agrees with the RMS' recommendations and has reflected these in the recommended conditions. Specifically, the Department has recommended conditions requiring White Rock to prepare an update to the CTAMP that includes:

- a detailed analysis of volumes and distribution of construction traffic for the three site access points on the Gwydir Highway;

- a protocol for assessing road safety and intersection performance, and determining whether any additional upgrades at the project site access point are required to maintain safety of turning vehicles; and
- identification of any necessary road upgrades at the project site access point, and a process for implementing any identified upgrades.

White Rock has accepted these conditions.

In relation to road upgrades, following further consultation with RMS and White Rock, it was agreed that the following works would be undertaken:

- upgrade the intersection of the Gwydir Highway and Spring Mountain Road to provide an Austroads Basic Right Turn (BAR) treatment and Austroads Basic Left Turn (BAL) treatment; and
- upgrade the substation access point to a Typical Rural Property Access standard to the satisfaction of RMS and the relevant Councils.

The Department has reflected the above in the recommended conditions, and notes that White Rock would be required to undertake any upgrades to the satisfaction of the relevant roads authorities. The Department has also recommended a condition requiring White Rock to implement any identified upgrades at the project site access point.

With the implementation of the recommended amended conditions, the Department considers that the increased construction traffic required for the proposed modification would not result in any significant impacts on the local and classified road network.

5.3 Other Issues

The Department has summarised its assessment of a range of other matters in **Table 1** below. These matters are minor, and can be regulated under the existing conditions of approval.

Table 1: Assessment of Other Issues

Issue	Summary of Assessment	Recommendation
Noise	<ul style="list-style-type: none"> • The existing conditions of approval require White Rock to: <ul style="list-style-type: none"> - comply with relevant operational noise criteria and operating conditions; - comply with specified operating hours; - undertake noise monitoring during operations to determine compliance with the relevant noise criteria; and - implement a Construction Noise and Vibration Management Plan and Operational Environmental Management Plan. • Noise consultants engaged by White Rock confirmed noise generated during construction of the substation and transmission line would not exceed the applicable noise criteria at any non-associated residence. • White Rock has also committed to implementing all reasonable and feasible measures to reduce construction noise, as acknowledged by EPA. • The noise consultants also confirmed that noise generated by the relocated substation would remain well below the applicable noise criteria of 35 dB(A) at all non-associated residences, including the closest non-associated residence R124 that would be located approximately 2.4 km away. Noise levels at this residence were predicted to reach a maximum level of 12 dB(A). • The Department's noise expert has reviewed the assessment and is satisfied that the maximum noise level at any non-associated residence would not exceed the applicable noise criteria. 	<ul style="list-style-type: none"> • Comply with existing conditions, including updating the Construction Environmental Management Plan to incorporate the modification.

Issue	Summary of Assessment	Recommendation
<i>Visual</i>	<ul style="list-style-type: none"> • The existing conditions of approval require White Rock to prepare a Design and Landscaping Plan, as well as implement all reasonable and feasible measures to minimise the impacts of the visual appearance of the development. • A visual assessment completed by White Rock’s visual consultant involved both desktop assessment and site fieldwork. The visual assessment considered the impacts of the transmission line, and the substation. • The visual assessment identified only 2 non-associated receivers in the visual catchment (ie. within 2 km of the proposed transmission line). As the substation would be located over 2.7 km from the closest non-associated residence, this component was considered to have a low level of visibility. • The assessment determined that the transmission line would not be a dominant visual feature in the landscape due to the combination of undulating landform, views towards existing vegetated areas and existing tree clusters distributed throughout the site. As such, the potential visual impacts on these residences was assessed as low. • The visual assessment also concluded that although sections of the proposed transmission line would span 3 local unsealed roads (including Spring Mountain, Northcotts and Sturmans Roads), the duration of potential visual impacts would be temporary and limited to a low number of local road users. • No impacts were predicted on users of the Gywdir Highway given its distance to the proposed modification area (at least 3.7 km to the substation), and intervening screening vegetation and topography. • The Department is satisfied that the undulating landform and existing trees would provide effective screening and that there would no significant visual impacts on surrounding residences, significant viewpoints or road users as a result of the proposed modification. • The Department is satisfied that the existing conditions remain appropriate for the proposed modification but has included an updated condition requiring White Rock to minimise the off-site visual impacts of the project, including the visual impacts of all ancillary infrastructure. 	<ul style="list-style-type: none"> • Comply with existing conditions, including updating the Design and Landscaping Plan to incorporate the modification. • Update visual appearance condition.

Issue	Summary of Assessment	Recommendation
<i>Aboriginal Heritage</i>	<ul style="list-style-type: none"> The existing conditions of approval require White Rock to prepare and implement a Construction Heritage Management Plan that includes measures to avoid impacts on Aboriginal heritage items, including protocols should any unidentified objects be found during construction. Surveys of the proposed modified infrastructure locations and surrounds were undertaken in July-August 2012 and September 2016 in consultation with the Anaiwan Local Aboriginal Land Council (ALALC). The proposed modified infrastructure locations would be within mostly previously disturbed land (ie. cleared agricultural land) in a broader project area that has previously been assessed as having limited heritage values. The archaeologist engaged by White Rock together with the ALALC did not identify any sites or objects of Aboriginal cultural heritage significance within the modified infrastructure locations. The potential for any 'chance finds' during construction is considered low. As noted in Section 2, the proposed transmission line route has also been designed to avoid two identified Aboriginal heritage sites (scarred trees) within the modified project area. White Rock proposes to update the Construction Heritage Management Plan (CHMP) in consultation with OEH and the relevant Aboriginal stakeholders to incorporate the proposed modification. OEH supports this approach. The Department considers that with the implementation of the existing conditions of approval, and the updated CHMP, there would be minimal risk of impacts to Aboriginal heritage values from the proposed modification. 	<ul style="list-style-type: none"> Comply with existing conditions, including updating the Construction Heritage Management Plan to incorporate the modification.
<i>Soil and Water</i>	<ul style="list-style-type: none"> Although the proposed new infrastructure may result in a minor increase to the area of disturbance, the existing approval includes requirements for a Construction Soil and Water Quality Management Plan. White Rock has committed to designing any creek crossings in accordance with applicable DPI Water guidelines. The Department is satisfied that the modification does not alter the impact to soil and water from the project and can be managed by the existing approval conditions. 	<ul style="list-style-type: none"> Comply with existing conditions, including updating the Soil and Water Quality Management Plan to incorporate the modification.
<i>Bushfire Risk</i>	<ul style="list-style-type: none"> The existing conditions of approval require White Rock to: <ul style="list-style-type: none"> design all project components to minimise bushfire hazard risk; provide for appropriate emergency management; consult regularly with the RFS; and implement a Construction Environmental Management Plan that includes measures to address bushfire risk. White Rock has committed to updating its Bushfire Risk Management Plan for the project, in consultation with the RFS. The Department is satisfied that bushfire risk can be appropriately managed by the existing approval conditions. 	<ul style="list-style-type: none"> Comply with existing conditions.
<i>Agricultural Land</i>	<ul style="list-style-type: none"> The proposed modification would be located on land zoned as '<i>RU1 Primary Production</i>' under the Inverell Local Environment Plan, 2012. The proposed modification area contains some areas mapped as Strategic Agricultural Land. The Department of Agriculture's guidelines (Primefact 1063) for infrastructure projects on rural land encourages consideration of aspects such as resource loss, increased biosecurity risks and site rehabilitation. 	<ul style="list-style-type: none"> Comply with existing conditions.

Issue	Summary of Assessment	Recommendation
	<ul style="list-style-type: none"> • The Department notes that White Rock would be required to have lease agreements in place with the host landowners to build the transmission line and associated infrastructure. • Notwithstanding, the proposed grid connection and associated transmission line is unlikely to have a significant impact on the current grazing or cropping practices, given the relatively small disturbance footprint and the reversibility of any impacts post-operations. Any potential disruption to farming practices would be limited to the construction phase and negligible during operation. • The existing conditions of approval relating to weed management and site rehabilitation would continue to apply to the modification area. • The Department is satisfied that any impacts to agricultural land can be appropriately managed by the existing approval conditions. 	

6 RECOMMENDED CONDITIONS

The Department has prepared a Notice of Modification (see **Appendix A**) and consolidated approval (see **Appendix B**) for the proposed modification.

In summary, the key proposed amendments to the conditions include:

- an increase in the clearing limit of Ribbon Gum Woodland EEC to 28 hectares;
- a requirement to prepare an update to the CTAMP to address traffic and access arrangements associated with the proposed modification, including measures to assess and implement (if required) any additional upgrades at the project site access point to ensure the safety of turning vehicles; and
- a requirement to upgrade the access point intersections as required by, and to the satisfaction of, the relevant road authorities.

In modifying the project approval, the Department has also taken the opportunity to update several conditions to better reflect contemporary conditions applying to other wind farms in NSW.

In line with this approach, the other changes to conditions include:

- updating the terms of approval to reference the current modification;
- inclusion of a general obligation requirement to minimise harm to the environment;
- inclusion of a condition relating to notification and staging of the submission of plans and programs;
- an update to the condition requiring White Rock to ‘make good’ any disruption to telecommunication services caused by the project;
- an update to the Community Consultative Committee condition to reflect the new *Community Consultative Committee Guidelines for State Significant Projects* (2016); and
- an update to the condition relating to the visual appearance of the project, including ancillary infrastructure.

White Rock has reviewed the proposed conditions and has raised no concerns.

7 CONCLUSION

The Department has assessed the modification application and supporting information in accordance with the relevant requirements of the EP&A Act.

While the modification would allow for an additional 6 hectares of vegetation to be cleared, the additional disturbance is not expected to result in any significant impact to threatened species or endangered ecological communities. White Rock would also be required to continue to minimise the actual vegetation clearance through detailed design and siting of infrastructure during construction, and compensated for with the implementation of White Rock’s updated biodiversity offset package.

Although the modification would result in some increased construction traffic, it is not expected to be significant and can be managed through recommended conditions requiring an update of the CTAMP and implementation of intersection upgrades in consultation with the relevant roads authorities.

Overall, the Department considers that the amended conditions of approval would effectively manage and minimise any residual impacts associated with the proposed modification, with most conditions remaining appropriate and unchanged.

The Department acknowledges that the proposed modification would optimise the grid connection configuration for the project and allow the full benefits of the project and the associated solar farm to be realised.

In this regard, the complete project has a capital investment value in the order of \$665 million, would employ up to 350 people during construction and would generate up to 297 MW of clean energy for NSW consumers. The project has also been declared “critical infrastructure” meaning that the project is, in the opinion of the Minister, essential for the State of NSW for economic, environmental or social reasons.

This level of investment would also stimulate flow-on economic benefits in the local and regional economies, and contribute to Australia’s Renewable Energy Target of sourcing 20 percent of electricity from renewable sources by 2020. It would also be consistent with the objectives of the NSW Renewable Energy Action Plan, which has identified the New England region as a prime area for developing renewable generation. Further, with the increased generation potential for Stage 2, White Rock has flagged these benefits could be increased up to 341 MW.

Finally, the proposed modification would free up capacity on the 132 kV transmission line to not only allow the full output from the Glen Innes Wind Farm, but also other future renewable energy developments in the region.

On balance, the Department considers that the proposed modification has merit, and in is the public interest. Consequently, the Department recommends that the proposed modification is approved, subject to conditions.


8 RECOMMENDATION

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

- **considers** the findings and recommendations of this report;
- **determines** the application under section 75W of the EP&A Act;
- **approves** the modification application, subject to conditions; and
- **signs** the attached Notice of Modification (**Appendix A**).

 31/5/17

Phillipa Duncan
Team Leader
Resource Assessments

 31/5/17.
Mike Young
Director
Resource Assessments

**APPENDIX A:
NOTICE OF MODIFICATION**

APPENDIX B:
CONSOLIDATED APPROVAL

APPENDIX C:
ENVIRONMENTAL ASSESSMENT

See the Department's website at:

http://majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=8191

APPENDIX D:
SUPPLEMENTARY INFORMATION

See the Department's website at:

http://majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=8191

APPENDIX E:
SUBMISSIONS

See the Department's website at:

http://majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=8191

APPENDIX F:
RESPONSE TO SUBMISSIONS

See the Department's website at:

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