Appendix C Consultation

C.1 Community engagement

Fact Sheet

BATTERY ENERGY STORAGE SYSTEM (BESS)

What is a Battery Energy Storage System?

Battery Energy Storage System (BESS) technology involves large scale energy storage that absorbs and releases energy on demand to meet the needs of energy users and to maintain grid stability. BESS is a key component of Australia's energy transition to low emission sources.

Why is battery storage required?

BESS technology allows for energy to be stored and then released during periods of peak demand. It supplements the generation of energy from renewables that can be intermittent. Battery storage can respond faster than any other energy storage technology maintaining grid stability.

Example of a trypical BESS

Example of a trypical BESS

What are the main components of the battery?

The main components of BESS technology include an 'enclosure' or battery unit that looks similar to a large shipping container. There is also an inverter and a transformer which are internally or externally connected. The size of the project and the type of BESS technology in use, will determine the number of enclosures required. There may also be a small number of buildings and other electrical enclosures and substations.

How will the community and energy consumers benefit from BESS?

Energy consumers will benefit from BESS technology with consistency of energy supply during periods of peak demand. Currently renewable energy in the region flows into the grid via the terminal station(sub station). The BESS project can store energy generated by these renewable sources for up to 4 hours. This energy can be released into the grid if there is an interruption in energy supply. This can also lead to lower prices through supporting more affordable energy sources.

Fact Sheet

akaysha

BATTERY ENERGY STORAGE SYSTEM (BESS)

Benefits of battery storage

- Allows for better use of renewable energy
- Energy can be stored for 4 hours and released when required with peak demand
- Reduction in overall carbon footprint
- Battery storage assists with reliability and consistency of energy supply during blackouts and load shedding
- Batteries respond faster than other types of storage technology to maintain grid stability

Is there any noise generated with BESS technology?

BESS can generate noise similar to large air conditioners. Noise testing is conducted as part of the planning application and the project will meet the relevant noise standard. This testing will provide base line data of the current level of noise emissions prior to construction and operations.

Post construction, noise testing will be conducted again. The two results will be compared to look for changes with noise emissions.

When the pre construction noise testing has been completed and the report has been prepared, it will be made available to the community.

The BESS technology and fire risks

The BESS units each contain monitoring and fire suppression systems. The BESS project is also required to have emergency management plans in place.

These emergency management plans will include procedures for managing potential hazards and preventing safety incidents including approaching bush fires.

The BESS project team will work with a fire risk consultant to provide information and prepare options to minimise fire risks. The local RFS will also be consulted regarding emergency management plans and managing risks relating to fire.

Example of a trypical BESS

Contact

For more informaion, please contact us as below

0437 136 149

oranabess@akayshaenergy.com.au

Fact Sheet

akaysha

ORANA BATTERY ENERGY STORAGE SYSTEM

The Project

Akaysha Energy proposes to develop and deploy a large-scale Battery Energy Storage System (BESS) near Wellington in central-west NSW. Known as the Orana BESS.

The BESS will have a capacity of between 200-400MW and provide up to 8 hours or 1600MWh of energy storage, delivered using class-leading battery technology.

The BESS is designed to store and discharge electricity when it is needed. Batteries can charge and discharge quickly which helps to regulate the electricity generation from intermittent sources like wind and solar.

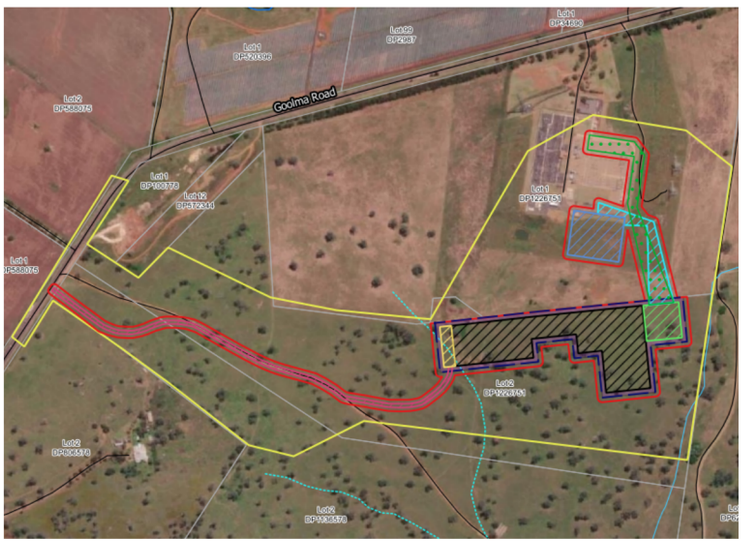
It is a cost effective way of integrating renewable energy for local and national electricity networks, ensuring that energy remains reliable and affordable.

Who is Akaysha?

Akaysha Energy are an Australian developer of BESS and renewable energy projects. Akaysha brings together a diverse and market leading set of skills and experience for end-to-end development of BESS projects, with ready access to the capital necessary to finance these complex projects.

Our team is made up of long-standing energy sector professionals, proven in the development and deployment of large-scale batteries and renewables in Australia.

The Site



Location of Proposed Orana BESS

The proposed site is approximately 2km north-east of Wellington, adjacent to TransGrid's 330kV zone substation as depicted below.

The BESS will occupy an area of ~10 hectares adjacent to the electricity grid and sharing a boundary with the TransGrid substation, this will reduce the need for high voltage power lines and visual impacts.

The site is zoned industrial and the land was originally slated for a gas fired power station that did not progress

The site requires minimal vegetation removal and minimal environmental impacts and ground disturbance

An indicative example of a BESS

Fact Sheet

akaysha

ORANA BATTERY ENERGY STORAGE SYSTEM

Why Wellington?

Wellington is located on a robust part of the TransGrid 330kV transmission system and within the Central West Orana Renewable Energy Zone which is expected to host 5.8GW of new wind and solar generation.

As conventional power plants retire over the next decade, batteries will play an increasing role in managing security of supply and addressing the intermittency of renewables, especially in areas of high-penetration such as the REZ.

Benefits

Increases energy reliability by supplying stored energy at times of low renewable energy generation

Supports renewable energy generation by providing additional storage capacity for the electricity network

Assists in transitioning the grid to clean and renewable sources of power

Work with us

We are actively looking to work with local trades, contractors, suppliers and service providers through construction and operations.

If you're interested in working with us, please contact us at oranabess@akayshaenergy.com.au

Design Considerations

The Orana BESS has been developed iteratively, with a specialist environmental assessment team. Adopting an "avoid-minimise-mitigate" approach is absolutely fundamental to the project design.

Design in accordance with the manufacturers recommendations and best practice engineering principle

Design and layout undertaken in accordance with detailed noise impact assessments to minimize impacts for local residents.

Ecological assessments ensure design and siting considers local environmental surroundings

Next Steps

The project is considered a State Significant Development and will be assessed by NSW Department of Planning and Environment.

An Environmental Impact Assessment is submitted responding to the DPE Secretary's environmental assessment requirements.

This assessment will be put up for public exhibition and Akaysha is open to feedback from interested parties.

Contact

For more informaion, please contact us as below

0437 136 149

oranabess@akayshaenergy.com.au

C.3 Agency engagement

C.3.1 Transport for NSW email chain

From: Brooke Marshall
Sent: Monday, March 13, 2023 3:37 PM
To: 'Alexandra.Power@transport.nsw.gov.au' <Alexandra.Power@transport.nsw.gov.au>
Subject: RE: Akaysha Energy Orana BESS Project, Wellington - TIA and Access Discussion

Hi Alexandra

Mike has updated the TIA and it will be headed your way shortly via DPE.

Below summarises some of his clarifications but also outlines our approach to dealing with SSD large / complex projects, so far in advance of detailed design and preparation of management plans.

That is, to address uncertainty we need to build in prescriptive commitments. I have highlighted this below.

I am happy to arrange a meeting once we are in the formal review stage. I believe most issues are addressed in accord with the SSD guidelines but look forward to identifying any further information required to facilitate consenting this project

Cheers, Brooke

Mar-22 Alexandra Power, Team Leader Development Services-Renewables West	A draft Traffic Impact Assessment (TIA) prepared by Amber Pty Ltd was provided for early comment to ensure it would be suitable once formally lodged as part of this EIS. A request for a meeting to discuss the project / workshop any concerns was made by Amber and NGH to TfNSW. TfNSW provided a list of high-level comments and declined the meeting until further information was provided. It is noted that some of the level of detail being requested by TfNSW at this time is not considered to be required to support this SSD impact assessment but will be developed within construction management plans in consultation with TfNSW, pending Project approval and subsequent to appointment of contractors. This approach is consistent with the State significant development guidelines – preparing an environmental impact statement (DPIE December 2021) which state: *… with some large, complex projects this flexibility is often essential as it is difficult, if not impossible, to deal with all aspects of the design of these projects at the EIS stage.* The Project has taken an 'upper limit' or 'worst case' approach where possible and acknowledge current information gaps. This approach is intended to over-estimate impacts and over-scope mitigation strategies, and is therefore considered conservative. It is underpinned by the Project's commitment to capture this higher level of Project-specific detail in consultation with affected stakeholders, within environmental management plans, developed in tandem with the final detailed design. Specifically, this includes: *Mitigation measure T1: A Construction Traffic Management Plan (CTMP) will be prepared and implemented. The CTMP will include additional information not available at this stage in the planning process including:*

	• *Road transport volumes, distribution and vehicle types broken down into:*
	  ○ *Hours and days of construction*
	  ○ *Schedule for phasing/staging of the project.*
	• *The origin, destination and routes for:*
	  ○ *Employee and contractor light traffic*
	  ○ *Heavy vehicle traffic*
	  ○ *Oversize and overmass traffic.*
	Some issues raised by TfNSW concern cumulative impacts and as above, will require more accurate data, closer to construction with regard to understanding and managing overlapping construction schedules.
	Amber's response to the issues raised by TfNSW is summarised below and has been incorporated into the final TIA. The email exchange showing the full TfNSW comments is provided in Appendix C.2.1. This further clarification regarding specificity and uncertainty has been provided to TfNSW.
	• The TIA currently presented does not identify the constraints or cumulative impacts with these other projects occurring within this space: *Amber verified there is currently ample road capacity which is extensive detail is not provided. It is difficult to know exactly what traffic is being generated by the other uses.*
	• TIA does not identify the origin and destination of the light and heavy vehicle workforce to the sites or provide inputs to the assumptions made in relation to the light/heavy/OSOM vehicles identified within the report: Amber have included a breakdown of the distribution of vehicles. *OSOM vehicle routes are shown.*
	• Will there be a transmission line required and will it have a separate access? *The 200m of transmission line to connect to the existing substation would not require a separate access.*
	• Any consideration of the lateral/horizontal and vertical requirements for the OSOM in particular transformers required to move to the site from the route? Will tree clearing, signage removal or any other modifications be required for the route. *OSOM vehicle routes are shown. The permitting process regarding these limited number of movements is included.*
	• It is noted that shuttle buses are proposed as a mitigation measure with no consideration of measures to enforce shuttle buses. *This detail would be captured within the CTMP.*
	• Dispute Safe Intersection Sight Distance calculations. *Amber have added further commentary to show these are correct, and concluded the Safe Intersection Sight Distance requirement is 214 metres and the available distance exceeds the requirement by 10 metres. There is a minor downward grade from the northeast which equates to less than 2%. The required correction in accord with Austroads Guidelines is 5-6 metres which results in the sight distance remaining compliant.*
	• What will happen in relation to the OSOM route if the road works for the Twelve Mile Road/Goolma Road intersection have not been completed? *This would be captured within the CTMP, reflecting current conditions and overlapping construction schedules.*

	• Provide the raw data for the tube counts undertaken on Monday 12-19 September 2022. *Amber will provide this with the EIS submission directly to DPE (the spreadsheet can be forwarded to TfNSW).* • The peak construction year should take into account the other projects such as Wellington South BESS and Uungula Wind Farm within the background traffic volume assumptions. *Noted. This would be captured within the CTMP, reflecting current conditions and overlapping construction schedules.* • Any assessment of capacity of surrounding townships to accommodate the workforce of these simultaneous projects? *This is investigated in the social impact assessment and mitigation measures include a specific* Industry Participation Plan which would be developed to ensure a focus on maximising the involvement of local people and businesses in the Project and include a Local Procurement Policy (LPP) and Accommodation and Employment Strategy (AES). • The traffic assessment should be based on the worst case scenario of 150 construction staff and 6 heavy vehicles (is this inclusive of input materials concrete, aggregate etc) entering the site in the AM/PM peak; *Amber have confirmed this assumption has been used.* • The correct peak hours will be 6-7am and 5-6pm. *Amber have stated the use of the later 7am and 6pm hours is based on previous advice TfNSW have provided for a similar project. Retained as is for now given the comments are high-level without full consideration of the Project.* • The strategic design provided does not represent the BAL/CHR(S). *Amber state it does represent the BAL/CHR(S), as verified by the dimensions on the plans for these turn treatments.* • The strategic concept design should include how the treatments for Wellington South BESS and the proposed treatments for this BESS will work together and be in accordance with Austroads. *Amber consider the accesses sufficiently separated to make this unnecessary.* • The last swept path identifies that the B-double design vehicle turning right will require to utilise the through lane and the BAL to turn right. *Noted.*

From: Brooke Marshall
Sent: Friday, March 10, 2023 7:59 AM
Subject: FW: Akaysha Energy Orana BESS Project, Wellington - TIA and Access Discussion

Thanks Alexandra, that's understood.

A final TIA and EIS for your formal review will come to your via DPE over the coming weeks and as stated we will make sure it considers the issues raised below.

Please reach out if I can be of assistance at any time.

Cheers, Brooke

BROOKE MARSHALL
PRINCIPAL – RENEWABLE ENERGY ASSESSMENTS
Certified Environmental Practitioner
Please note I do not work Wednesdays

T. 02 6492 8303 **M.** 0437 700 915
E. brooke.m@nghconsulting.com.au
Suite 11, 89-91 Auckland St
(PO Box 470) Bega NSW 2550

BEGA · BRISBANE · CANBERRA · GOLD COAST · NEWCASTLE · SYDNEY · WAGGA WAGGA
WWW.NGHCONSULTING.COM.AU

From: Alexandra Power <Alexandra.Power@transport.nsw.gov.au>
Sent: Monday, March 6, 2023 6:07 PM
Subject: Re: Akaysha Energy Orana BESS Project, Wellington - TIA and Access Discussion

Thank you, Brooke,

Sufficient work and progress would require to be undertaken to address the matters raised within the SEARs or the points identified within the email earlier today, before a meeting would occur with TfNSW. I noted that we have also had previous meetings with Akaysha Energy on all the points raised in SEARs and within the previous email today.

Once the project has progressed further in reviewing the matters identified in the SEARs and raised within the earlier email then I will reconsider the need for a meeting.

Any request for clarification on TfNSW comments raised within the SEARs or within the previous email today can be in writing or via email. Preferably to development.west@transport.nsw.gov.au.

Kind regards

Get Outlook for iOS

From: Brooke Marshall <brooke.m@nghconsulting.com.au>
Sent: Monday, March 6, 2023 5:55:55 PM
Subject: FW: Akaysha Energy Orana BESS Project, Wellington - TIA and Access Discussion

Hi Alexandra
I am the principal impact assessment consultant on this project and want to make clear the EIS is still in preparation. We are in the final stages but at this time the EIS document:

- has not been subject to full internal review and sign off by NGH
- has not had final client comment / clarifications added
- cannot be relied upon for accurate information across all sections at this time.

The intention of consultation with TfNSW at this point is so that when the EIS is submitted for your formal review, we have the best chance of ensuring it will meet TfNSW requirements.

I thank you for the points identified below and they will definitely assist us to produce a final TIA and EIS for your formal review that better meets your requirements.
If you would like specific information, we can provide this ensuring it is the best available information at this time.
I think we could have a very useful workshop/teams meeting involving the client as well as Amber and NGH to assist your understanding of the project and our understanding of how to better meet your requirements ahead of EIS submission.

Kind regards, Brooke

BROOKE MARSHALL
PRINCIPAL – RENEWABLE ENERGY ASSESSMENTS
Certified Environmental Practitioner
Please note I do not work Wednesdays
T. 02 6492 8303 **M.** 0437 700 915
E. brooke.m@nghconsulting.com.au
Suite 11, 89-91 Auckland St
(PO Box 470) Bega NSW 2550

From: Alexandra Power <Alexandra.Power@transport.nsw.gov.au>
Sent: Monday, 6 March 2023 1:24 PM
Subject: RE: Akaysha Energy Orana BESS Project, Wellington - TIA and Access Discussion

Tammy/Andy,

Do you have the draft EIS as well to review.

I do not believe a number of points have been considered within the Draft TIA and Strategic Design and therefore will not have a meeting to discuss until sufficient information has been provided to address TfNSW comments to the SEARs and at a minimum the points identified below:

1. It is noted that this section of Goolma Road is subject to a number of other developments occurring that will likely have implications for the road environment such as the Uungula Wind Farm realignment of Twelve Mile/Goolma Road and the Wellington South BESS that will be neighbouring this site. The TIA currently presented does not identify the constraints or cumulative impacts with these other projects occurring within this space.
2. It does not identify the origin and destination of the light and heavy vehicle workforce to the sites or provides inputs to the assumptions made in relation to the light/heavy/OSOM vehicles identified within the report.
3. Will there be a transmission line required to be undertaken as a part of this work? Will that have a separate access with separate vehicles required to enter/exit this access?
4. Has there been any consideration of the lateral/horizontal and vertical requirements for the OSOM in particular transformers required to move to the site from the route? Will tree clearing, signage removal or any other modifications be required for the route.
5. It is noted that shuttle buses are proposed as a mitigation measure with no consideration of measures to enforce shuttle buses.
6. SISD is not based on the 85th percentile and is actually for the posted speed zone. Meaning the SISD presented as 224 is deficient requires 226m would likely need to take into account the curve and superelevation.
7. What will happen in relation to the OSOM route if the road works for the Twelve Mile Road/Goolma Road intersection have not been completed?
8. Please provide the raw data for the tube counts undertaken on Monday 12-19 September 2022.
9. In relation to *Table 2: Traffic Generating During Construction* the Peak Hour for light vehicles is identified as 20 with 10 shuttle buses this is an assumption that 86% of the workforce will be utilising shuttle buses. With no clear measures in relation to enforcement as to how this will be implemented and achievable. Is this for peak construction for the project?
10. The peak construction year should take into account the other projects such as Wellington South BESS and Uungula Wind Farm within the background traffic volume assumptions.
11. Has there been any assessment of capacity of surrounding townships to accommodate the workforce of these simultaneous projects? If workforce can't be accommodated in surrounding townships then this will changed the distribution splits at the proposed access. I imagine this would have been a requirement of the Social Impact Assessment Guidelines.

12. The traffic assessment should be based on the worst case scenario of 150 construction staff and 6 heavy vehicles (is this inclusive of input materials concrete, aggregate etc) entering the site in the AM/PM peak.
13. It is noted that the Mon-Friday construction timeframes are 7-6pm however Table 3: Expected Peak Hour Traffic Volumes During Construction you have stated the AM Peak as 7am and PM Peak as 6pm which is incorrect. As the construction workforce will already be on site or have left the site. The correct peak hour will in face be 6-7am and 5-6pm.
14. The last section notes that there will be no overlap with timeframes with other projects. Reviewing the Wellington South BESS the construction hours will be 7am to 6pm and therefore will have the same AM/PM peak as the proposed project of 6-7am and 5-6pm.
15. The strategic design provided does not represent the BAL/CHR(S) and should be noted that the whole TIA should be reviewed to address the above discrepancies and will likely require review of the turn warrant assessment and the strategic concept design.
16. The strategic concept design should include how the treatments for Wellington South BESS and the proposed treatments for this BESS will work together and be in accordance with Austroads.
17. The last swept path identifies that the B-double design vehicle turning right will require to utilise the through lane and the BAL to turn right.

Kind regards

Alexandra Power
Team Leader Development Services-Renewables West
Regional and Outer Metropolitan Division | TfNSW
T 02 6861 1428

From: Tammy Vesely <tammy.v@nghconsulting.com.au>
Sent: Monday, 6 March 2023 1:12 PM
Subject: Akaysha Energy Orana BESS Project, Wellington - TIA and Access Discussion

Hi Alexandra

As per the request you made to Andy Winter on Monday 06 March; please find attached the Draft TIA and the Strategic Design for the access and intersection treatments for review for the Orana BESS project. Please don't hesitate to contact me for any queries.

Regards,

TAMMY VESELY
SENIOR PROJECT MANAGER
MSc(EnvSc), CEnvP, MEIANZ, PMP®
T. 0452 151 752
E. tammy.v@nghconsulting.com.au
T3, Level 7, 348 Edward St
Brisbane QLD 4000

NSW · ACT · QLD · VIC
WWW.NGHCONSULTING.COM.AU