

Turitea wind farm Community Liaison Group



4 May 2022

Margaret Kouvelis (Independent Chair) welcomed attendees to the meeting, and thanked Troy Duckworth (principal of Turitea School) for continued use of the school hall.

She noted that Kenn Wood, Vestas' project manager, was unable to attend this meeting, but that Willem Venter was present, and Robert Medley had joined from Vestas in Australia. Vestas' subcontractor Downer were represented by Alan Howard-Smith.

Margaret also acknowledged Janine Rankin from the Manawatū Standard and thanked her for her attendance.

PROJECT UPDATE



2



Glen Twining, Project Manager, introduced himself. He is based in Hamilton, with previous experience on Mercury's hydro power stations on the Waikato River. He has been involved with the Turitea wind farm project since 2018, and has taken over as Project Manager from John Campbell, who has now left Mercury.

He said that Dennis Radich had been overseeing this project as Project Director, but has also decided to move on from the business and take a break, now that Mercury has become NZ's biggest wind generator.

Previous Project Manager John Campbell, had a very successful career in wind farm development in Australia and the UK behind him when he picked up this project for two and half years, and we're extremely thankful for his contribution during the time he was with us.

Tonight's meeting will also be presented by Duncan Annandale, our Property Manager, Mark Henry our Environmental Resources Manager. Katy Scoullar, Communications Manager is with us. Glen introduced Beth Wotherspoon, Head of Resources and Stakeholders, who was also present.

Glen noted that on 1 May Mercury acquired Trustpower's retail business, making Mercury New Zealand's largest energy retailer and fourth biggest broadband provider. This is a huge milestone for Mercury and Trustpower, but hasn't taken our focus off renewable energy generation including wind: our five operating wind farms that combined that with Turitea North, make Mercury New Zealand's largest wind generator.

PROJECT UPDATE



3



Glen shared this slide showing a nacelle (the top part of the turbine that the blades attach to) being trucked past a relic of past power generation and distribution in the district.

In February replacement nacelles and hubs at were unloaded at Napier port, replacing those lost in the December 2020 ship fire. They were taken to Hastings then reloaded for transport to Palmerston North. All major components for the rest of the build are now in the country, ready for the final trip to site.

PROJECT UPDATE



4



Glen shared this image showing preparations at the site of the new sub-station to be built in the southern zone of the site. Piling is complete at the Browns Flat substation and the contractors are establishing and beginning works there now.

The Turitea North wind farm became operational in the last quarter of 2021. We are now focused on the Turitea South Wind farm, which is scheduled for completion in mid-2023.

Major civil earthworks continue to shape the landscape upon which to erect the turbines, with culvert installation and roading being put in place.

20 of the 27 foundations have been excavated and work has begun installing the ducting for cables in the bottom of the excavations before the foundations are built.

A batch plant has been established at Wind Turbine 34 (the northern-most turbine of the southern zone) and begun producing concrete. A second batch plant towards the middle of the southern zone will be established to support the much bigger volumes of concrete in some of the South foundations.

PROJECT UPDATE



5



Glen shared this image showing the extent of works on the Reserve Road to enable access. Roading works into the South wind farm are well advanced allowing materials to arrive from the north.

Reserve Road construction earthworks are complete and tidy-up works including permanent drainage works are being completed when conditions allow.

PROJECT UPDATE



6



Glen confirmed that the Northern zone of the site is in normal operation with all 33 turbines running and generating renewable energy to the grid. This view is from North Range Road.

Rehabilitation works – fencing, grassing, ongoing in the North. Remedial planting, re-grassing and fencing was underway.

The northern office compound near the North entrance on the Pahiatua Aokautere Road has been reconfigured and will continue to be used by the Vestas construction team. This is a change from what was previously advised, that this compound would be removed.

The site entrance and South Range Road through to the southern portion of the wind farm will continue to be used for construction traffic.

NOISE – TIMELINE

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|------|-----------|---|
| 2021 | February | Noise first reported; noise monitoring units installed by environmental acoustics consultants (Marshall Day) |
| | April | Noise monitoring information provided to Electrix |
| | July | Electrix queries which properties are impacted |
| | August | Mercury re-engages Marshall Day for further noise monitoring |
| | September | Electrix attends site, dampers installed to close apertures in the poles. Mercury engages acoustic inspection services to assist in identifying the source of the noise |
| | October | Acoustic inspection results inconclusive due to wind conditions not being appropriate during their attendance at site |
| | November | Electrix commits to installing blanking plates to cross arms of the poles |
| 2022 | January | Blanking plates installed. After further complaints, Mercury inspection identifies holes in poles that have not been plugged and calls for further attendance on site by contractor |
| | March | Electrix completed an interim treatment to close the apertures on nine poles, awaiting the components to close those gaps permanently |
| | April | Transmission noise monitoring equipment installed by Electrix Thurs 28 April |



Duncan Annandale, Property Manager, said that the wind-induced noise from the transmission infrastructure was a troubling issue. Five parties had been experiencing noise from poles in some areas of the transmission line. This was frustrating, and had not been predicted when the site was planned and designed.

It was taking time to resolve the issues, and the precise source of the noise had not yet been identified. Delays resulting from waiting for the right wind direction (less than 30% of time), and higher than normal wind strength – therefore occurs probably less than 10% of the time. Duncan was reviewing a twice daily report with wind predictions to identify when the wind direction and speed synchronised.

Mercury’s contractor Electrix, who installed the infrastructure, needed a calm day to safely access the high poles and fix the gaps/holes in them, and then wait for the wind speed and direction to cause the noise, in order to test whether they had resolved the issue. It has taken weeks to find the right conditions, and this cycle of fix-and-test has happened twice without complete success.

We know that some residents around the Kahuterawa and Greens Road areas continue to be frustrated by wind-induced noise from the transmission infrastructure. It’s taken a long time, and it’s ongoing. COVID-19, looking for the right wind conditions, having to get teams from outside the region on to site – all real reasons, but we understand the deep and ongoing frustration of the residents impacted by the noise.

This is the timeline of actions up to the last communication to you all, in February – with additions showing what’s happened since in March and current activity,

LOCATING THE CAUSE



8



Duncan explained that audio equipment has now been installed to discover the source of the noise.

Picture on right shows a directional microphone on the cross arm directed at the insulator, that we suspect might be the cause of the noise.

Separately we are looking to artificially induce wind conditions on insulators, by testing them in a wind tunnel in a Wellington laboratory. If we are able to replicate the noise, we can then consider potentially fixing rubber gromets on existing insulators or replace glass with composite insulators.

An outage of the line would be required to work on the insulators, at significant daily cost, but we know that this noise is frustrating and not acceptable to residents.

When the wind farm was planned and designed, we had anticipated potential noise from the operation of the wind turbines. So far we have identified four houses that we are working with neighbours, but to date there have only two of those where noise may be a concern. Due to the distance from the southern turbines to any homes we don't anticipate any issues with turbine noise in the southern zone.

SOUTHERN ACCESS



9



Mark Henry, Environmental Compliance Manager, spoke to the meeting.

Mercury had explored the use of Kahuterawa and Greens Road to gain additional access to the site via its southern entrance. Working with Vestas' subcontractor Downer, we had first considered building an off-road accessway, but ultimately this was unsuccessful due to the need to get agreements with land owners. The next idea was to consider easing the constraints around use of Kahuterawa and Greens Road, and an application to vary the consent conditions was lodged with Council. However, after discussion with the contractors that identified with the progress made on site since the consent variation application was lodged, it was realised that the benefits to the construction programme of extending the use of these southern roads had diminished. Therefore, the decision was made to withdraw the consent variation application, and continue with the existing consent conditions.

Pictured two heavy trucks and one digger on site in fog, 7.30am March 2022

ENVIRONMENTAL MONITORING



10

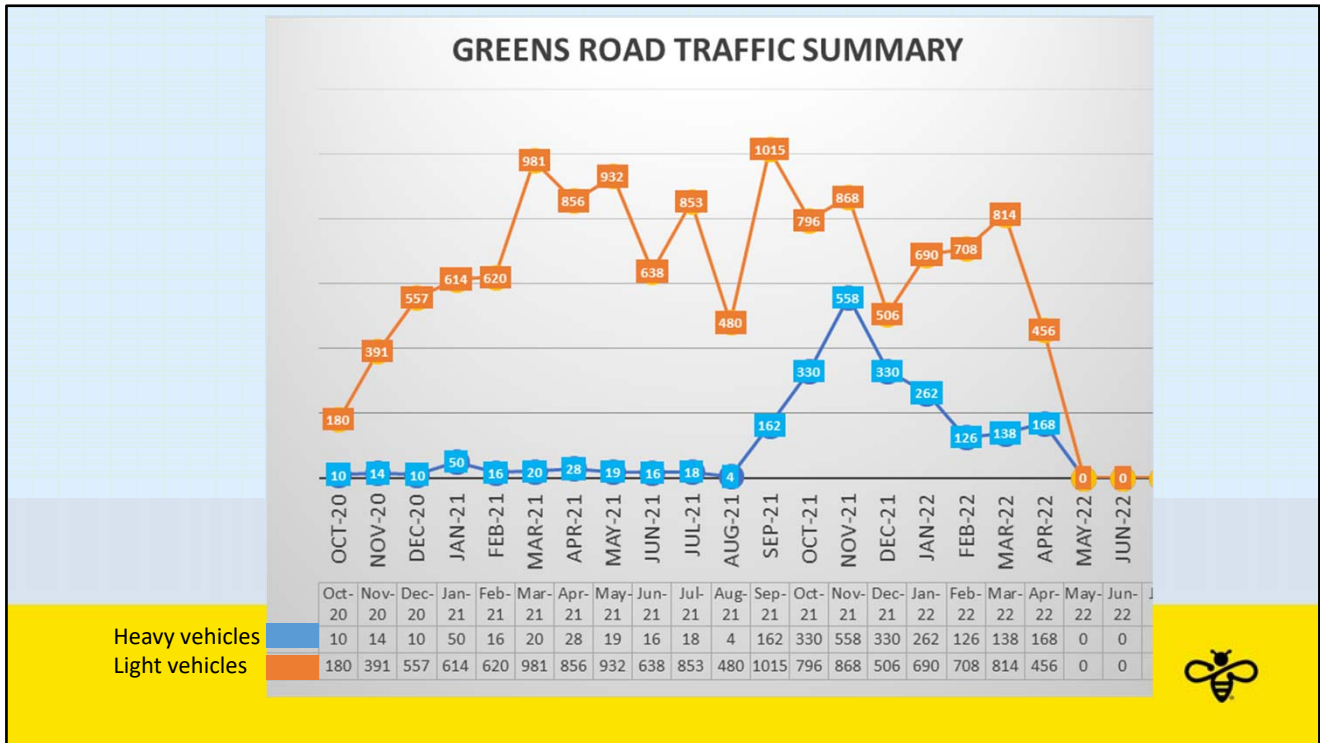


Mark spoke to the rehabilitation underway in the North, with grass seeded to control erosion, and fencing reinstated. Environmental practises on site were closely monitored by Horizons Regional Council, and Mark acknowledged the work of Vestas' Environmental professional, Willem Venter, for his work on site and maintaining the confidence of the regulator. Planting and revegetation was continuing per the Rehabilitation and Revegetation Plan (available on our website: <https://www.turiteawindfarm.co.nz/news-and-updates/turitea-rehabilitation-and-revegetation-plan-north-and-south/>).

Around 200 sediment controls had been in place across the development, and these were being removed as the site was finished and rehabilitated.

The picture shows the installation of a culvert complete with fish passage, boxed up and ready for concrete. This had been carefully designed with the appropriate gradient to allow fish to move as they would have naturally. Earlier, Willem Venter and the team had relocated koura from this site.

In the southern zone, bulk earthworks for the roads was 80% complete, now starting to excavate foundations for turbines.



Mark shared this chart showing the ongoing count of truck movement numbers on Greens Road. Heavy and light vehicles are tracked and reported. Willem Venter sends this to the Council each month.

This is the latest monthly traffic summary for Greens Road to the southern site entrance (to end of April).

It was confirmed that around 30% of the traffic movements allowed under the Consent were still available (including the count used by Electrix for its earlier construction of the transmission infrastructure), and while large components would all be transported via the northern entrance, the traffic movements on Greens Road would be used on the substation build.



FOR FURTHER INFORMATION > TURITEAWINDFARM@MERCURY.CO.NZ

Margaret asked for questions from the floor.

Question: how much power has been generated by the turbines in the northern zone, compared with forecast output? Duncan Annandale said that the first full month of generation, December, had been 5% above expected output, but January, February and March had all been around 5% lower due to unusually low winds for that time of year.

The next scheduled meeting of the Community Liaison Group will be 3 August.

The meeting ended at 6.10pm.