

IN THE ENVIRONMENT COURT OF NEW ZEALAND
WELLINGTON REGISTRY

I MUA I TE KŌTI TAIAO O AOTEAROA
TE WHANGANUI-Ā-TARA ROHE

ENV-2024-WLG-000001

Under the	RESOURCE MANAGEMENT ACT 1991
In the matter of	the direct referral of applications for resource consents under section 87G of the Act for the Mt Munro Wind Farm
By	MERIDIAN ENERGY LIMITED Applicant

JOINT STATEMENT OF THE TRAFFIC AND TRANSPORT EXPERTS

7 August 2024

INTRODUCTION

1. This joint expert witness statement relates to the direct referral application lodged by Meridian Energy Limited for resource consents to construct, operate and maintain a windfarm on Mt Munro, Eketāhuna.
2. The experts attending the conference were:
 - (a) Harriet Fraser (**HF**) for the Consent Authorities (Manawātū-Whanganui Regional Council, Wellington Regional Council, Tararua District Council, and Masterton District Council)
 - (b) Colin Shields (**CS**) for Meridian Energy Limited (**MEL**).
3. The conference took place on 7 August 2024 at the Wellington registry of the Environment Court. It was facilitated by Environment Court Commissioner Myers.

AGREED AGENDA

4. The agenda for discussion is set out below in Annexure A.

CODE OF CONDUCT

5. This joint witness statement is prepared in accordance with section 9 of the Environment Court Practice Note 2023.
6. We confirm that we have read the Environment Court Practice Note 2023 and agree to abide by it.

PURPOSE AND SCOPE OF CONFERENCING

7. The purpose of this expert conferencing was to identify, discuss, and highlight points of agreement and disagreement on traffic and transport issues.
8. Issues have been identified following the reporting of the Consent Authorities in the s 87F reports, and through evidence filed by MEL and the s 274 parties. At mediation in June 2024, the parties also agreed that some issues would be discussed at expert conferencing.

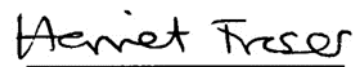
AGREED ISSUES

9. Refer to Annexure A.

DISAGREEMENT AND REASONS

10. Refer to Annexure A.

Date: 7 August 2024

A handwritten signature in black ink that reads "Harriet Fraser". The signature is written in a cursive style with a horizontal line underneath.

Harriet Fraser

A handwritten signature in blue ink that reads "Colin Shields". The signature is written in a cursive style with a horizontal line underneath.

Colin Shields

ANNEXURE A

In the matter of the Mt Munro windfarm application

Expert conferencing – Traffic and Transport – HF and CS (yellow highlight for Planners to note)

Issue	Agreed position with reasons	Disagreements with reasons
Topic: Traffic assessment		
1. Methodology	<p>HF agrees with the general approach. Some gaps identified in s87F report:</p> <ul style="list-style-type: none"> - Meridian have completed assessment of the two-laning of the full length of Old Coach Road ('OCR') to be discussed in points 13 and 14. - Meridian assessment for trigger of right turn bay completed outcomes to be discussed in point 29. - Awaiting confirmation that all fill will come from onsite cuts. - We agree to amend the CTMP to include Masterton District Council ('MDC') regarding potential road use for haulage – refer to point 20. - We agree on Mount Munro Road being the limit to the South on Opaki Kaiparoro Road ('OK Road') for construction traffic activities. Condition CTM1b. - Sight lines at SH2 OCR intersection confirmed and agreed that satisfactory. - We agree that NZ Post have been consulted with and raised no issues. - Regarding pedestrian and cyclist demands on OCR, agree that very limited activity and that sealed width and 	

Issue	Agreed position with reasons	Disagreements with reasons
	<p>temporary speed limits will allow for safer interaction between road users.</p> <ul style="list-style-type: none"> - CTMP addresses emergency access to both local properties on OCR and wind farm site. 	
2. Current transport network	HF, as per s87F para 27 considers that the transportation assessment (TA) and S92 request for information (RFI) provides a reasonable summary of the traffic environment.	
3. Confirmation of current Munro proposal	<p>Key transport elements of the proposal as per s87F paras 33-38. OCR upgrade design discussed at points 13 and 14. SH2/Transmission line access discussed at point 8. SH2 OCR Road intersection design is discussed at point 5.</p>	
4. Address matters arising out of Mediation Outcomes Report ('MOR').	<p>Transport related actions from MOR:</p> <ul style="list-style-type: none"> - Meridian have provided a draft CTMP, assessment of capacity constraints for two-laning of OCR, alternative access assessment including via rail and considered further effects on stock during construction. - Seal removal and OCR maintenance are discussed at point 17 and 18. - Discussions with NZTA addressed in point 28. - Discussion on trigger for right turn bay, see point 29. - Safe movement of cyclists, school children and stock, for school children, para 160 of Mr Shields evidence demonstrates that there are no school bus impacts. The stock movements and cyclists are addressed in table 5.1 of the CTMP. - Restriction on construction traffic on OK Road beyond Mount Munro Road applies to both heavy and light 	

Issue	Agreed position with reasons	Disagreements with reasons
	<p>construction traffic with the exception of any construction workers who live along the route.</p> <ul style="list-style-type: none"> - Pavement surveys discussed at points 10, 11 and 12. - Decommissioning of turbines discussed at point 24. - Dust agreed, OCR to be sealed which addresses dust from road. - Impact on adjoining properties of OCR widening discussed at point 16. - Right turn bay discussed at point 5. - Higher volumes of traffic in the District managed through the design of the upgrades and the CTMP. - Alternative access discussed in point 15. - Resealing activity as per standard road maintenance. - Regarding electric vehicles, not aware of electric trucks being a viable option. Given isolated location and steep topography, risk of vehicles of running out of power, and hence electric powered vehicles unlikely to be viable. 	
5. SH2/OCR intersection	<p>NZTA email to CS dated 5 August 2024 (needs to be circulated) indicates a trigger of 8 to 9 vehicles per hour and NZTA have expressed concerns about how this trigger will be monitored and how this applies to different phrases of construction. Based on this advice, Meridian will work with NZTA to provide a right turn bay as part of the OCR upgrade works.</p> <p>NZTA have indicated a preference for their form of wording for the condition, as per the wording in their letter dated 30 August 2023, NZTA Condition 1. We recommend inclusion of the NZTA</p>	

Issue	Agreed position with reasons	Disagreements with reasons
	condition but instead of OCR the condition should refer to the intersection of OCR and SH2.	
6. Design of accesses off public roads	<p>Regarding the details of site accesses from OCR, OK Road, Kaiparoro Road and SH2, design provided for through CTM2(c) and detailed designs to be approved by TDC and NZTA as appropriate, as noted in CTM2(d).</p> <p>In response to planners comments on CTM2(c), HF and CS agree that site accesses will be bespoke and therefore will be agreed at detailed design stage.</p>	
7. Discuss whether there are any cumulative traffic effects associated with the Puketoi and Castle Hill proposals	Potential cumulative effects of construction traffic from concurrent projects (e.g. Puketoi, Castle Hill) will be addressed at section 1.9 of the CTMP and any required mitigation identified.	
8. SH2/Transmission Line access – discuss report and any recommendations arising.	Meridian provided NZTA with their memo dated 22 July 2024. NZTA responded on 2 August 2024 agreeing to the use of the access on the basis that some widening will be undertaken at the access as outlined in the memo. NZTA also requested that trucks crossing signage and trucks to use their flashing lights. This will be incorporated within the CTMP. Detailed design for the access will be provided in response to CTM2(c) and (d).	
9. SH2/Kaiparoro Road terminal substation access - discuss s 92 response and any recommendations arising.	<p>SH2/Kaiparoro Road intersection upgrade to accommodate over dimension vehicles as per s92 drawing number 1016884.1000-200 rev1 dated 31 August 2023 will need to be approved by NZTA, review condition CTM2(b).</p> <p>The access improvements are covered by CTM2(c).</p>	
Topic: Pavement surveys		

Issue	Agreed position with reasons	Disagreements with reasons
10. Geographic extent of pavement surveys	<p>We have identified two different geographical areas.</p> <p>To include OCR from SH2 to the site entrance, OK Road from SH2 to transmission line access, and Kaiparoro Road to terminal station access.</p> <p>The routes to construction sites from aggregate sources to be confirmed in the CTMP, as sources unknown at this stage.</p>	<p>HF considers the section between the transmission line access on OK Road and Mount Munro Road should be included with the main access routes as heavy construction traffic allowed on this section.</p>
11. Methodology	<p>CS indicates for OCR that upgrades will be constructed to TDC standards. Ongoing regular visual inspections will be carried out during the construction period. Post construction structural pavement condition surveys will be carried out and any remedial action to be carried out by Meridian. Ongoing maintenance as highlighted in points 17.</p> <p>HF agrees with methodology for OCR with proviso that visual inspection and remedial action undertaken by Meridian two years post construction.</p> <p>For Kaiparoro Road visual inspections before and after construction will be carried out and any remedial actions implemented by Meridian.</p> <p>HF agrees with methodology for Kaiparoro Road.</p>	<p>CS: OK Road and roads used to and from quarries visual inspections pre and post construction will be carried out and any contributions to remedial works will be calculated based on pro rata use of these roads by Meridian construction traffic.</p> <p>HF considers that same methodology should apply to OK Road including to Mount Munro Road as per Kaiparoro Road. HF agrees with methodology for quarry haulage routes.</p>
12. Timing of surveys and any subsequent maintenance	Addressed above.	
Topic: Old Coach Road Upgrades and Maintenance		
13. OCR proposal – widening and pavement design	<p>Meridian's original proposal was for two way widening on OCR around the bends and one way on straights with passing bays. That drawing later updated to include an additional passing bay as requested by HF. Following site visit in July by TDC and Meridian, TDC requested widening of OCR to 6m sealed width</p>	<p>CS considers the original TA design proposal is a safe and deliverable option.</p> <p>HF considers that the single lane sections on OCR need to be minimised to ensure long term consistency in the road cross</p>

Issue	Agreed position with reasons	Disagreements with reasons
	<p>and 2m either side shoulder/drain (unsealed). CS showed drawings (not issued) to HF during conferencing of this proposal and highlighted a number of concerns regarding impact on existing trees and several property accesses. A hybrid option was discussed, (CS to issue a copy of the hybrid option drawings to Councils) and key parameters to be included in this hybrid option are as follows:</p> <ul style="list-style-type: none"> - The 6m minimum sealed width for two-way traffic flow can be reduced to 5.5m for short sections (without a shoulder but to include a drain); - 4m minimum sealed width for single lane sections; - Drainage design to be provided at detail design. Will vary depending on edge condition; - Pavement design to be provided at detailed design. <p>HF considers that the above parameters need to be delivered through the detailed design.</p> <p>CTN2(a)(i) and (iii) drawing numbers will need to be reviewed once complete.</p>	<p>section, including once the wind farm construction is completed and temporary speed limits removed.</p>
14. Constraints to two-laning	<p>There will be single lane sections at approximately Ch1200-1300 and Ch1500-1600. These are associated with gully crossings.</p>	
15. Alternatives to use of OCR – including use of rail, and Coach Road South for site access	<p>Regarding use of Coach Road South as an exit, in CS letter of 19 July 2024 this option was rejected due to grades of 20% or more and the need to replace the OK Road Bridge. Agree that there is not any benefit from one way arrangement.</p> <p>Agree based on CS letter of 19 July 2024 that rail is not an option due to no siding/station, triple handling of loads, challenge of accessing the site from the rail and that the turbine components cannot be transported by rail.</p>	

Issue	Agreed position with reasons	Disagreements with reasons
16. Effects on adjoining properties	<p>CS and HF recognise potential effects on adjoining properties including:</p> <ul style="list-style-type: none"> - Impacts during construction of OCR widening. - Traffic flow increases. - Local temporary traffic management including temporary reduced speed limit. - Some relocation of fencing but remaining within road reserve. - Amendments to some vehicle accesses as a result of OCR widening. - Management of stock movements needing to be coordinated as per the CTMP. 	
17. OCR maintenance responsibilities	<p>In reference to TDC email dated 31 July 2024 which outlines the maintenance contribution requested from Meridian to OCR, Meridian email dated 2 August 2024 confirms Meridian acceptance in principle of the proposal. Meridian proposed that this is addressed post consent and outside the consenting process.</p>	<p>HF considers that the intent regarding maintenance responsibility should be included through conditions.</p>
18. Post-construction seal removal	<p>TDC email dated 30 July 2024 states that if Meridian commit to maintenance and reseals of OCR then TDC can allow the road to remain sealed.</p> <p>HF understanding is that the above would involve:</p> <ul style="list-style-type: none"> - reseal of OCR at year one post upgrade; - structural pavement survey and remedial action post construction; and 	

Issue	Agreed position with reasons	Disagreements with reasons
	<ul style="list-style-type: none"> - visual survey and remedial action at two years following completion of construction. 	
Topic: CTMP		
19. Draft CTMP scope and content	Agreed that CTM6 and the comments provided in points 27 and 30 address the CTMP scope and content.	
20. Transport of aggregate	HF memo of 6 August 2024 (attached as Annexure B) agreed as being a useful starting point for looking at aggregate routes within the CTMP.	
Topic: Operational		
21. Traffic activity	Forecast total operational traffic activity of up to eight light vehicle movements and 40 truck movements per day on OCR as per CS evidence paras 56-58.	
22. Traffic effects – positive and potential adverse effects	Agree that this level of traffic activity can be readily accommodated on OCR post construction. OCR will be safer and have increased traffic carrying capacity than at present. Reduced dust with sealed surface and easier passing of oncoming vehicles.	
23. Expected capacity and performance of OCR	NZS4404:2010 indicates a capacity of around 1000vpd for a rural road with a sealed width of 5.5m to 5.7m and total shoulder width of 1m. The single lane sections will result in OCR having a slightly reduced capacity from the NZS4404 guidance.	
24. Turbine decommissioning and effects management	Condition DT1 to include appropriate traffic management of the removal of materials offsite.	
Topic: Drawing Requirements		

Issue	Agreed position with reasons	Disagreements with reasons
25. Detailed design (public road upgrades including access design and internal access roads) – discuss whether these required by conditions	Provided for in condition CTM2(d).	
26. As-built drawings (public road upgrades including access design and internal access roads) – discuss whether these required by conditions	Expectation that this will be provided as part of the engineering plan approval process.	
Topic: Conditions		
27. General review of any other transport-related conditions	<p>CTM1 b) why include the following wording? vehicles undertaking works on the transmission line proposed to be located within the transmission corridor.</p> <p>Also, we understand that truck and trailers can turn in and out of this access but this may require TTM to make these manoeuvres. Should this be included in the CTMP?</p> <p>See also comment regarding on site workers in point 29 above.</p> <p>CTM1 d) Location is confirmed as property #85151 SH2.</p> <p>CTM2 d) to g) all agreed</p> <p>CTM5 agreed</p> <p>CTM6 a) suggest adding Tararua District Council and Masterton District Council in place of District Councils</p>	
28. NZTA role/input	Discussed in point 5, 8 and 9.	
29. Issues arising out of Mediation Outcome Report, including:	<p>In relation to 30vph trigger for right-turn bay on SH2 at OCR, this has been discussed in point 5.</p> <p>Regarding the third bullet point, refer to point 4 above.</p>	Regarding limits on construction traffic, HF considers that the capacity of OCR once upgraded is likely to be similar to the forecast peak traffic activity during construction. HF recommends that truck speeds and numbers are monitored throughout construction and

Issue	Agreed position with reasons	Disagreements with reasons
<ul style="list-style-type: none"> - 30vph trigger for right-turn bay on SH2 at OCR - limits on construction traffic - confirmation of position regarding use of roads by heavy vehicles and light vehicles (eg: on Opaki-Kaiparoro Road beyond Mt Munro Road) 		<p>data provided to TDC to ensure that vehicle activity is in line with the forecast activity.</p> <p>CS view of monitoring of traffic movements is that this is contained within section 8 of the CTMP.</p>
<p>30. Address questions from planning experts (see attached)</p>	<p>CTM2</p> <p>(a)</p> <p>i) see point 13 above for update of drawing numbers</p> <p>ii) HF and CS agree to include</p> <p>iii) see point 5 above</p> <p>iv) agree remove</p> <p>v) see point 5 and 29 above</p> <p>(b)</p> <p>i) Agree include and this is referenced in proposed NZTA Condition 3.</p> <p>ii) See right hand column</p> <p>iii) and iv) Agree include referenced in point 9 above.</p> <p>v) agreed see point 8 above.</p> <p>(c) addressed in point above</p> <p>CTM3</p> <p>Condition needs to reflect points 10, 11 and 12 above</p>	<p>Regarding wording within CTM2 (b), CS of the view that pavement strengthening works pre-construction is not the responsibility of Meridian. HF considers that Meridian needs to ensure that the road pavement condition is fit for carrying the construction traffic loadings. HF considers that CTM2 (b) ii) is needed and CS considers that it should be deleted.</p> <p>CTM6 d) xiii. As raised in point 29 above, HF considers that truck speeds and volumes should be monitored and reported to TDC.</p>

Issue	Agreed position with reasons	Disagreements with reasons
	<p>CTM6 (d)</p> <p>ix)– remove reference to level crossings</p> <p>Recommend that a new section is added to CTM6 that the CTMP will include a summary detailing how the CTMP complies with consent conditions CTM6 (a) to (d).</p>	
Topic: Other matters		
31. Any other matters	None	

Memo

To: Damien McGahan
From: Harriet Fraser
Date: August 6, 2024
Re: Mt Munro Windfarm Project – Aggregate Sources

This memo summarises an investigation into possible aggregate source locations and implications for the local road networks. The quarry locations include those listed in the Mt Munro Aggregate Supply Assessment Memo Report dated 11 May 2023 and also some potential sources identified by Tararua and Masterton District Councils.

This is not intended to be a fully comprehensive assessment of all possible aggregate sources but rather is intended to demonstrate possible route scenarios that could emerge and which could have an impact on local roads during the construction of the project.

Contractors/ Quarries	Location	Potential Routes
Hoults Contractors	SH57 Fitzherbert East Road, Aokautere, PN	SH57, Pahiatua Track, SH2. Would need to ensure that they travel into Pahiatua to access SH2. Scarborough Road and Nikau Road are local roads that provide alternative routes to SH2 and are not considered appropriate for heavy construction traffic.
Blackley (Byfords)	Ashhurst	SH57 and Pahiatua Track or SH3 to Woodville and onto SH2 once Te Ahu a Turanga opens. As per above for Pahiatua Track use. If travelling via SH3 and SH2 would want to ensure that the trucks stay on the State Highway network through Woodville and do not divert onto local roads.
Hirock and Prenters	65 Mangahao Road, Pahiatua	Ensure that trucks access SH2 from central Pahiatua and do not use Scarborough Road and Nikau Roads.
Pratts Quarry	Back Road, Aokautere, PN	As per Hoults above.
Stringfellows (Troup Rd)	Dannevirke	Ensure that trucks either stay on SH2 through Woodville or use Tay Street and Station Street.
Longburn Shingle	Longburn, PN	Walkers Road, SH56, central PN, SH57, Pahiatua Track, SH2. As per above comments on use of the Pahiatua Track.

Contractors/ Quarries	Location	Potential Routes
Winstone Aggregates	Lower Hutt	SH2 all the way.
Kieran Oliver	307 High Street, Solway, Masterton	SH2 through Masterton or heavy vehicle bypass around Masterton and then SH2. Ensure that trucks use the Heavy Vehicle Bypass and do not travel through central Masterton.
Winstone Aggregates	Otaki	SH1, SH57, Pahiatua Track, SH2. As per above comments on use of the Pahiatua Track.
Oringi Road Quarry	Dannevirke	Oringi Road, SH2 Ensure trucks do not use the Hopelands Road route and stay on SH2 through Woodville or use Tay and Station Streets.
Brislanes Quarry	Waikakahi Road, Pongaroa	Long sections of local road via either Pahiatua-Pongaroa Road or Route 52 Alfredton Road. Route 52 is likely to be the preferred route. Either route will be susceptible to pavement damage and also need temporary traffic management in places.
Hi-Rock Kendalls Line	Kendalls Line, PN	SH57, Pahiatua Track, SH2 As per above comments on use of the Pahiatua Track.
Kiriwhakapapa Road Quarry	Masterton District	Kiriwhakapapa Road, SH2 2004 resource consent for 7,000m ³ per annum with no trigger for ongoing review of road performance beyond 8 months of the consent decision. The decision includes that the road is narrow and there are sections where the visibility is poor and the curvature tight. This route is likely to be susceptible to pavement damage and may need temporary traffic management in places.
Taipo Quarry	Tinui Valley Road, Masterton	Tinui Valley Road, Masterton-Castlepoint Road, SH2 Tinui Valley Road is narrow and may be susceptible to pavement damage and may need temporary traffic management in places.

Based on these indicative quarry locations, and recognising that other sources will exist, and no locations have been confirmed by Meridian, some matters arising that may need to be addressed through conditions and/or the CTMP are:

1. Route between SH2 and the Pahiatua Track. This should be via Mangahao Road in Pahiatua.

2. Movements through Woodville to and from the west should be via SH3 and SH2 only. Movements through Woodville to and from the east could be via SH2 through Woodville or via Tay and Station Streets.
3. Ensure that trucks travelling to and from SH2 to the south of Masterton use the Heavy Vehicle Bypass and do not travel through central Masterton.
4. If Oringi Road Quarry is used ensure that the route is via Oringi Road and SH2 and not via Hopelands Road.
5. Route 52 is likely to be the preferred route if Brislanes Quarry is used.
6. If any of Brislanes, Kiriwhakapapa Road or Taipo Quarries are used, there may be a need for measures to ensure:
 - a. Truck volumes and speeds allow for the safe operation of the roads;
 - b. Provisions are in place to mitigate the risk of accelerated deterioration if significant increases in heavy traffic movements; and
 - c. Appropriate temporary traffic management measures are in place as needed.

In summary, the above exercise confirms the importance of identifying, through the development of the CTMP, the likely haulage routes (including alternative routes where options exist) and the numbers and types of trucks using these routes, so that the Councils can be satisfied that effects on local roads can be understood and appropriately monitored, managed and addressed through construction.

Harriet Fraser