

24 October 2018

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Dear Louise

Waikato Regional Council: Request for Further Information under Section 92 of the Resource Management Act 1991 (RMA) – Application Number APP139668 (Auth 139668.01.01, 139668.02.01 139668.03.01 139668.04.01) – Kaimai Wind Farm Limited

Thank you for the Section 92 requests from Waikato Region (dated 30 July) and Hauraki District (dated 2 August) Councils in which you request further information on the above consent applications.

This letter responds to further information requested from Waikato Regional Council.

The information is responded to in the order it was requested. In many cases the responses are in this letter but in some instances additional investigations have been undertaken and the resultant reports are referenced and appended.

Extensive additional work has been undertaken to respond to the S92 request. In particular we have refined the Civil Drawings and re-released them. The major differences from those submitted with the application is that we have carried out a more detailed assessment of potential cleanfill sites, including looking at geotechnical issues and erosion and sedimentation issues. This has led to a reduction in the number of cleanfill sites, and we are now proposing just one quarry area.

We have prepared a comprehensive Erosion and Sediment Control Plan and we have reviewed geotechnical aspects of the cleanfills, as requested.

Finally, we have carried out a full assessment of the effects of culvert upgrades on the Romaru Stream. This includes a detailed evaluation of the ecology of that stream.

Please contact me if you have any queries regarding this response letter and accompanying documentation.

Yours faithfully,

Craig Shearer

S92 Requests and Responses

1. *Initially there is some concern with regard to the generality of the statement within 1.2 of the AEE that requests the following:*

“The application expressly seeks resource consents for any and all variations or amendments to the plans and information described and appended to this AEE report, to the extent necessary to enable implementation of the resource consents, assuming granted, upon progression of the Project through the detailed design phase. This is provided any such variations or amendments do not create materially different or additional effects to those assessed, described or illustrated in this AEE and the Technical Reports and plans included within Attachments B to E”.

I request that this general statement, which requests an allowance for variations and amendments to the plans and information, without the need to seek a variation to the consent, be removed.

Response:

The purpose of this statement was to ensure that as a matter of scope, the application covered variations revealed as necessary at the detailed design phase to enable implementation of the resource consents. For a major project of this kind, it is essential to retain such scope. There is nothing unusual or inappropriate about this. Resource consents are frequently granted subject to a requirement that the approved activity proceed in general accordance with the application. A condition of that nature is almost universally set for consent for major projects, including for wind farm consents that have been approved by the Environment Court.

Case law confirms that a consent with that type of condition covers immaterial variations; that as a developer proceeds with the work authorised by a consent there will necessarily be variations from time to time, and that it should not be necessary for the developer to go back to the consent authority for every such immaterial variation. (*Cooke v Auckland City Council* A63/96)

Kaimai Wind Farm is not seeking “carte blanche” here but simply to retain scope within the consent granted for variations to the details of the project relative to the plans submitted with the application, provided they do not create materially different or additional adverse effects. This is in line with established case law and necessary for a project of this scale and nature. Kaimai Wind Farm does not propose to delete this statement from the application or amend it accordingly.

2. *The definition of Mineral provided within the WRP is “a naturally occurring inorganic substance beneath or at the surface of the earth, whether or not under water; and includes all metallic minerals, non-metallic minerals, fuel minerals, precious stones, industrial rocks and building stones and a prescribed substance within the meaning of the Atomic Energy Act 1945.”*

On the basis of the above definition the proposed quarry sites located and operated within the site will be regarded as a mineral extraction site.

To ensure compliance with Rule 3.5.11.4 in relation to the Discharge of Stormwater to Water can you please confirm that any discharge of stormwater on the site will not originate from a catchment that includes a mineral extraction site unless there is an interceptor system in place and confirm how the discharge is able to comply with the suspended solids standards in Section 3.2.4.6 of the WRP.

Otherwise the discharge of stormwater to water will require consent as a Discretionary Activity in accordance with Rule 3.5.11.8. Sufficient information in relation to the discharge will be required in accordance with Rule 8.1.2.5.

Response:

See Appendix 4, Textus Consultants letter, for response to this request.

3. *One of the main mitigating factors identified within the Ecological reports is that it is critical that machinery and plant is thoroughly cleaned or otherwise guaranteed to be free of attached seed or plant matter when being brought onto the site.*

Considering the volume of traffic how is this plant and machinery cleaning regime going to be managed and guaranteed in a practical manner to ensure that appropriate and adequate cleaning procedures are followed?

Potential mitigation measures could include the provision of a truck wash facility on site, to ensure all machinery and plant is washed immediately prior to entry. Alternatively to limit the volume of traffic such as concrete truck, a batching plant could be established on the site.

However, it is noted that both of these activities are identified as High Risk Facilities under Rule 3.5.12. This will require additional consenting requirements and potentially a change in the activity status of a number of activities. Can you please provide appropriate information to confirm how these matters are going to be addressed.

Response:

There will be no concrete batching plant on the site, with all concrete imported onto the site. Allowance has been made for these truck movements in the Integrated Traffic Assessment report. Note that aggregate will now be sourced on site, saving 4,410 truck movements onto the site with aggregate.

Trucks entering the site will be need to travel through a wheel wash facility established at the site. The facility that is proposed is a closed cycle lined pond system. So any water into the wheel wash facility will be purchased, used and re-used and the water dispose of at the end to a local sewerage plant. No liquids will be discharged to the site.

4. *Rule 8.1.4.3 identifies the information requirements in relation to cleanfill activities. The information provided within the application does not sufficiently address the following:*

- *The volume, area, length and batter height of the various cleanfill areas proposed as part of the activity.*
- *The proposed start and completion times of the activity.*
- *The potential effects on soil erosion, slope stability (including the potential to exacerbate pre-existing deep seated land instability), adjacent water bodies and water quality,*
- *The extent to which the activity will affect sites of significance to tangata whenua as Kaitiaki,*
- *The design and construction methods to be used.*
- *Methods to control water and sediment run-off from the site.*

- *The characteristics and sources of the material to be received at the site, and the measures to ensure that the material meets the definition of cleanfill or overburden in the Waikato Regional Plan.*
- *An assessment of the acid drainage potential of the material.*
- *Methods to control airborne particulate matter.*
- *Any measure necessary to rehabilitate the land following the completion of activity.*

Response:

See Appendix 1B ESC Memo and Appendix 1 Erosion and Sediment Control Plan from Graeme Ridley of Ridley Dunphy Environmental. Also, see Appendix 2 Geotech Response from KGA Geotechnical.

In respect of the issue “The extent to which the activity will affect sites of significance to tangata whenua as Kaitiaki”, KWF is still consulting with various Iwi. As yet we do not have specific additional sites of significance to Iwi apart from those already identified, although Iwi are saying the overall site is of significance to them. It would be normal practice to establish an accidental discovery protocol as part of the consent conditions in the event remains, features, deposits, or artefacts are discovered during the earthworks and construction phase of the project. This will enable assessment and if necessary protection of those features.

5. *In addition to the above it is noted that the geotechnical and civil engineering review of the information provided has resulted in the following information being requested:*

- *The project involves a considerable amount of earthworks for construction of the turbine foundations, laydown areas and access roads. However, the geotechnical report does not include any discussion on the suitability of re-use of any of the excavated materials, particularly for engineering fill. I note that in Section 3.3.8 of the AEE by Tektus earthworks volumes are given which includes a volume for engineered fill won from excavations. Please can the applicant provide information regarding the suitability of the materials to be excavated for re-use as engineering fill.*
- *The project will require significant volumes of suitable aggregate for construction. The geotechnical report includes potential locations of several quarry sites, however, the extent of these quarry sites has not been indicated. Please can the applicant confirm the number, extent and location of the proposed quarry sites and what, if any, remedial works will be carried out once the quarries are no longer required for the project.*
- *The project will create an excess volume of material which is proposed to be disposed of on site within engineered clean fill sites. The geotechnical report includes general recommendations for detailed design but does not include a plan showing the location of these fill sites or typical sections. The preliminary civil engineering drawings show numerous clean fill sites, some of which appear to be located on moderately steep slopes where they could reduce the stability of the existing slopes and where the recommended maximum fill grade of 1(v) to 3(h) appears difficult to achieve. Please can the applicant confirm that all indicated clean fill sites satisfy the recommendations in the geotechnical report.*
- *The geotechnical report indicates the depth of fill within the clean fill sites will be between 2m and 10m. No stability analysis has been included in the report to support the preliminary design. Please can the applicant provide stability analyses confirming that the proposed clean fill sites do not adversely affect the global stability of the existing slopes and can be constructed with a suitable factor of safety against local failure for both the static and seismic case. Please also clarify the method of construction and what measures will be taken to mitigate saturation of the fill as it is placed.*

- *The project includes the construction of two new 110kv lattice transmission towers. The geotechnical report does not include any discussion or recommendations for these structures. Please can the applicant provide information regarding the suitability of the proposed sites for the structures, a discussion of the geotechnical hazards and recommendations for earthworks, foundations and any slope stability mitigation measures.*
- *The geotechnical report includes general recommendations for foundation options for the proposed substation. However, the drawings indicate the substation is to be constructed on a fill platform with a maximum fill height of approximately 11m. This is not mentioned in the geotechnical report. Please can the applicant provide information on the proposed gradient of the fill batters and stability of the proposed fill platform.*
- *The civil engineering drawings include sections of the proposed access road. It is noted that the gradient of the fill batters is frequently shown as 1(v):1.5(h) or 1(v):1(h). These are steeper than the recommended maximum fill batter gradient of 1(v):2(h) stated in the geotechnical report. Please can the applicant provide justification for steepening the fill batters and confirm on what assumptions the earthworks volumes have been estimated.*

Response:

The response to these requests are included in Appendix 2 Geotech Response from KGA Geotechnical, and in Appendix 4 Textus letter, and Appendix 4B Civil Drawings Revised October 2018.

6. *The information provided on erosion and sediment control a does not indicate an understanding of what is typically required to implement appropriate erosion controls for these types of works. The following information is noted or requested:*
- *It is proposed to treat runoff from road construction with sediment pits located every few hundred metres. Sediment pits are designed to manage runoff from completed roads in free draining soil such as pumice. They are inappropriate as a treatment device as proposed.*
 - *There is mention on relying on pasture below the sediment pits to provide treatment of sediment laden water. Pasture is not a recognised sediment treatment method and there is no way of knowing how successful this would be. Sediment can travel for kilometres overland through pasture. This method should not be relied upon and does not meet the WRC guideline criteria.*
 - *The turbine site example provided shows an SRP located within the construction area. A large amount of earthworks would need to be undertaken to create the level area before the SRP could be constructed. It is unknown how the site would be controlled up to the point that the SRP became operative. The SRP emergency spillway would discharge back onto the construction site due to its location. It is required to discharge onto stabilised ground clear of the construction works. The SRP (or any other control such as a DEB) should be located adjacent to the works where it can be constructed and made operational before earthworks commence and where it can discharge clear of the site.*
 - *Part of the site shown is uncontrolled. Part has a bund and a silt fence. I am not certain what these devices purposes are. If any runoff was to discharge over the edge it would collect behind the bund then discharge at either end of it untreated.*
 - *There are clean fill sites on steep slopes which have topsoil bunds marked on as the control device. The plan notes they will have decants and there is a silt fence located below each bund which will be in the way of discharge. These fill sites will need more robust controls.*

If the catchments are small enough for DEBs they should be sized a minimum of 3% and should include forbays.

- *There is no mention of using flocculants. It seems likely that they will be needed.*
- *The Siltation Mitigation Proposals Report and Plans identify general measures proposed to control sediment runoff during excavation of a typical turbine platform. These measures show sediment ponds being constructed on the floor of each stage of the cut areas. Further information on proposed staging and methodology is required to identify how the appropriate erosion and sediment controls are to be constructed in advance of the earthworks commencing for each stage (as will be required) as currently the proposal shows ponds located directly underneath the areas of significant cut. Furthermore, the sediment pond on the plan discharges via a single pipe to the top of an adjacent slope. Further information is required to identify the proposed method of erosion protection at the point of discharge to the slope.*
- *The Drawings identify general access road cross sections with table drains. The access roads proposed have significant vertical gradients in places. Further information regarding the methodology for access road stormwater collection and disposal is required to identify; how runoff velocities will be controlled to prevent erosion of table drains, where the table drains will discharge their runoff to, and to identify the proposed method of erosion protection and sediment control at the point of discharge.*
- *Given the scale of earthworks proposed and potential for sediment effects to adjacent streams it is considered appropriate that some sampling of streams be undertaken during construction, particularly following rainfall events to help assess the effectiveness of erosion and sediment control measures employed. With this in mind please provide a stream monitoring plan to support your applications.*

Response:

See Appendix 1B ESC Memo and also Appendix 1 Erosion and Sediment Control Plan from Graeme Ridley of Ridley Dunphy Environmental.

7. *The Civil Engineering Peer Review supplied in Appendix 4 raises several questions re consistency between reports – can you confirm if all of these matters have been addressed within the final technical reports supplied as part of the application.*

Response:

These issues were addressed in the technical reports.

8. *It is calculated that approximately 100 concrete trucks will be required to create each turbine base, can you please confirm whether this is a continuous pour methodology and how many trucks per hour/day will be accessing the site. Will some form of water take be required to keep the concrete from setting between truck loads? How will this be managed, where will the water be sourced from and how will it be transported and discharged at the site?*

Response:

The concrete will be a continuous pour with no concrete mixed in situ and will continue until each turbine foundation is complete. The pour will need to be completed in one day. Therefore no water will be required for the concrete operation.

A typical capacity for a concrete truck referred to on page 16 of the Construction Report and is 6m³. As each turbine base will require approximately 540m³ of concrete, 90 concrete truck loads will be required for each (p13 Construction report).

9. *WRC are aware of previous consenting requirements in relation to wind farm activities that have resulted in the need to take up to 46m³ of water per day to provide for concrete batching, dust suppression and machinery washing. It is noted that no such water take consent is sought as part of this application. How is it intended that the water needs of the site will be appropriately addressed. As noted above where will a sufficient quantity of water be sourced from for these activities? How will water be transported and/or stored on the site, and where will any resultant discharge of water end up. Will these activities require additional consent applications? Please confirm.*

Response

Concrete batching is not proposed on the site. Wheel washing will be provided via a mobile, closed cycle lined pond and self-contained wheel washing system. As for dust suppression, because of the location of the site, dust suppression is not likely to be a major cause for concern. However, if it is then it will be the responsibility of the relevant contractor to source water for this purpose. We do not consider additional consents will be required to take water from either ground or surface water for this purpose.

10. *Following a review of the ecological information provided the following information is noted and requested:*
- *The assessment of impacts from the upgrade of eight culverts on the receiving freshwater environment is included in the Supplementary Ecological Report. The Ecological Effects Assessment did not assess the effects on freshwater environments because the design at that time did not include additional culverts or the alteration of existing culverts.*
 - *On review of the AEE and the Supplementary Ecological Report there are a number of questions in relation to the proposed works which would influence the nature of surveys and conclusions in relation to the impact assessment;*
 - *The AEE and the Supplementary Ecological Report indicate that eight culverts require an upgrade. The AEE states that one stream (Romaru Stream) will be affected by the culvert upgrades (section 8.8.5) and then in section 7.5.8 states that there are two instream culverts. The AEE suggests that the remainder of the culverts are for surface water only and therefore not relevant to the ecological assessment. The Supplementary Ecological Report states four streams are affected by the culvert upgrades, but does not indicate how each of these will be impacted. Further clarity is required in the Supplementary Ecological Report as to which streams are considered to be impacted by works.*
 - *It is not clear from the Supplementary Ecological Report or the AEE if the footprint of the upgraded culverts will remain the same as is currently present on site.*
 - *The Supplementary Ecological Report indicates that culverts may be perched. If this is the case, will instream works be required downstream, such as the installation of riprap or similar material to dissipate the energy of water leaving the culvert? These works are likely to be localised, but it is not evident from the ecological assessment if this has been considered.*

- *It is not evident from the Supplementary Ecological Report whether a walkover/survey was undertaken to assess the quality of the stream habitat that would be impacted by works. A stream survey was not completed to inform the Ecological Effects Assessment.*
- *The Supplementary Ecological Report indicates that the four streams on site have not been surveyed extensively; therefore fish diversity is largely unknown. The report goes on to indicate that the assessment will not exclude the potential presence of all local fish species. It is not clear what is meant by local fish species. Was a desk study undertaken for this assessment? Can this information be presented within the report?*
- *The Ecological Effects Assessment presents fish records that would be relevant to the Supplementary Ecological Report but there is no cross reference to this information in the Supplementary Ecological Report. In addition, the two reports make reference to different streams.*
- *A clear presentation of the desk study is required along with the scale of works being assessed. This would assist in the decision making as to whether a electrofishing surveys is required.*
- *In relation to freshwater habitat and fish – the Supplementary Ecological Report suggests that a desk study was undertaken and that the assessment is completed based on this information (e.g. local fish). However, the results of the desk study are not presented nor is there a cross reference to information presented in the Ecological Effects Assessment. It appears from the information presented that a walkover to assess the quality of the impacted stream habitat was not undertaken.*
- *The Supplementary Ecological Report does not include any assessment of the value of the streams to be impacted.*
- *The Supplementary Ecological Report looks at the majority of impacts that could occur as a result of the upgrade of culverts, but it is not clear what the value of the impacted streams are, the footprint of the works and whether culverts are perched. This affects the readers understanding of the scale of impact of the works. In addition, the conclusion states that works will lead to an improvement because works will improve fish passage. Where on site was fish passage restricted and what area of stream do the culvert upgrade works create access to?*
- *The Supplementary Ecological Report indicates a number of mitigation requirements that are in line with current practice. It would be useful to know if the culverts within the 1-2 streams highlighted by the AEE will be perched. Will there be loss of stream length or any instream works? The Supplementary Ecological Report indicates that stream restoration would be undertaken in the headwaters and streams fenced. This is also stated in the AEE in section 7.5.6. There is no indication as to where this will occur and the scale of works. It is not evident as to whether this is mitigation for impacts, enhancement works or compensation for other effects of the development.*
- *It is unclear how the Supplementary Ecology Report can present an assessment of residual ecological effects as this document is not an Ecological Impact Assessment (EclA) as per the guidelines (Environment Institute of Australia and New Zealand (EIANZ) produced the Ecological Impact Assessment Guidelines for use in New Zealand: terrestrial and freshwater systems (1st edition 2015, 2nd edition 2018)) and has not gone through the assessment process. Please provide a clear assessment of residual impacts post mitigation.*

Response:

See attached Supplementary Culvert Assessment Report from Ecology New Zealand, Appendix 3 for the answers to question 10.

Please contact the undersigned if you have any queries or other issues with the information provided.

Yours faithfully

Craig Shearer
Consent Co-ordination
Kaimai Wind Farm Ltd

List of Appendices

Appendix 1: Erosion and Sediment Control Plan (Ridley Dunphy)
Appendix 1B: ESC Memo (Ridley Dunphy)
Appendix 2: Geotech Response (KGA Geotechnical)
Appendix 3: Supplementary Culvert Assessment (Ecology NZ)
Appendix 4: Tektus Consultants Letter
Appendix 4B: Civil Drawings Revised October 2018 (Tektus Consultants)