

# Memorandum

**To:** Kaimai Wind Farm Limited

**From:** Graeme Ridley, Ridley Dunphy Environmental Limited

**Date:** 16 October 2018

**Re:** Kaimai Wind Farm Limited: Erosion and sediment control plan s.92 further information response

## RESPONSE TO s.92(1) FURTHER INFORMATION REQUEST

This memorandum summarises the s.92(1) further information request from both the Waikato Regional Council (WRC) (dated 24 July 2018) and the Hauraki District Council (HDC) (dated 2 August 2018) in relation to the earthworks and erosion and sediment control aspects for the Kaimai Wind Farm project (“the Project”).

Table 1 below addresses these points in a summary manner and directs where they have been included (where relevant) within the Erosion and Sediment Control Plan prepared by Ridley Dunphy Environmental Limited, dated October 2018 (“the ESCP”). The ESCP has been prepared as a standalone document that helps assess the potential effects of earthworks and construction activity and will be utilised moving forward within the project implementation forming the guidance for development of future Site Specific Erosion and Sediment Control Plans (SSESCP).

*Table 1: Waikato Regional Council and Hauraki District Council s.92(1) further information summary and response in relation to earthworks and erosion and sediment control matters.*

Council requested by	General summary of further information requested	Response
<b>Cleanfill placement:</b>		
WRC	Volume, area, length and batter height.	The total estimates for cleanfill, and the typical parameters for cleanfill sites have been included in the ESCP Section 5.6 and within the other associated Project reports. The plan set that supports the Project includes a set of further refined fill sites.

WRC	Proposed start/completion times.	The exact Project start and completion times are unknown at this stage. However, a Construction Management Plan (or equivalent) detailing the proposed construction timeframes and sequencing will be provided to Council prior to the commencement of activities.
WRC	Potential effects on erosion, slope stability and adjacent waterbodies and water quality.	The indicative fill sites have been identified and assessed geotechnically with this discussed within the geotechnical reports.  Section 5.6 of the ESCP outlines methods to manage the potential erosion and sedimentation effects on the receiving environment.
WRC	Design and construction methods.	Section 5.6 of the ESCP outlines the construction methods for the proposed cleanfill sites.
WRC	Methods to control water and sediment-run off.	Section 5.6 of the ESCP outlines the erosion and sediment control methods to manage the potential erosion and sedimentation effects on the receiving environment from the fill sites.
WRC	Characteristics and sources of material to be received at the site.	All material will be sourced from within the identified Project site, and will meet the definition of cleanfill. Imported material will include aggregate which will also meet the definition of cleanfill.
WRC	Methods to control airborne particulate matter.	Dust management has been addressed in Section 9 of the ESCP. The use of progressive stabilisation further confirms the minimisation of dust discharges.
WRC	Rehabilitation measures upon completion.	Site rehabilitation measures has been addressed in the ESCP.
HDC	“Siltation mitigation proposals” report includes in brackets that “some of these potential areas shown on the consent area plans are considered to have a contour	Potential fill sites have been identified and assessed for appropriateness, from a geotechnical and erosion and sediment control management perspective. Details in relation to these proposed sites and the typical erosion and sediment controls are included in Section 5.6 of

	<p>that is too steep for this purpose...”</p> <p>These sites should be removed from the plans.</p>	<p>the ESCP. It is noted that some of the original fill locations have been removed or refined in response to slope and risk factors.</p>
<p><b>Erosion and sediment control:</b></p>		
WRC	<p>Use of sediment pits.</p>	<p>Sediment pits are no longer included in the erosion and sediment control methodology as a primary device. These devices are however included for access roads where they can be used to assist with the cut and cover methodology by capturing and retaining some of the “heavier” sediments: that may be generated from the site. Sections 8 and 9 of the ESCP outlines the key erosion and sediment controls to be implemented on site, and Section 5.1 outlines the typical roading and access track construction methodology and the associated proposed erosion and sediment controls.</p>
WRC	<p>Utilisation of pasture as sediment treatment.</p>	<p>It is acknowledged that reliance on pasture is not considered a best practice sediment treatment method. Sections 6 and 7 of the ESCP outlines the key erosion and sediment controls to be implemented on site. Grass buffer zones will however remain as a key element in assisting with “polishing” the discharges from the site.</p>
WRC	<p>Turbine platform erosion and sediment control methodology and construction sequencing.</p>	<p>Section 5.2 of the ESCP outlines the typical construction methodology and erosion and sediment controls to be implemented for the proposed turbine platforms.</p>
WRC	<p>Fill site erosion and sediment control methodology.</p>	<p>Section 5.6 of the ESCP outlines the typical erosion and sediment control methods for the proposed cleanfill sites.</p>
WRC	<p>Use of flocculants to be included.</p>	<p>Chemical treatment has been considered, and is addressed in Section 8 of the ESCP. Chemical treatment remains as a key tool in the toll box to be implemented if necessary</p>

WRC	Erosion protection for sediment retention pond discharge locations to be identified.	Appendix A of the ESCP outlines the typical sediment retention pond design details, including erosion protection methods for SRP discharge locations.
WRC	Roading stormwater management including; stormwater collection, disposal, runoff velocity control, and erosion and sediment control at the point of discharge.	Sections 6 and 7 of the ESCP outlines the key erosion and sediment controls to be implemented on site, and section 5.1 outlines the typical roading and access track construction methodology and the associated proposed erosion and sediment controls.
WRC	Stream sampling and monitoring programme during construction to be included.	Section 10 of the ESCP outlines the proposed stream monitoring programme during construction.
<b>Culvert and stream works</b>		
WRC / HDC	Confirm locations of the proposed culvert works, and the assessment of instream effects.	Section 5.8 of the ESCP outlines the typical culvert construction methodology, and the proposed erosion and sediment controls to minimise the effects of this activity on the receiving environment. The locations and culvert details are provided for within the other documentation.

*G.S. Ridley*

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