

### Test Report

<p><b>To :</b> Hazell Bros</p> <p><b>Date :</b> 11<sup>th</sup> June 2019</p>	<p><b>Project Number :</b> 1604</p> <p><b>Project Details :</b> Cattle Hill Wind Farm</p> <p><b>Order Number :</b> 2509486</p> <p><b>Report Number :</b> 160401</p>
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### Thermal Resistivity (TR) of Granular Materials

The following results have been obtained from samples prepared by Geotherm to the material optimum moisture content and **95%** of maximum dry density, from materials delivered by Hazell.

Test ID / Material Description	As Received Moisture Content (% Dry Weight)	Material Density Details		TR Test Sample Details			
		Standard Max. Dry Density (t/m <sup>3</sup> )	Optimum Moisture Content (% dry weight)	Test Sample Moisture Content (% Dry Weight)	TR at listed moisture content (wet) (Km/W)	Test Sample Approx. Dry Density (t/m <sup>3</sup> )	TR Fully Dry (Km/W)
Robbin Island. Smithton, TAS. 60% Dust / 40% Dune Sand	2.5	1.91	10.0	9.7	0.45	1.82	1.22

**Notes**

- In order for the thermal values above to be achieved in the field, the material must be placed to the compaction and moisture details listed. Changes to the material density will affect the thermal resistivity values. To aid in compaction, material should be installed in layers.
- Thermal Resistivity testing conducted in accordance with IEEE Standard 442-2017 - Guide for Soil Thermal Resistivity Measurements and Ausgrid NS130 Appendix K.
- Maximum dry density / optimum moisture content determined in accordance with AS 1289.5.1.1.
- Sample density determined by weight per volume calculation.
- The above samples will be discarded after 2 weeks.

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Manager




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