

28 September 2023

Far North Solar Farms Ltd
Level 1 Office
65 Main Road,
Kumeu
Auckland 0810

Attention: John Andrews and Pareekshit Parihar

Dear John and Pareek,

**OHAU C SOLAR FARM
SCREENING ASSESSMENT OF EFFECTS**

This letter summarises our noise assessment for the proposed Ohau C solar farm near Twizel in the South Island. We understand a “generation only” solar farm is proposed.

We have previously prepared noise assessments for other projects for Far North Solar Farms (FNSF). In addition, we have prepared assessments for numerous other solar farm developers.

We understand that the proposed FNSF Ohau C project is a considerable distance from nearby dwellings. We have reviewed satellite photos and have located dwellings or other noise sensitive areas only at the following locations and distances:

- 2km: Haldon Arm Campground (to the south-east)
- 3.3km: Glencairn Station (to the west)
- 5.5km: Haldon Station / School (to the south-east)
- 8.6m: Twizel (to the north-west)

Figure 1 at the end of this letter shows the proposed site and the nearest dwellings / receivers.

Based on detailed calculations from previous FNSF generation solar farm projects, we have calculated the following approximate noise levels at these locations¹.

Table 1: Solar Farm Noise Levels at Significant Distances

Distance	Receiver	Approximate Rating Noise Level dB L _{Aeq} Includes special audible character correction (+ 5 dBA)
2,000 m	Haldon Arm Campground	24 dB L _{Aeq}
3,300 m	Glencairn Station	15 dB L _{Aeq}
5,500 m	Haldon Station / School	9 dB L _{Aeq}
8,600 m	Twizel	2 dB L _{Aeq}

¹ Note that these calculations are based on the propagation from other large “flat ground” solar farms, rather than the specific Ohau C project. Nevertheless, the noise levels are likely to be similar to what would be emitted from Ohau C assuming it has multiple inverters, transformers and tracker motors operating in a generation capacity (without significant BESS storage). To be clear: these calculations are **not** based on a specific calculation/noise model of the detailed design of Ohau C.

The above noise levels are very low. We expect they would be typically below the background noise levels in the most settled of daytime conditions². Our predicted noise levels would readily comply with any District Plan noise limit.

We consider a detailed assessment of noise emission from the proposed Ohau C solar farm is unnecessary because of the large distances between the farm and the closest receivers.

Please contact us if you have any further questions.

Yours faithfully

MARSHALL DAY ACOUSTICS LIMITED

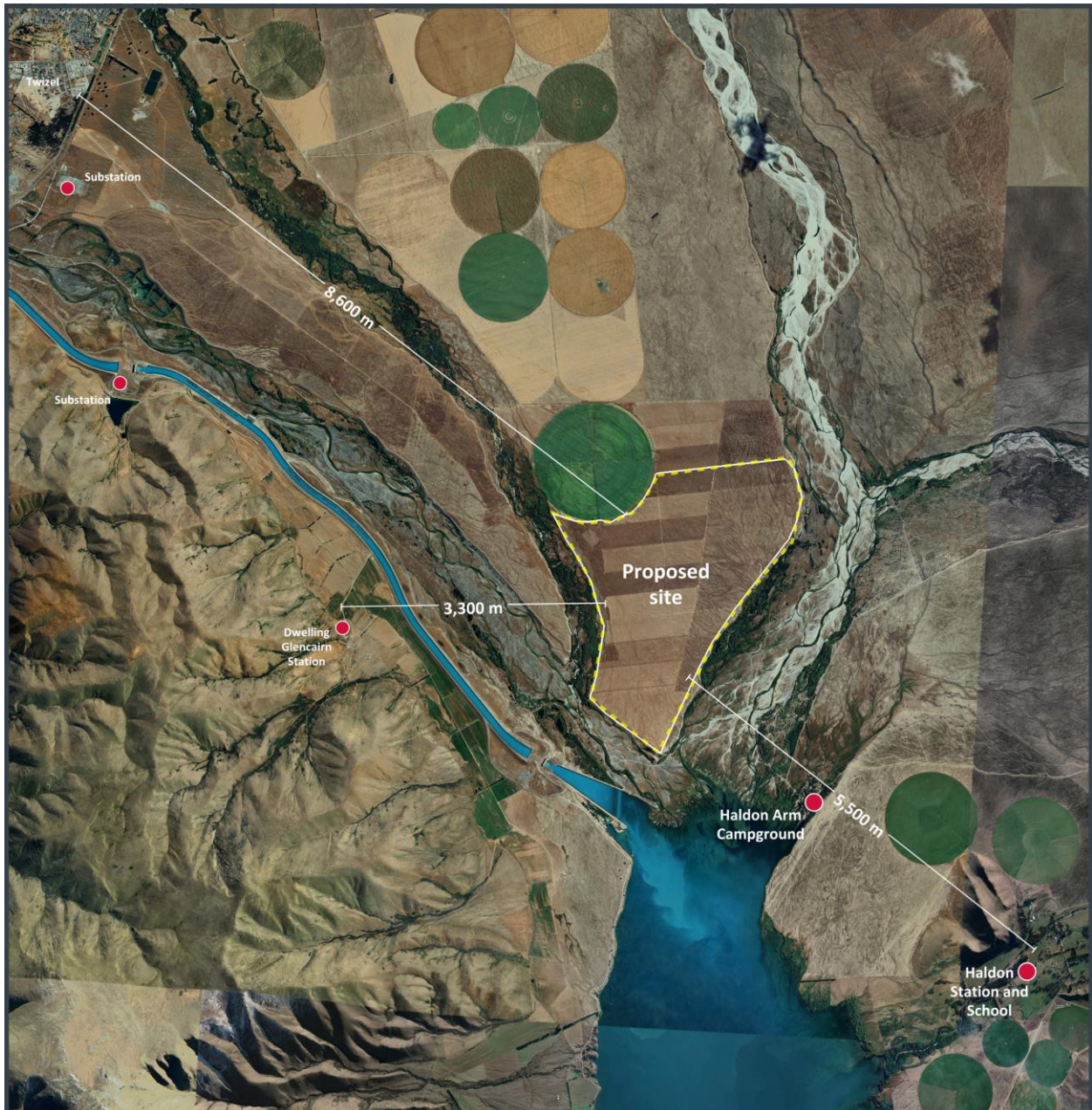


Peter Ibbotson

Acoustic Engineer

² In alpine environments during still conditions, daytime background noise levels can fall to around 20 to 25 dB LA90 – though this is rare in the daytime if there is any traffic, bird, wind, insects or the location is near to flowing water. Ambient noise conditions in the Ohau area will vary depending on the proximity to the hydro outflow, rivers and streams, irrigation machinery, etc.

Figure 1: OHAU C AND SURROUNDING DWELLINGS / RECEIVERS



PROJECT: OHAU C	TITLE: SITE AND SURROUNDS	
JOB NO: 20230722	DRAWN: PAI	DRAWING REF:
MARSHALL DAY Acoustics © COPYRIGHT THE DESIGN SHOWN ON THIS DRAWING REMAINS THE PROPERTY OF MARSHALL DAY ACOUSTICS AND MUST NOT BE REPRODUCED WITHOUT THE OWNER'S PERMISSION	DATE: 25 SEPTEMBER '23	Dw 001
	SCALE: 1:2,000 m	