

A. Description of Activity

The two sites of interest are at the below points. On the map below, figure 1. I have shown the locations of the existing beacon and the proposed location for the new structures

E1246201.079, N4829483.312
E1245417.811, N4828642.910

The structures are for providing back up power to the existing beacons in case of power failure from Tiwai. When the smelter closes the solar panels and batteries will become the permanent power supply for the beacons. Minor modifications to the existing beacons will be done to integrate the solar setup.

The conservation area is Tiwai Spit and under section s.25 – Stewardship Area

New structure location 1 = $13 \times 4 = 52\text{m}^2$

New structure location 2 = $1 \times 1 = 1\text{m}^2$

The above locations have been chosen due to their proximity to the existing beacons they are going to provide power for.



Figure 1 Solar panel locations

As shown in the below figures 2-5 below. You can see the area is a mixture of grasses, with scrubs tussocks and gorse scattered between. We will only be removing topsoil and vegetation to lay dunnage down for placing the concrete blocks on. Any topsoil and plant matter will be left onsite either in a pile or spread out alternatively If required by DoC it can be removed and disposed of at landfill.

There is a gravel road to within 30 metres of the beacon and then a rougher track that will get you within 18m of the beacon. The digger will track over from the road to site to clear the topsoil and vegetation. This means minimal disruption to the surround area will occur. Lifting of concrete block and solar panel equipment will be done by hiab to avoid disturbing the surrounding area where possible.

For erecting the fence, the holes will made using an auger.to keep hole size to a minimum. The implementation of the solar panels will mean when the smelter closes the port will still have a permanent reliable power supply to the beacons needed for safe navigation of ships. The current power poles are getting to their end of life and require maintenance that would cause a much larger impact on the area as the track to access is significantly overgrown and would require maintenance before a bucket truck could access it. Or if new lines were to be buried much larger site works would be required.



Figure 2-Looking back towards gravel road from lead light



Figure 3-Looking from gravel road down dirt track towards lead light



Figure 4-Proposed location looking back at gravel road



Figure 5-Proposed location looking from dirt road