

Executive Summary

Energy Farms Limited (EFL) is considering the development of 189 hectares of land, comprised of two properties, on Upper Kina Road in Ōpunake within the Taranaki Region for solar farm generation. Beca Limited (Beca) have been commissioned by EFL to undertake an Ecological Impact Assessment (EcIA) to support the resource consent application for the proposed works, including triggers under the National Environmental Standards for Freshwater (NES-FW, 2020) with respect to earthworks and vegetation removal in proximity of a 'natural wetland', as well as regional triggers controlling the placement of new culvert structures as identified by the NES-FW and Fresh Water Plan for Taranaki Regional Council.

The properties are both currently used for dairy farming with paddocks comprised of typical pasture species with scattered remnant native vegetation, mature exotic trees, and several small wetland systems comprised of hydrophytic vegetation that meet the NES-F definition of a 'natural wetland'. It is expected that the extent of hydrophytic vegetation expands and contracts depending on weather patterns and land management practices. The properties also contain several intermittent and permanent watercourses.

Ecological features within the properties provide habitat for native bird species, and native fish including At – Risk kōaro (*Galaxias brevipinnis*) and longfin eel (*Anguilla dieffenbachia*). There is also potential habitat for long-tailed bat and lesser short-tailed bat, as well as native skinks.

The completion of a preliminary ecological constraints assessment has ensured that the ecological effects of installing solar panels and associated infrastructure on the site have been avoided and minimised where possible through design.

There are several potential construction phase and operational adverse effects as a result of the proposal which include:

- Potential injury and/or mortality of native fauna;
- Vegetation clearance and loss of terrestrial habitat;
- Erosion and earth disturbance leading to potential deposition of suspended sediments into receiving environments;
- Loss of potential ecological value;
- Increased impervious surface landcover and potential alterations to hydrology; and
- Alteration to permanent watercourses.

Proposed measures to address these effects include:

- Timing of construction to avoid bird nesting season (Sept – Feb) or pre-clearance nest surveys;
- Implementation of robust erosion and sediment control measures to avoid sediment runoff into the wetland and watercourses;
- Completion of both lizard and bat surveys prior to the commencement of work and the development and implementation of management plan if native lizards or bats are present;
- Implementation of good practice watercourse and stormwater management; and
- Wetland management and restoration.

The overall ecological effect of the proposal is considered to be **Low to Very Low** assuming the recommended mitigation measures are implemented. Additionally, if watercourse and wetland management is implemented as recommended there may be a net gain in ecological value due to increased indigenous dominance and improved habitat value for native fauna over a medium to long term time scale.

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