

RC Application: – APP042595.01.01

Applicant: Glenview Estate Ltd.

Attention:

Leon Keefer,

Associate – Environmental Planning,

Beca.

To email: Leon.Keefer@beca.com

14 December 2021

Ecoprojects Consulting Network Ltd trading as

Ecoprojects Consulting Collaborative

P.O. Box 634, Whangarei 0140 NZ

PRINCIPAL CONSULTANTS:

Mobile: (0274) 738 216 - **Hedley Evans**

landscape planner, registered landscape architect

Mobile: (0273) 201 989 - **Terry Kennedy**

agroecologist, landscape ecologist

Mobile: (0274) 738 217 - **Mary Rasmussen**

engineer - projects planning, Microsoft Project applications

emissions trading scheme administrator

Proposed Purua Rapids Hydroelectric Scheme - ADDENDUM to 30/9/21 Assessment of Ecological Effects

On Tuesday 7 December a meeting was held on the project site as a follow-up to the submission of the Ecoprojects report 'Proposed Purua Rapids Hydroelectric Scheme - Assessment of Ecological Effects', dated 14 September 2021. Present were:

Brandon Ruehle, Resource Scientist – Freshwater Quality, **Northland Regional Council**.

Eloise Keefer, Community Ranger, Operations, **Department of Conservation**.

Leon Keefer, Associate – Environmental Planning, **Beca**.

Neil Lewis, Director, **Glenview Estate Ltd**.

Terry Kennedy, Ecologist, **Ecoprojects**.

Zivana Pauling, Environmental Monitoring Officer, **Northland Regional Council**.

All parties present familiarised with the project site and obtained clarification on matters of interest.

At the conclusion of the site meeting, Leon Keefer requested a written response from Terry Kennedy to the following remaining matters.

Provide description of the field work carried out to determine absence of native fish species in the Purua pools.

Assessments of the populations of Inanga, Bullies and other native fish was carried out during the site visits by Terry Kennedy (ecologist) and Bernadine Kiro (ecologist) on 1 April 2021 and 7 April 2021.

The site visits prioritised determining the potential effects of the Hydroelectric scheme on the ecological and hydrological functions of the river, over providing a complete environmental audit.

The search was therefore restricted to determining effects on the existing keystone species in the river i.e., eels. A total of 4 hours was spent below the falls and 2 hours above the falls using handheld sieves and viewing tubes to search for any species of diadromous fish.

During this visit indicators emerged of poor water quality and habitat denigration that helped explain the absence of native fish species:

- Acidic water, 4.0 – 4.5pH.
- High water temperature 17 degrees plus.
- Low levels of dissolved oxygen.
- High levels of sediment on the riverbed.
- Nitrogen contamination.
- Natural barriers to fish passage.
- Absence of eggs on instream flora.
- Domination of the habitat by Gambusi and snails.
- Previous environmental audits confirming an historical absence.

These factors combined with our inability to find any of the native species on the day supported our conclusion;

Native species do not have a significant presence in the ecology of the area surveyed.

Presence of eels in the section of Wairua River affected by the scheme

To avoid drawing the effects of the downstream Northpower hydro-electric facility into the independent Purua River project, this application did not focus on the manual transportation of elvers upstream and the transportation of mature eels downstream from that facility.

As there are no fish passages or eel access systems incorporated into the Northpower hydroelectric installation design, eels are manually collected and transported in containers past the dam, by appointed staff.

This method, although successful in maintaining eel populations in the upper river, is not regarded by Ecoprojects researchers as a form of natural or sustainable access.

Hence the statement:

The affected portion of the river is not accessible to diadromous fish.

Ecoprojects Consulting Collaborative, Hokianga

Per: *Terry Kennedy*

National Diploma in Sustainable Rural Development (NorthTec)

ecologist