

Tabled at hearing 23/04/2013



Proposed Canterbury Land and Water Regional Plan

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Summary of Terrestrial Ecology Evidence
Hearing Group 1

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Department of
Conservation
Te Papa Atawhai

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SCOPE OF EVIDENCE

- Context of New Zealand's indigenous biodiversity
- New Zealand's conservation priorities.
- Canterbury's remnant habitats and threatened plants.
- Importance of riparian margins
- Ongoing loss and threats to indigenous biodiversity in Canterbury.
- Proposed Canterbury Land and Water Regional Plan.



CONTEXT

- New Zealand's ecosystems and indigenous biodiversity is internationally significant, but has undergone extreme levels of loss, especially so in lowland and montane environments
- Such is the extent of ecosystem loss and degradation, all of low-altitude (<500 masl) Canterbury is classified as a threatened land environment and most of the montane zone (500m – 900m) is classified as at risk.
- Very little indigenous vegetation remains on threatened land environments, what does has typically been reduced to small, highly fragmented, modified relicts of indigenous habitats.



NEW ZEALAND'S CONSERVATION PRIORITIES

- The protection of indigenous vegetation that remains on threatened land environments is a national priority for nature conservation in New Zealand.
- Other national priorities include:
 - protection of ecosystems that have become rare, such as wetlands;
 - protection of naturally-rare ecosystems;
 - protection of habitats for threatened species.
- The CRPS, ECan's biodiversity Strategy, and NZ's Biodiversity Strategy are all consistent with these priorities and expectations.



CANTERBURY'S REMNANT HABITATS AND THREATENED PLANTS

- Remnants that survive in threatened LENZ are very important as the last examples of indigenous biodiversity in otherwise highly modified environments.
- They provide important refuge habitats for native species generally, including a disproportional number of Canterbury's 291 threatened plant and at risk plant species, of which 85% occur in low altitude or montane environments.
- Most of these remnants and threatened plant species occur on private land and are poorly protected or provided for in district council plans.



IMPORTANCE OF RIPARIAN MARGINS

- Riparian margins have high ecological values. They include margins of lakes that are classified as naturally rare ecosystems.
- Riparian margins can be especially important as refuges for remnant indigenous biodiversity in threatened LENZ due to the greater difficulty in developing them.
- Riparian habitats support ~35 (12%) of Canterbury's threatened plant species, reflecting their importance.
- Riparian margins, which can include exotic vegetation, also have important wider ecological values as:
 - surrogate habitats for fauna,
 - ecological corridors for species movement,
 - buffer zones to intensive land and use.



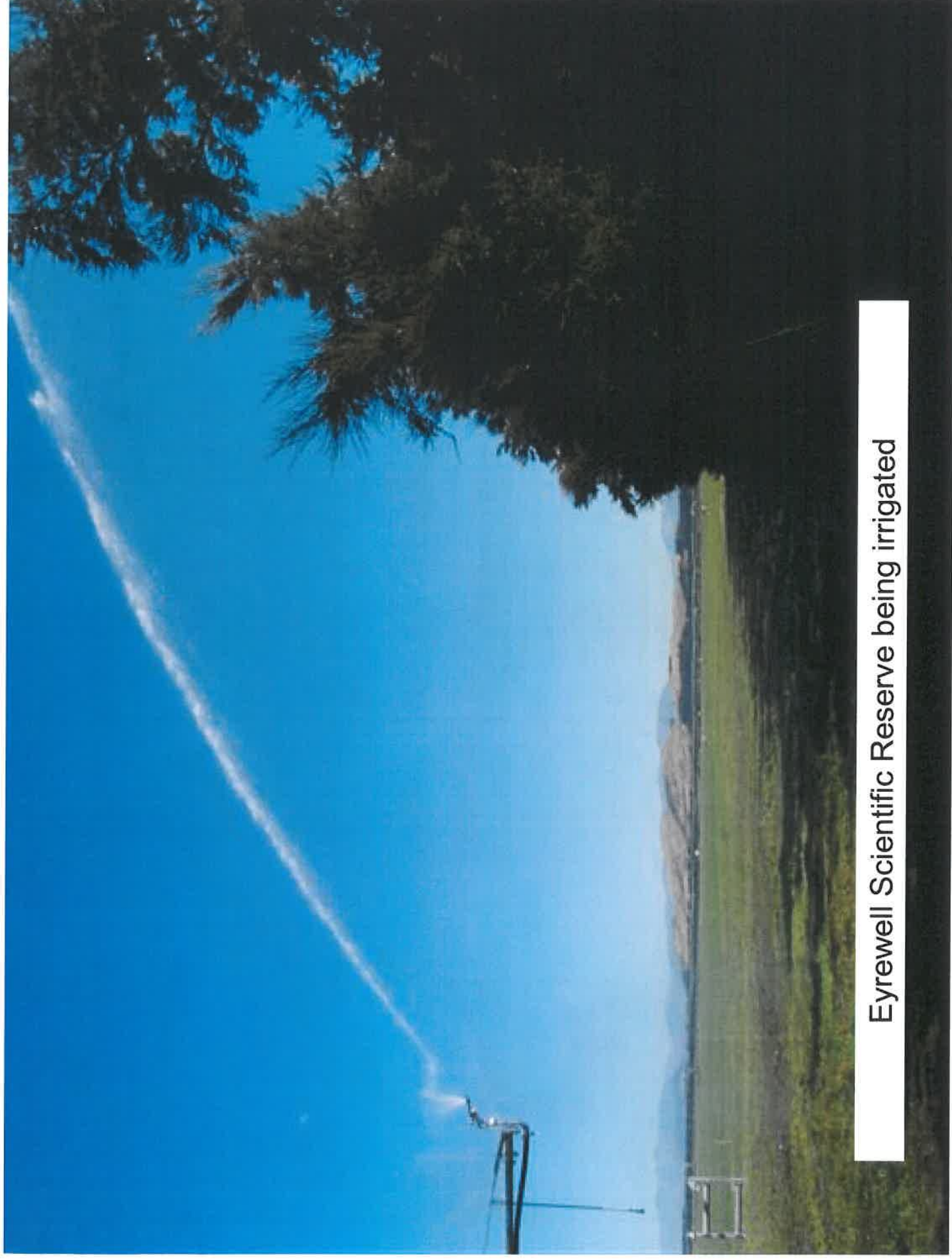
ONGONG LOSS OF INDIGENOUS BIODIVERSITY

- Despite the national imperative to halt the decline of indigenous biodiversity generally, ongoing habitat loss (herbicide, fire, cultivation, etc.) and degradation (weed invasion, stock damage, etc.) continues in Canterbury.
- This is especially the case in the lowlands, foothills and intermontane basins and includes substantial loss of threatened and rare ecosystems, and encroachment into riparian vegetation such as in the Waitaki, Rangitata and Rakaia Rivers.
- Other important remnants are seriously degraded by edge effects from adjoining land use. For example, dry-land remnants, including all conserved reserves on the Canterbury Plains, are adversely affected by cross boundary irrigation causing serious weed encroachment and the loss of native species.





Small isolated remnants on the Canterbury Plains affected by
irrigation edge effects

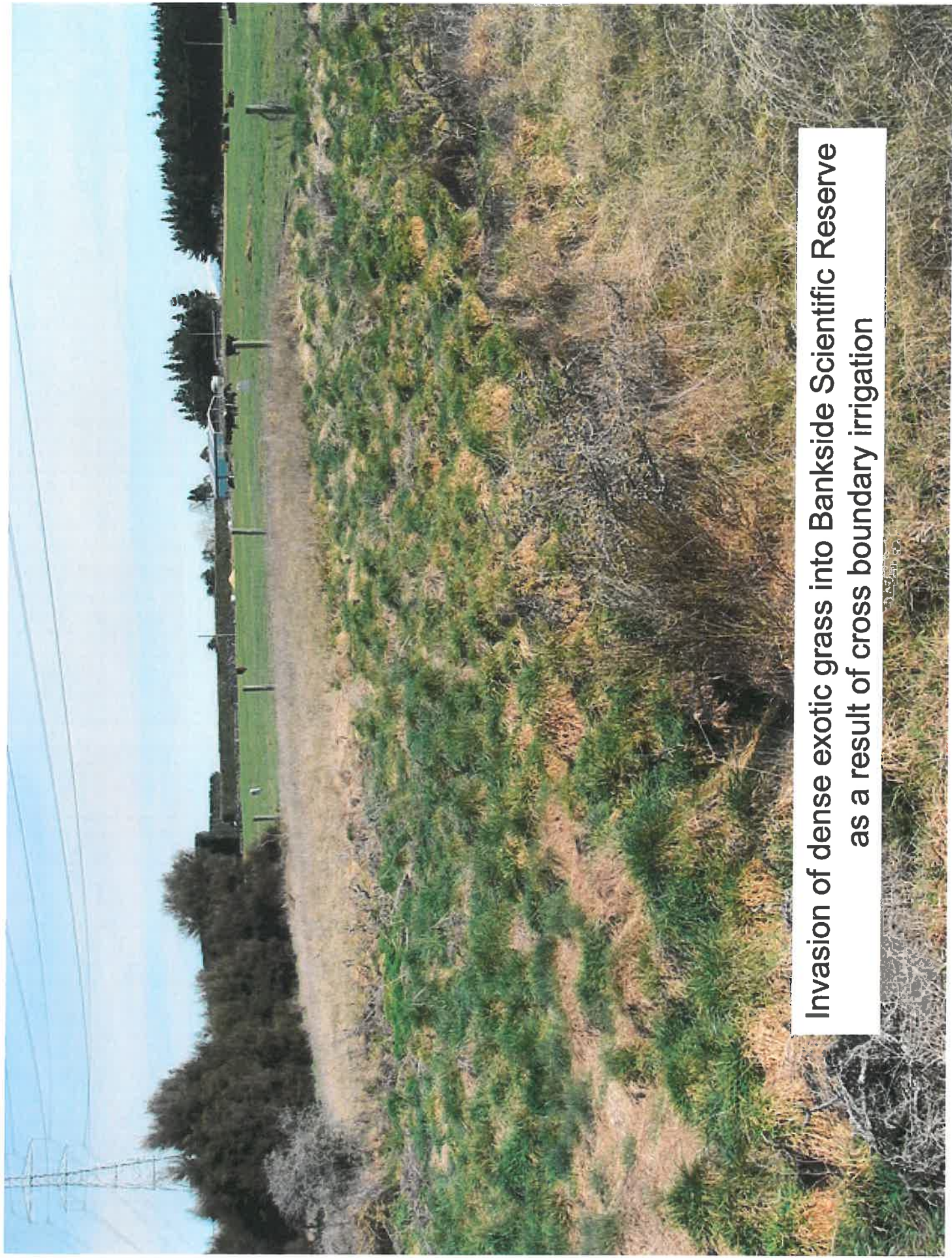


Eyrewell Scientific Reserve being irrigated



Exotic grass invasion under dry forest canopy at Eyrewell
Scientific Reserve owing to adjoining irrigation





**Invasion of dense exotic grass into Bankside Scientific Reserve
as a result of cross boundary irrigation**

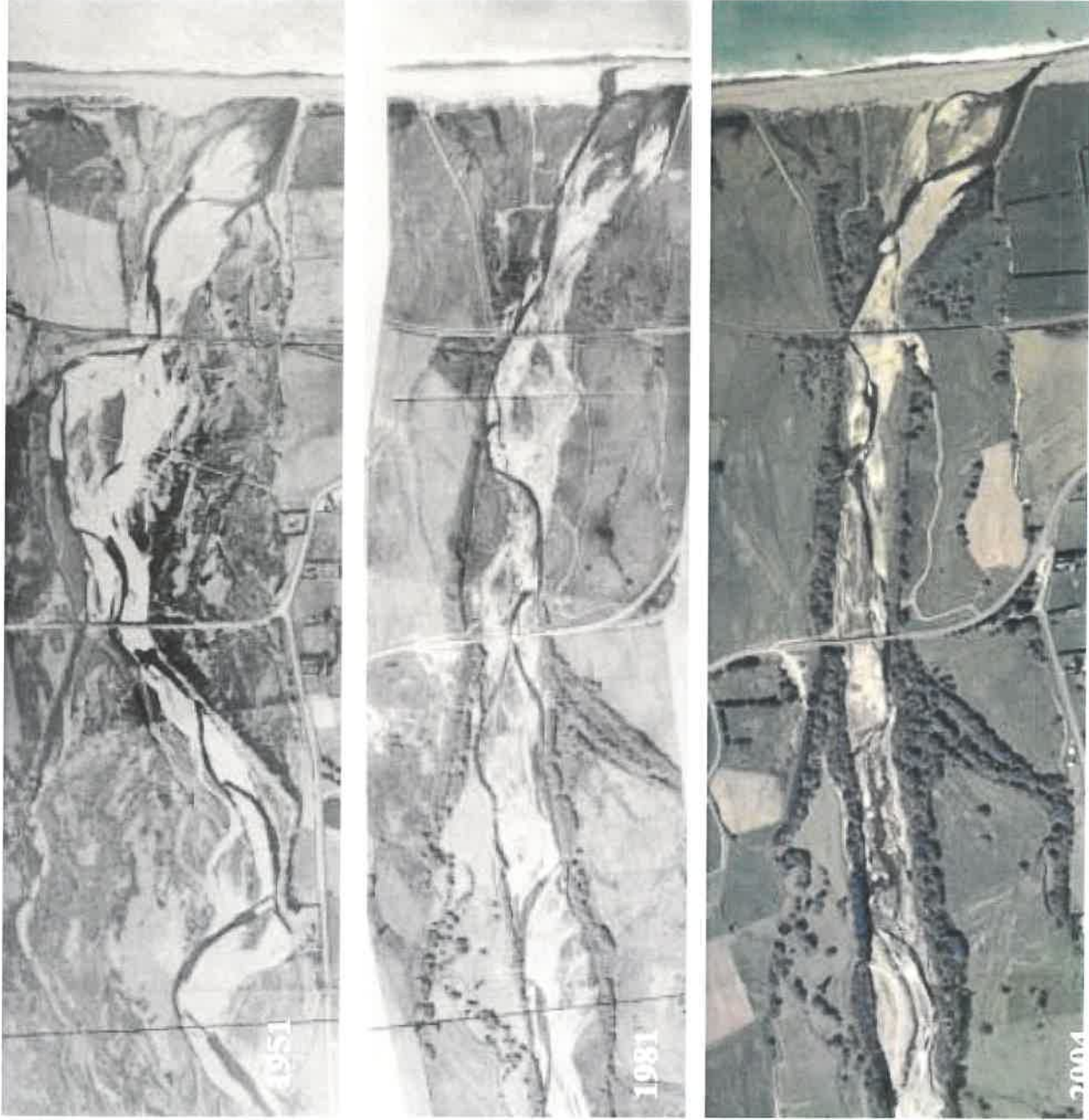
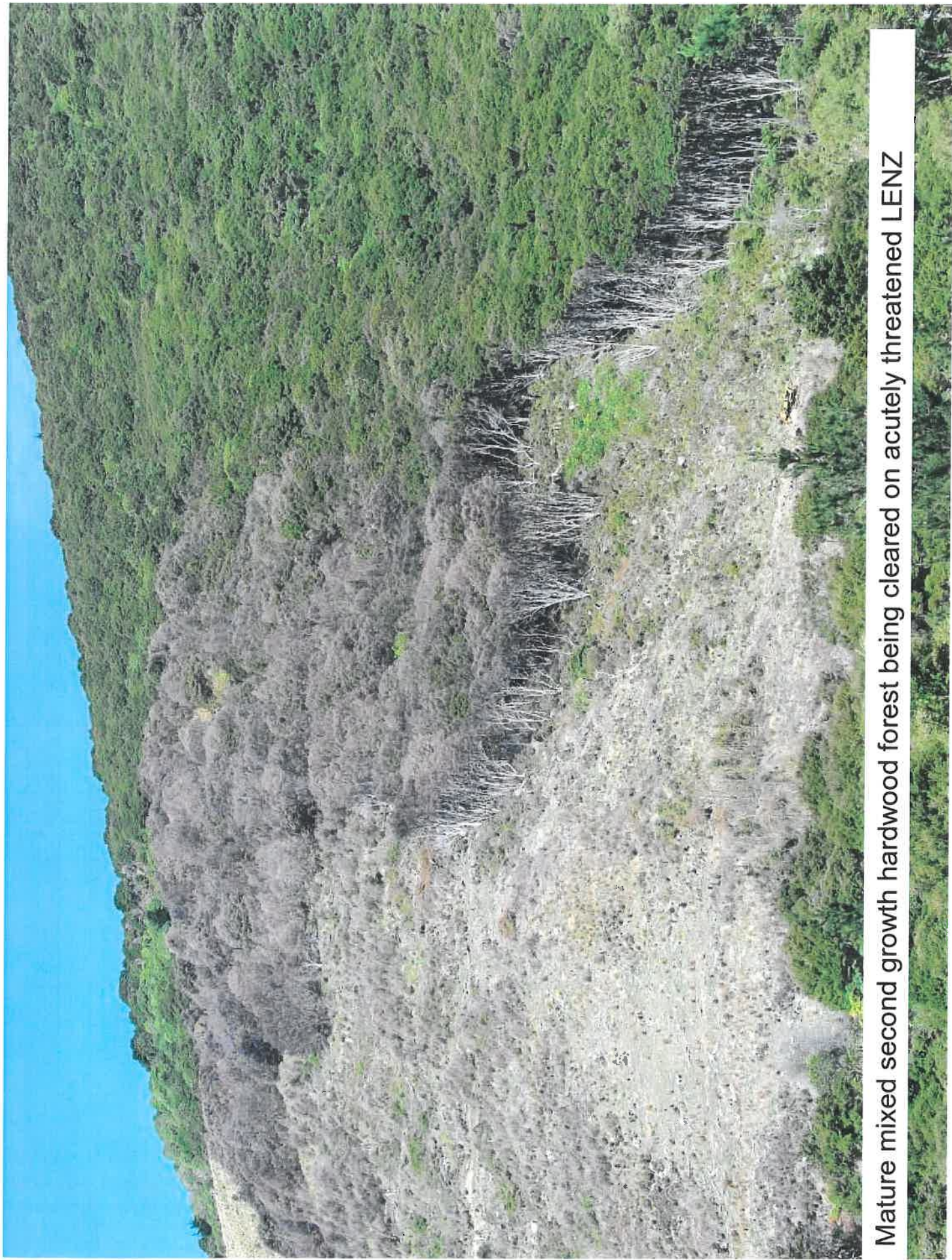


Figure 3. Changes in the Pareora River (1951, 1981, 2004), from braided river to single-thread river, caused by river control works. Taken from Hudson, H. R. 2005. Pareora River: Status of gravel resources and management implications. Environment Canterbury, Christchurch. Report U05/30. 18 p.





Mature mixed second growth hardwood forest being cleared on acutely threatened LENZ



Severe cattle pugging on the shoreline of Lake Heron Nature Reserve

PROPOSED LAND AND WATER PLAN

- Does not adequately provide for the identification of significant ecological values.
- It is especially permissive of vegetation clearance in threatened land environments (low altitude, gentle relief etc), such as:
 - clearance of indigenous vegetation from earthworks, cultivation and burning on land below 900m and less than 35 degrees slope,
 - clearance of riparian vegetation (with the exception of rather ambiguous restrictions over clearance levels),
 - damming streams to store up to 5000cum water as a permitted activity.
- Unless the pCLWRP provides for the recognition of indigenous vegetation and ecological values in these areas, it is likely that the Plan will facilitate the ongoing loss of ecological values that are likely to be present.



PROPOSED LAND AND WATER PLAN

- I support the changes to the pCLWRP proposed by the Director General of Conservation to address ecological concerns. These include:
 - Water Take and Use (Rule 5.96/5.101) - measures to address the adverse effects of water use on significant indigenous vegetation. Buffer zones around remnants should be a mandatory part of this mitigation.
 - Soil and Vegetation, and Infrastructure Sections (vegetation clearance and damming) - to require the identification of significant ecological values that may be present, such as the ecological assessment criteria in the CRPS.
 - Increasing the riparian zone width from 20m to 50m, given the values of riparian zones for indigenous biodiversity.

