

Tiromoana Bush photopoints – Summary of vegetation cover changes visible between 2005/06 and 2007/08

The Tiromoana Bush permanent photo points were established on December 14th 2004 (2004/05 photopoints). A report on the difference between these initial photos and those taken on January 24th 2006 (2005/06 photopoint) was produced in February 2006. Changes between these two photo sets were fairly limited being restricted mainly to the development of a rank grass sward as a result of the removal of grazing by domestic livestock and the establishment of infrastructure associated with the landfill, including the formation of Kate Pond. The present report brings these comparisons through to the start of 2008 (9 and 11 January 2008), and compares these 2008 images with those taken at the start of 2006 in order to identify changes subsequent to the initial grazing removal and infrastructure development. No report was produced on photopoint changes in 2007.

The following bullet points summarise the main changes apparent from the photopoints. Paired photos for those photo points referred to in the text are appended.

- The most obvious change apparent between the two sets of photo points is the very dense rank grass growth that was present in January 2008 (e.g., PP1j). Grass growth appeared to be taller and denser than in the two previous summers, reflecting in part the very heavy flowering that occurred during the 2007/08 summer.
- While there is no evidence of expansion of native shrubland from the photos (although kanuka has expanded in some areas, at least locally), there is now good evidence of both gorse (e.g., PP11e & PP12b) and broom expansion (PP11c). While most of the gorse expansion is from existing clumps (PP11e), at one site on the south side of Kate Pond earth works have created a disturbed area that has also been colonised (PP12b), either from seed already present or from seed brought on site by earthmoving machinery.
- The 2007/08 summer was characterised by low rainfalls and the effect of this is evident in the low levels of Ella Pond (PP6c), which actually dried out later that summer, the first time it has been totally dry since the start of the Tiromoana Bush restoration project.
- The margin of Kate Pond has been colonised by rushes during the period between the two photos, and stands out as an obvious brown band (PP12c).
- Weed management is evident in some of the photos, both the loss of some (but not all) wilding pine trees as a result of the felling operation (e.g., PP1b), and gorse spraying in lower Kate Stream (e.g., PP9g). This is the only gorse control that has been undertaken within Tiromoana Bush and aims to keep the coastal areas free of gorse.
- Finally, the first of the restoration plantings, the establishment of sedge (*Carex*) species on the Kate Pond weir are visible in the January 2008 photo (PP12a).

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PP1i (left – January 2006, right – January 2008) – the rank grass sward is clearly evident in the 2008 photo, obscuring the gorse plants beyond it.



PP11e (left – January 2006, right – January 2008) – gorse expansion from an existing patch is evident in the middle of the photo.



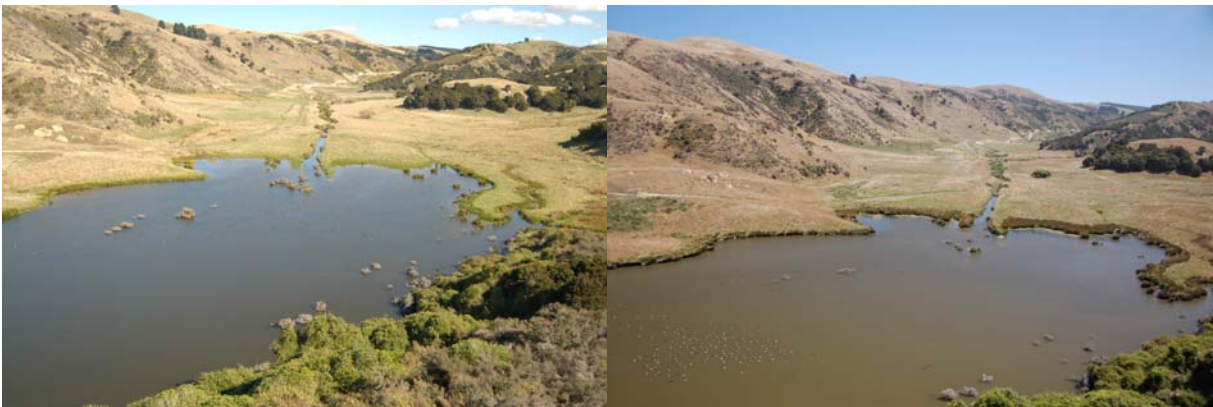
PP12b (left – January 2006, right – January 2008) – gorse appears to have established and expanded on an area of land disturbed by earthworks on the far side of Kate Pond.



PP11c (left – January 2006, right – January 2008) – broom expansion on the ridge to the left of the pine plantation is clearly evident in the 2008 photo.



PP6c (left – January 2006, right – January 2008) – the low water levels in Ella Pond in 2008, with the pond eventually drying right out at the end of the 2008 summer.



PP12c (left – January 2006, right – January 2008) – establishment of a distinctive belt of rushes around the margin on Kate Pond.



PP1b (left – January 2006, right – January 2008) – removal of wilding pines is evident to the left and on the ridge in the middle distance, while those on the foreground ridge have been left.



PP9g (left – January 2006, right – January 2008) – gorse control along lower Kate Stream.



PP12a (left – January 2006, right – January 2008) – Sedge plantings are visible on the further side of the Kate Pond weir.