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Waioira Manuherekia

Planting proposal for Merino Ridges (Poolburn Gorge/McKnights)

Please find below suggested plant species, planting densities, and site preparation for the wetland. These suggestions have considered the approximate budget for planting allocated and recommendations provide the best outcomes for the budgets.

Merino Ridges (Poolburn Gorge/McKnights)

It is understood that due to the constrained budget, it is not possible to plant the entire area, as such priority planting areas have been outlined on the plan below (Figure 1). A noticeable amount of regenerating native vegetation is already occurring within the area and proposed planting can be used to supplement this, as well as provide an additional seed source for further regeneration.

Budget: \$25,000

Total plant numbers: approximately 1,100 plants.

Sediment pond:

It is recommended that planting is undertaken on the edge of the historic mining sediment pond at 2m spacings (Figure 2). This area is drier, meaning there is more competition from weeds. Native planting can be used to suppress weeds in this area. Woody species would work well, along with taller species which would provide shade and shelter.

Recommended planting list:

- *Coprosma cheesemanii* (coprosma)
- *Coprosma dumosa* (coprosma)
- *Coprosma intertexta* (coprosma)
- *Coprosma rhamnoides* (twiggy coprosma)
- *Carmichaelia crassicaulis* (coral broom)
- *Carmichaelia petriei* (desert broom)
- *Coprosma rugosa* (needle-leaved mountain coprosma)
- *Corokia cotoneaster* (korokio)
- *Griselinia littoralis* (pāpāuma/broadleaf)
- *Olearia avicenniifolia* (mountain akeake)
- *Olearia lineata* (small-leaved tree daisy)
- *Olearia nummulariifolia* (tree daisy)

- *Olearia odorata* (scented tree daisy)
- *Phormium cookianum* (mountain flax)
- *Podocarpus laetus* (Hall's tōtara)
- *Podocarpus totara* (tōtara)
- *Sophora microphylla* (kōwhai)

Pocket planting along main water channel:

Other suggested planting locations include strategic areas along the main water channel at 1m – 2m spacings (Figure 3). As this is a dug channel it will likely continue to erode until it finds its natural path again. Therefore, rather than planting the edges to prevent further erosion, it is recommended that most planting is done in pockets along the edge of the channel where there are gentler slopes. Where planting does occur on steeper banks, *Carex secta* should be used at the bottom of the bank and planting at the top should be further back from the edge. It is possible that some of these plants may be lost through erosion, but they would still provide a seed source for future plants if this were to happen.

Recommended planting list:

- *Austroderia richardii* (toetoe)
- *Carex secta* (pukio/sedge)
- *Carex virgata* (pukio/sedge)
- *Coprosma propinqua* (mingimingi)
- *Cordyline australis* (tī kōuka/cabbage tree)
- *Phormium tenax* (harakeke/flax)
- *Veronica salicifolia* (koromiko/hebe)

General wetland planting:

Sparse planting throughout the wetland in general is recommended at 6m spacings (Figure 4).

Recommended planting list:

- *Austroderia richardii* (toetoe)
- *Coprosma propinqua* (mingimingi)
- *Cordyline australis* (tī kōuka/cabbage tree)
- *Olearia lineata* (small-leaved tree daisy)
- *Olearia odorata* (scented tree daisy)
- *Phormium tenax* (harakeke/flax)
- *Plagianthus regius* (ribbonwood)

Site preparation and planting:

Minimal site preparation will be required, with no need to spot spray prior to planting. This will enable more budget to be allocated to planting. Plant guards and wool mats are recommended. Spot scrub bar prep at the time of planting will aid planting efficiency and provide plantings with adequate light but retain protection from elements.

It is understood that willow control will be undertaken around the edge of the planting site. Ideally this would occur before planting. If this is not feasible, a decent sized buffer would be required between the willows and planting.



Figure 1 Plan view of proposed planting areas.



Figure 2 Photograph of historic mining sediment pond.



Figure 3 Main water channel through planting site.



Figure 4 Photograph of general wetland area within planting site.