

## **Attachment G**

## Attachment G Recommended Species List

Wetland and riparian areas	
<i>Aristotelia serrata</i>	Wineberry
<i>Asplenium bulbiferum</i>	Hen and chick fern
<i>Carex buechananii</i>	sedge
<i>Carex gaudichaudiana</i>	sedge
<i>Carex geminata</i>	Rautahi
<i>Carex maorica</i>	sedge
<i>Carex secta</i>	purei
<i>Carex sinclairii</i>	sedge
<i>Carex virgata</i>	sedge
<i>Chionochloa rubra</i>	Red tussock
<i>Coprosma propinqua</i>	Mingimingi
<i>Cordyline australis</i>	Cabbage tree
<i>Cortaderia richardii</i>	Toetoe
<i>Juncus edgariae</i>	rush
<i>Muellenbeckia australis</i>	pohuehue
<i>Phormium cookianum</i>	Mountain flax
<i>Phormium tenax</i>	Flax
<i>Sophora microphylla</i>	Kowhai
Raised and drier sites adjacent to wetlands	
<i>Coprosma propinqua</i>	Mingimingi
<i>Coprosma rigida</i>	
<i>Coprosma rugosa</i>	
<i>Cordyline australis</i>	Cabbage tree
<i>Fuchsia excorticata</i>	Fuchsia
<i>Hoheria glabrata</i>	lacebark
<i>Hoheria populnea</i>	lacebark
<i>Holocarpus bidwillii</i>	Bog pine
<i>Meliccytus alpinus</i>	Porcupine shrub
<i>Myrsine divaricata</i>	Weeping mapou
<i>Leptospermum scoparium</i>	manuka
<i>Olearia fragrantissima</i>	Scented tree daisy
<i>Olearia hectorii</i>	Hector's tree daisy
<i>Olearia lineata</i>	
<i>Olearia odorata</i>	Scented tree daisy
<i>Pittosporum eugenioides</i>	Lemonwood
<i>Pittosporum tenuifolium</i>	kohuhu
<i>Plagianthus regius</i>	Ribbonwood
<i>Poa cita</i>	Silver tussock
<i>Polystichum richardii</i>	Black shield fern

<i>Polystichum vestitum</i>	Prickly shield fern
<i>Uncinia strictissima</i>	Hook grass
<b>Beech forest associate species – Lake Terrace, western area and trail areas</b>	
<i>Blechnum novaezealandiae</i>	kiokio
<i>Carmichaelia petrei</i>	Native broom
<i>Carpodetus serratus</i>	putaputaweta
<i>Clematis paniculata</i>	clematis
<i>Coprosma crassifolia</i>	
<i>Coprosma foetidissima</i>	
<i>Coprosma linariifolia</i>	Yellow wood
<i>Coprosma lucida</i>	Shining karamu
<i>Coprosma propinqua</i>	mingimingi
<i>Coprosma rigida</i>	
<i>Coprosma rotundifolia</i>	
<i>Cordyline australis</i>	Cabbage tree
<i>Cortaderia richardii</i>	Toe toe
<i>Dacrycarpus dacrydioides</i>	Kahikatea
<i>Fuchsia excorticata</i>	Fuchsia
<i>Griselinia littoralis</i>	broadleaf
<i>Hebe salicifolia</i>	koromiko
<i>Meliccytus ramiflorus</i>	mahoe
<i>Metrosideros umbellata</i>	Southern rata
<i>Myrsine australis</i>	mapou
<i>Myrsine divaricata</i>	Weeping mapou
<i>Nothofagus menziesii</i>	Silver beech
<i>Nothofagus solandri var. cliffortoides</i>	Mountain beech
<i>Nothofagus fusca</i>	Red beech
<i>Phormium tenax</i>	flax
<i>Phyllocladus alpinus</i>	Mountain toatoa
<i>Pittosporum eugeniioides</i>	Lemonwood
<i>Pittosporum tenuifolium</i>	kohuhu
<i>Podocarpus hallii</i>	Mountain totara
<i>Prumnopitys taxifolia</i>	matai
<i>Pseudopanax crassifolium</i>	lancewood
<i>Pseudopanax ferrox</i>	Fierce lancewood
<i>Sophora microphylla</i>	kowhai
<i>Uncinia strictissima</i>	

<b>Low flammability<sup>32</sup> vegetation appropriate for incorporation into areas adjacent railway</b>	
<i>Griselinia littoralis</i>	broadleaf
<i>Fuchsia excorticata</i>	Fuchsia
<i>Pseudopanax crassifolium</i>	lancewood
<i>Carpodetus serratus</i>	putaputaweta
<i>Hebe salicifolia</i>	koromiko
<i>Melicytus ramiflorus</i>	mahoe
<i>Pittosporum eugenioides</i>	Lemonwood
<i>Pittosporum tenuifolium</i>	kohuhu

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<sup>32</sup> Fogarty, L.G. (1994): A flammability guide for some common New Zealand native tree and shrub species. Forest Research Bulletin No.167 Forest and Rural Fire Scientific and Technical Series Report No. 6.

## **Attachment H**

## Attachment H – Recommendations for swale planting

The following is a list of species suitable for use in planting/ naturalisation of drain swales with flows that are intermittent with an otherwise ephemeral nature.

Fringe = in periodically inundated areas

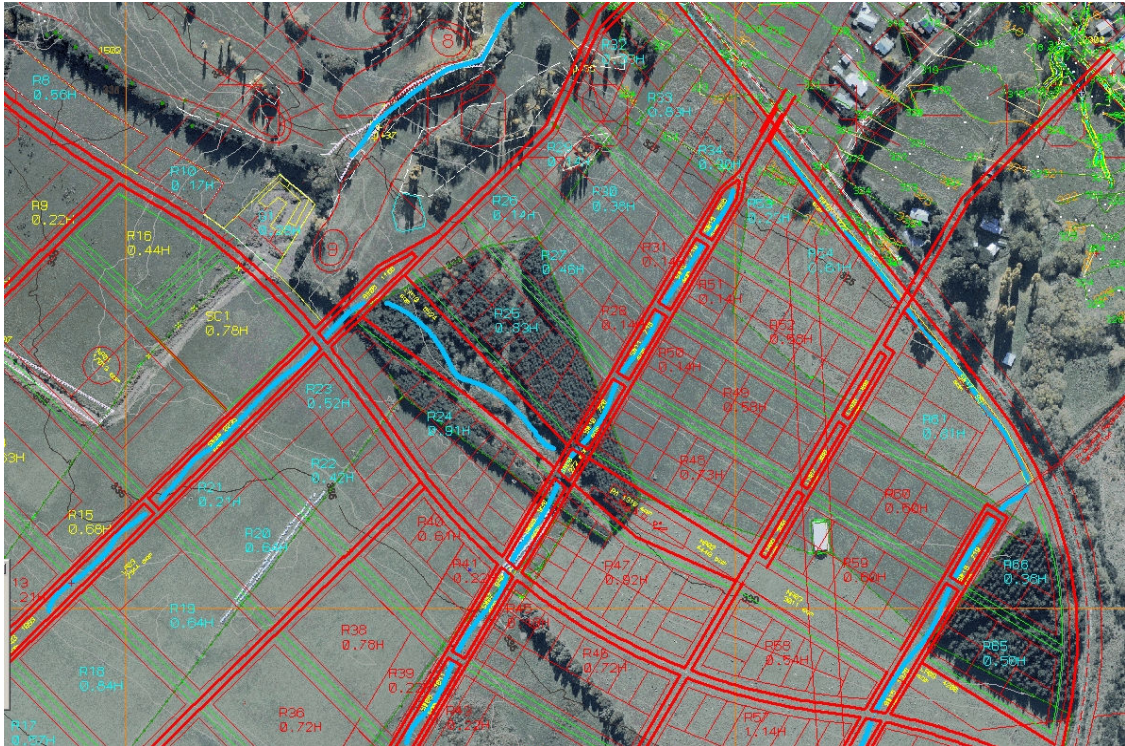
Mid bank = areas unlikely to be or only infrequently submerged, moist riparian area

Riparian shade = able to shelter other species and any areas of residual flow, beneficial for inhibiting light demanding weeds, higher, drier, not submerged

\* Growth rates as per Colin Meurk, “Rediscovering and Restoring Natural Heritage in the Wakatipu Basin” (1997). Slow growth rates - <0.15 metres/ year; medium - 0.15 – 0.5 m/ yr; fast - >0.5 m/yr.

Location	Growth rate* / (max height)	Botanical name	Common name
Fringe	3 to 5 yrs to fill a gap / (0.4m)	<i>Carex buchananii</i>	shining sedge
Fringe	3 to 5 yrs to fill a gap / (1 – 1.6m)	<i>Carex secta</i>	purei
Fringe	3 to 5 yrs to fill a gap / (1m +/-)	<i>Carex virgata</i>	sedge
Fringe/ base	3 to 5 yrs to fill a gap / (0.4m sward)	<i>Carex maorica</i>	
Fringe/ base	3 to 5 yrs to fill a gap / (0.4m sward)	<i>Carex geminata</i>	rautahi
Fringe	3 to 5 yrs to fill a gap / (0.6m)	<i>Juncus edgariae</i>	Leafless rush
Fringe – Mid bank	3 to 5 yrs to fill a gap / (2 m)	<i>Phormium tenax</i>	Flax
Fringe	3 to 5 yrs to fill a gap / (1.25 -1.5m)	<i>Chionochloa rubra</i>	Red tussock
Mid bank	3 to 5 yrs to fill a gap / (1-2 m plume)	<i>Cortaderia richardii</i>	Toetoe
Mid bank	3 to 5 yrs to fill a gap / ( 1- 1.25m)	<i>Phormium cookianum</i>	Mt flax
Riparian Shade	Medium/ (10 – 20 m)	<i>Sophora microphylla</i>	Kowhai
Riparian shade	Slow / (10 m +)	<i>Cordyline australis</i>	Cabbage tree
Riparian shade	Medium/ (3 m)	<i>Pittosporum eugenioides</i>	Lemonwood
Riparian shade	Medium/ (9m )	<i>Pittosporum tenuifolium</i>	Kohuhu
Riparian shade	Medium/ 15 m)	<i>Podocarpus hallii</i>	Hall's totara

## Attachment I - Proposed subdivision, linear park and stormwater system plan surrounding a *Carex* sedgeland.



Plan provided by Connell Wagner showing proposed subdivision, linear park and stormwater system surrounding a *Carex* sedgeland. The wettest portion of the sedgeland is within the linear park but this will be affected by drainage and earthworks in the surrounding area. It is recommended that the species listed in Attachments G and H be planted within the part of the sedgeland proposed to be retained and used for stormwater management.