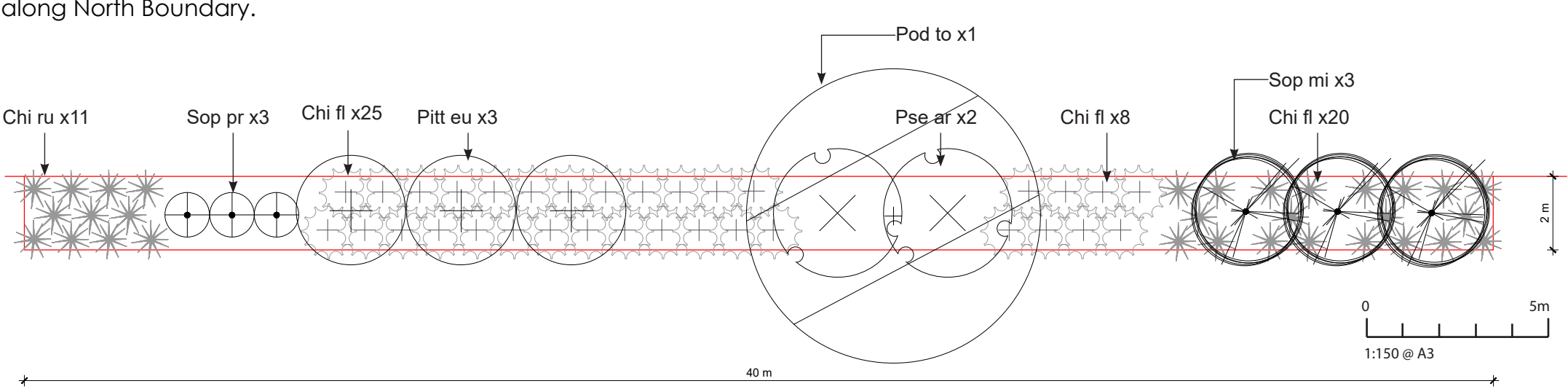




Detail 2A: Planting location along North Boundary.



Detail 2B: 40m repetitive planting pattern to be implemented over 120m. Planting to be incorporated between trees to be retained.

PLANT SCHEDULE - Detail 2B

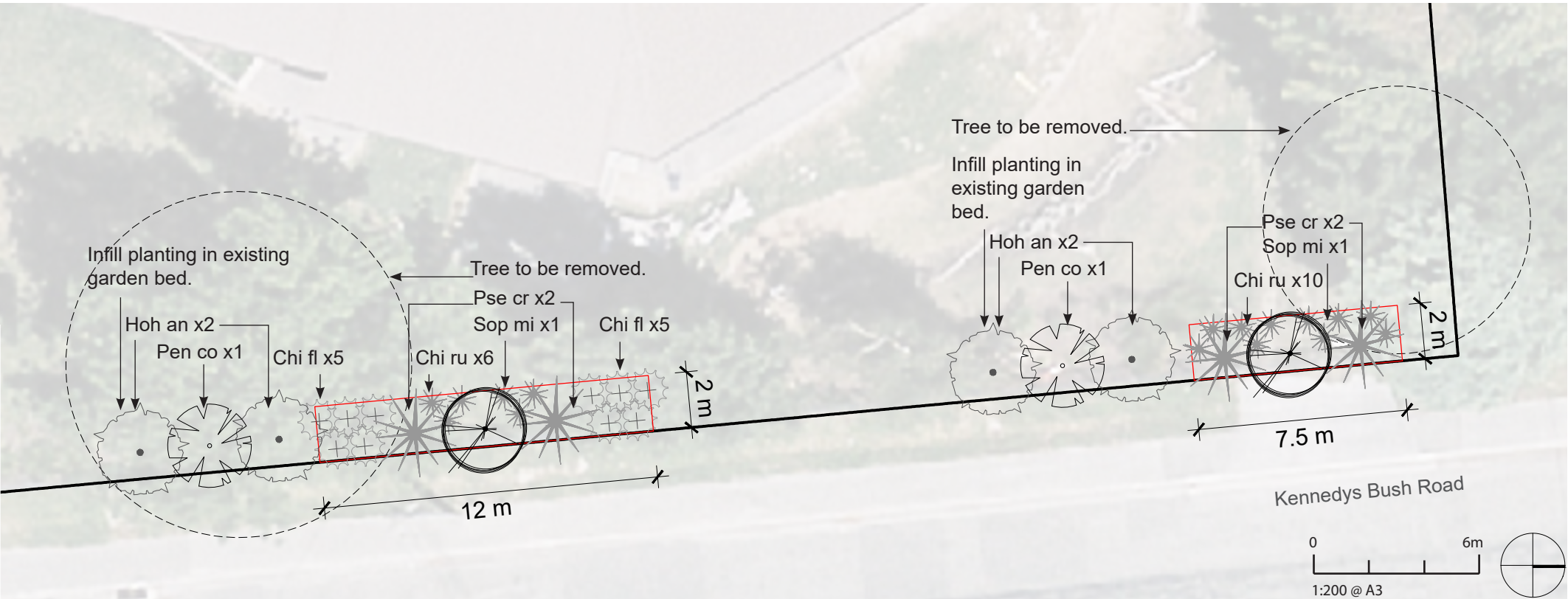
Code	Botanical Name	Common Name	Mature size (WxH)	Spacings	Quantity
TREES & SHRUBS					
Pit eu	<i>Pittosporum eugenoides</i>	Tarata - Lemonwood	3x12m	3m	3
Pod to	<i>Podocarpus totara</i>	Tōtara	8x15m	7m	1
Pse ar	<i>Pseudopanax arboreus</i>	Whauwhaupaku - Five Finger	3.5x6m	3m	2
Sop mi	<i>Sophora microphylla</i>	Kōwhai	3x8m	2.5m	3
Sop pr	<i>Sophora prostrata</i>	Dwarf Kōwhai	1x2m	1m	3
GRASSES					
Chi fl	<i>Chionochloa flavicans</i>	Dwarf Toe toe	1.5x1.2m	1m	33
Chi ru	<i>Chionochloa rubra</i>	Red Tussock	1x1m	1m	31
(Total is for one 40m repeatable pattern)				TOTAL:	76



PLANT SCHEDULE - Detail 3A

Code	Botanical Name	Common Name	Mature size (WxH)	Spacings	Quantity
TREES & SHRUBS					
Hoh an	<i>Hoheria angustifolia</i>	Houhi puruhi - Lacebark	3x6m	2.5m	4
Pen co	<i>Pennantia corymbosa</i>	Kaikōmako - Bellbird Tree	3x8m	2.5m	2
Pse cr	<i>Pseudopanax crassifolius</i>	Horoeka - Lancewood	3x12m	2m	4
Sop mi	<i>Sophora microphylla</i>	Kōwhai	3x8m	2.5m	2
GRASSES					
Chi fl	<i>Chionochloa flavicans</i>	Dwarf Toe toe	1.5x1.2m	1m	10
Chi ru	<i>Chionochloa rubra</i>	Red Tussock	1x1m	1m	16
TOTAL:					38

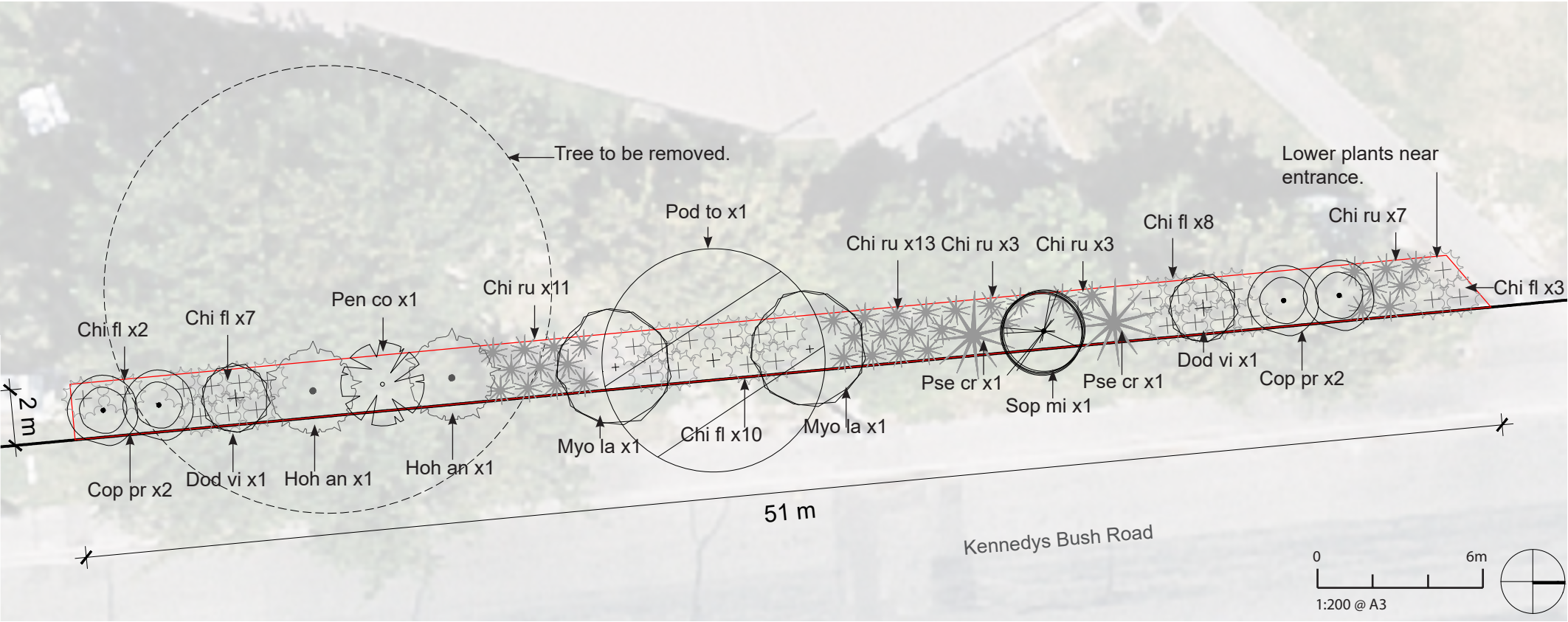
Detail 3A: Planting detail along North East Boundary.



PLANT SCHEDULE - Detail 3B

Code	Botanical Name	Common Name	Mature size (WxH)	Spacings	Quantity
TREES & SHRUBS					
Cop pr	<i>Coprosma propinqua</i>	Mikimiki	2.5x5m	2m	4
Dod vi	<i>Dodonaea viscosa</i>	Green Ake Ake	2.5x7m	2m	2
Hoh an	<i>Hoheria angustifolia</i>	Houhi puruhi - Lacebark	3x6m	2.5m	2
Myo la	<i>Myoporum laetum</i>	Ngaio	4x7m	3.5m	2
Pen co	<i>Pennantia corymbosa</i>	Kaikōmako - Bellbird Tree	3x8m	2.5m	1
Pod to	<i>Podocarpus totara</i>	Tōtara	8x15m	7m	1
Pse cr	<i>Pseudopanax crassifolius</i>	Horoeka - Lancewood	3x12m	2m	2
Sop mi	<i>Sophora microphylla</i>	Kōwhai	3x8m	2.5m	1
GRASSES					
Chi fl	<i>Chionochloa flavicans</i>	Dwarf Toe toe	1.5x1.2m	1m	30
Chi ru	<i>Chionochloa rubra</i>	Red Tussock	1x1m	1m	31
TOTAL:					76

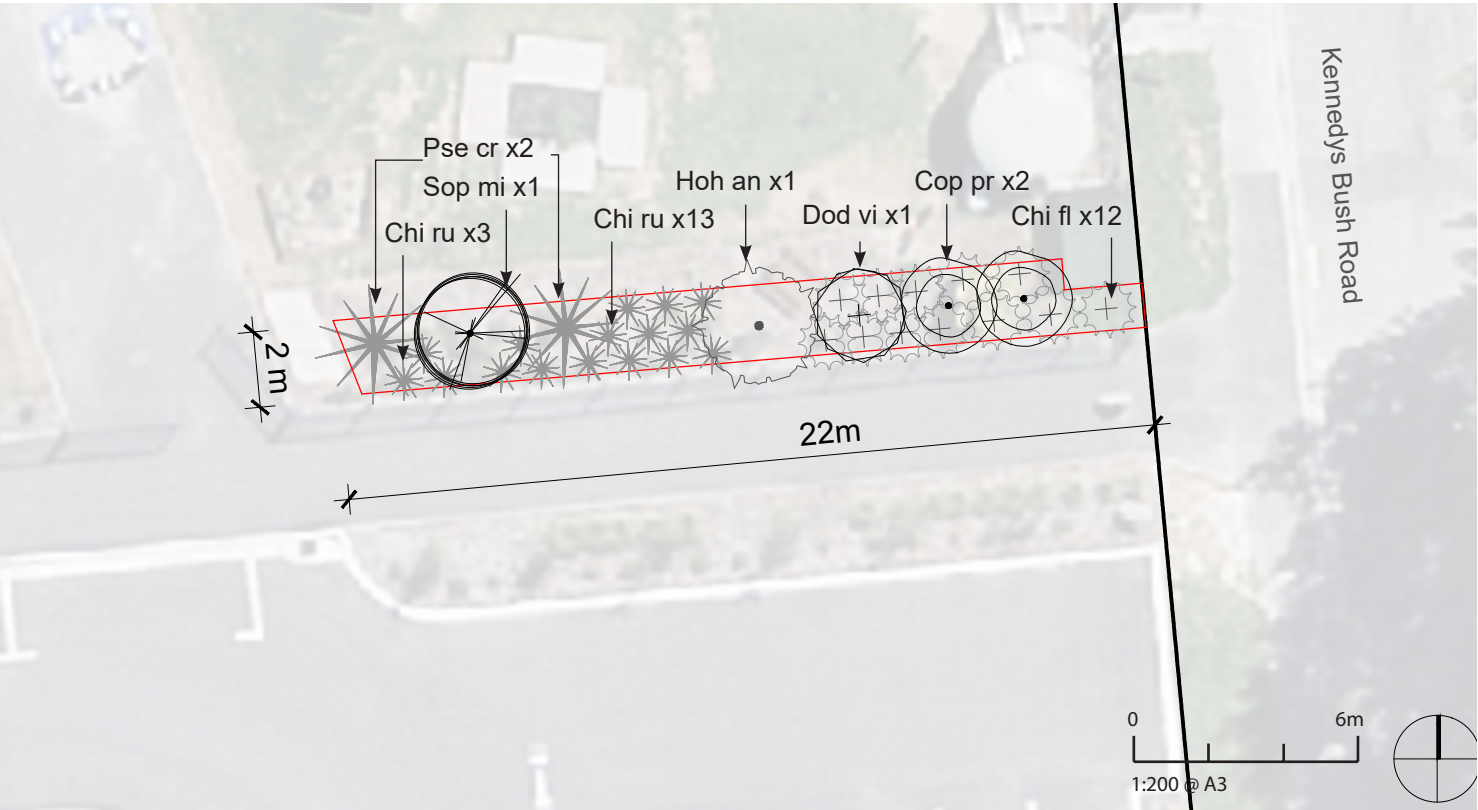
Detail 3B: Planting detail along South East Boundary.





PLANT SCHEDULE - Detail 4A

Code	Botanical Name	Common Name	Mature size (WxH)	Spacings	Quantity
TREES & SHRUBS					
Cop pr	<i>Coprosma propinqua</i>	Mikimiki	2.5x5m	2m	2
Dod vi	<i>Dodonaea viscosa</i>	Green Ake Ake	2.5x7m	2m	1
Hoh an	<i>Hoheria angustifolia</i>	Houhi puruhi - Lacebark	3x6m	2.5m	1
Pse cr	<i>Pseudopanax crassifolius</i>	Horoeka - Lancewood	3x12m	2m	2
Sop mi	<i>Sophora microphylla</i>	Kōwhai	3x8m	2.5m	1
GRASSES					
Chi fl	<i>Chionochloa flavicans</i>	Dwarf Toe toe	1.5x1.2m	1m	12
Chi ru	<i>Chionochloa rubra</i>	Red Tussock	1x1m	1m	16
TOTAL:					35

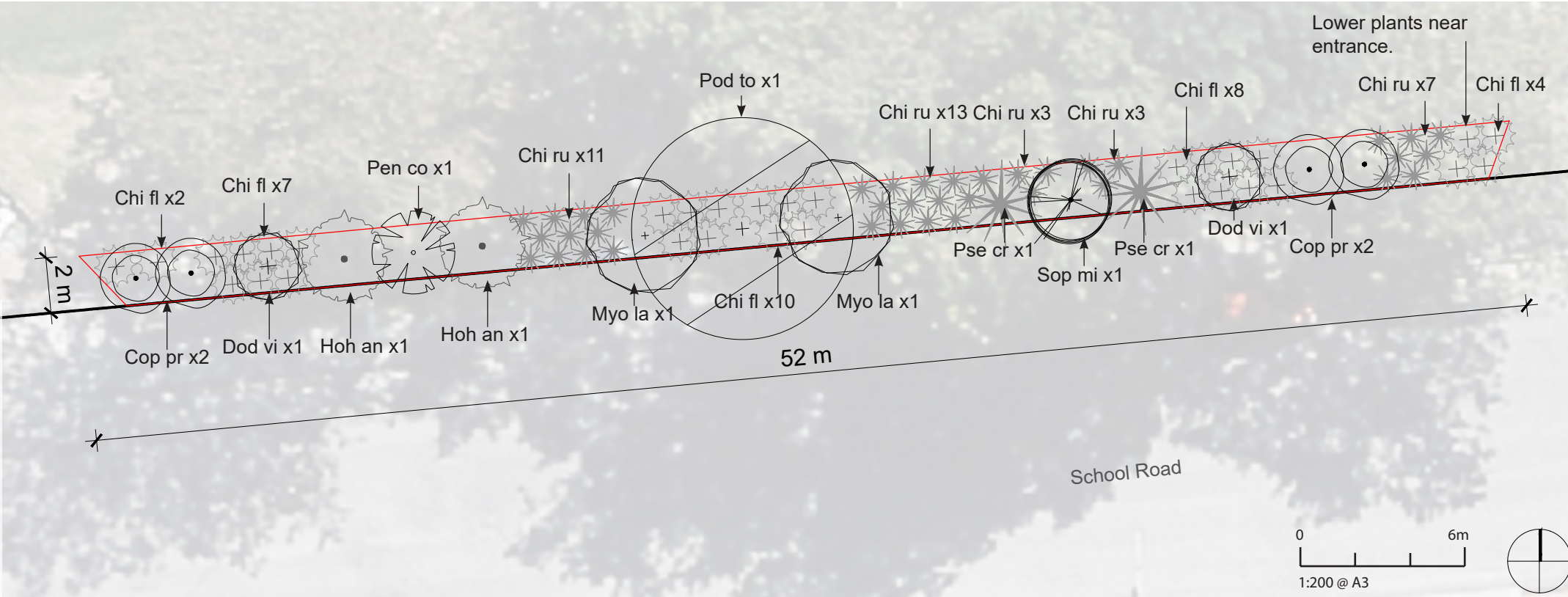


Detail 4A: Planting detail at South Access.



PLANT SCHEDULE - Detail 5

Code	Botanical Name	Common Name	Mature size (WxH)	Spacings	Quantity
TREES & SHRUBS					
Cop pr	<i>Coprosma propinqua</i>	Mikimiki	2.5x5m	2m	4
Dod vi	<i>Dodonaea viscosa</i>	Green Ake Ake	2.5x7m	2m	2
Hoh an	<i>Hoheria angustifolia</i>	Houhi puruhi - Lacebark	3x6m	2.5m	2
Myo la	<i>Myoporum laetum</i>	Ngaio	4x7m	3.5m	2
Pen co	<i>Pennantia corymbosa</i>	Kaikōmako - Bellbird Tree	3x8m	2.5m	1
Pod to	<i>Podocarpus totara</i>	Tōtara	8x15m	7m	1
Pse cr	<i>Pseudopanax crassifolius</i>	Horoeka - Lancewood	3x12m	2m	2
Sop mi	<i>Sophora microphylla</i>	Kōwhai	3x8m	2.5m	1
GRASSES					
Chi fl	<i>Chionochloa flavicans</i>	Dwarf Toe toe	1.5x1.2m	1m	31
Chi ru	<i>Chionochloa rubra</i>	Red Tussock	1x1m	1m	31
TOTAL:					77



Detail 5: Planting detail South.

PLANT SCHEDULE - Detail 2B

Code	Botanical Name	Common Name	Mature size (WxH)	Spacings	Quantity
TREES & SHRUBS					
Pit eu	<i>Pittosporum eugenoides</i>	Tarata - Lemonwood	3x12m	3m	3
Pod to	<i>Podocarpus totara</i>	Tōtara	8x15m	7m	1
Pse ar	<i>Pseudopanax arboreus</i>	Whauwhaupaku - Five Finger	3.5x6m	3m	2
Sop mi	<i>Sophora microphylla</i>	Kōwhai	3x8m	2.5m	3
Sop pr	<i>Sophora prostrata</i>	Dwarf Kōwhai	1x2m	1m	3
GRASSES					
Chi fl	<i>Chionochloa flavicans</i>	Dwarf Toe toe	1.5x1.2m	1m	33
Chi ru	<i>Chionochloa rubra</i>	Red Tussock	1x1m	1m	31
(Total is for one 40m repeatable pattern)				TOTAL:	76

PLANT SCHEDULE - Detail 3A

Code	Botanical Name	Common Name	Mature size (WxH)	Spacings	Quantity
TREES & SHRUBS					
Hoh an	<i>Hoheria angustifolia</i>	Houhi puruhi - Lacebark	3x6m	2.5m	4
Pen co	<i>Pennantia corymbosa</i>	Kaikōmako - Bellbird Tree	3x8m	2.5m	2
Pse cr	<i>Pseudopanax crassifolius</i>	Horoeka - Lancewood	3x12m	2m	4
Sop mi	<i>Sophora microphylla</i>	Kōwhai	3x8m	2.5m	2
GRASSES					
Chi fl	<i>Chionochloa flavicans</i>	Dwarf Toe toe	1.5x1.2m	1m	10
Chi ru	<i>Chionochloa rubra</i>	Red Tussock	1x1m	1m	16
				TOTAL:	38

PLANT SCHEDULE - Detail 3B

Code	Botanical Name	Common Name	Mature size (WxH)	Spacings	Quantity
TREES & SHRUBS					
Cop pr	<i>Coprosma propinqua</i>	Mikimiki	2.5x5m	2m	4
Dod vi	<i>Dodonaea viscosa</i>	Green Ake Ake	2.5x7m	2m	2
Hoh an	<i>Hoheria angustifolia</i>	Houhi puruhi - Lacebark	3x6m	2.5m	2
Myo la	<i>Myoporum laetum</i>	Ngaio	4x7m	3.5m	2
Pen co	<i>Pennantia corymbosa</i>	Kaikōmako - Bellbird Tree	3x8m	2.5m	1
Pod to	<i>Podocarpus totara</i>	Tōtara	8x15m	7m	1
Pse cr	<i>Pseudopanax crassifolius</i>	Horoeka - Lancewood	3x12m	2m	2
Sop mi	<i>Sophora microphylla</i>	Kōwhai	3x8m	2.5m	1
GRASSES					
Chi fl	<i>Chionochloa flavicans</i>	Dwarf Toe toe	1.5x1.2m	1m	30
Chi ru	<i>Chionochloa rubra</i>	Red Tussock	1x1m	1m	31
				TOTAL:	76

PLANT SCHEDULE - Detail 4A

Code	Botanical Name	Common Name	Mature size (WxH)	Spacings	Quantity
TREES & SHRUBS					
Cop pr	<i>Coprosma propinqua</i>	Mikimiki	2.5x5m	2m	2
Dod vi	<i>Dodonaea viscosa</i>	Green Ake Ake	2.5x7m	2m	1
Hoh an	<i>Hoheria angustifolia</i>	Houhi puruhi - Lacebark	3x6m	2.5m	1
Pse cr	<i>Pseudopanax crassifolius</i>	Horoeka - Lancewood	3x12m	2m	2
Sop mi	<i>Sophora microphylla</i>	Kōwhai	3x8m	2.5m	1
GRASSES					
Chi fl	<i>Chionochloa flavicans</i>	Dwarf Toe toe	1.5x1.2m	1m	12
Chi ru	<i>Chionochloa rubra</i>	Red Tussock	1x1m	1m	16
				TOTAL:	35

PLANT SCHEDULE - Detail 5

Code	Botanical Name	Common Name	Mature size (WxH)	Spacings	Quantity
TREES & SHRUBS					
Cop pr	<i>Coprosma propinqua</i>	Mikimiki	2.5x5m	2m	4
Dod vi	<i>Dodonaea viscosa</i>	Green Ake Ake	2.5x7m	2m	2
Hoh an	<i>Hoheria angustifolia</i>	Houhi puruhi - Lacebark	3x6m	2.5m	2
Myo la	<i>Myoporum laetum</i>	Ngaio	4x7m	3.5m	2
Pen co	<i>Pennantia corymbosa</i>	Kaikōmako - Bellbird Tree	3x8m	2.5m	1
Pod to	<i>Podocarpus totara</i>	Tōtara	8x15m	7m	1
Pse cr	<i>Pseudopanax crassifolius</i>	Horoeka - Lancewood	3x12m	2m	2
Sop mi	<i>Sophora microphylla</i>	Kōwhai	3x8m	2.5m	1
GRASSES					
Chi fl	<i>Chionochloa flavicans</i>	Dwarf Toe toe	1.5x1.2m	1m	31
Chi ru	<i>Chionochloa rubra</i>	Red Tussock	1x1m	1m	31
				TOTAL:	77

PLANT SCHEDULE - SUMMARY

Code	Botanical Name	Common Name	Mature size (WxH)	Spacings	Quantity
TREES & SHRUBS					
Cop pr	<i>Coprosma propinqua</i>	Mikimiki	2.5x5m	2m	10
Dod vi	<i>Dodonaea viscosa</i>	Green Ake Ake	2.5x7m	2m	5
Hoh an	<i>Hoheria angustifolia</i>	Houhi puruhi - Lacebark	3x6m	2.5m	9
Myo la	<i>Myoporum laetum</i>	Ngaio	4x7m	3.5m	4
Pen co	<i>Pennantia corymbosa</i>	Kaikōmako - Bellbird Tree	3x8m	2.5m	4
Pit eu	<i>Pittosporum eugenoides</i>	Tarata - Lemonwood	3x12m	3m	3
Pod to	<i>Podocarpus totara</i>	Tōtara	8x15m	7m	3
Pse ar	<i>Pseudopanax arboreus</i>	Whauwhaupaku - Five Finger	3.5x6m	3m	2
Pse cr	<i>Pseudopanax crassifolius</i>	Horoeka - Lancewood	3x12m	2m	10
Sop mi	<i>Sophora microphylla</i>	Kōwhai	3x8m	2.5m	8
Sop pr	<i>Sophora prostrata</i>	Dwarf Kōwhai	1x2m	1m	3
GRASSES					
Chi fl	<i>Chionochloa flavicans</i>	Dwarf Toe toe	1.5x1.2m	1m	116
Chi ru	<i>Chionochloa rubra</i>	Red Tussock	1x1m	1m	125
				TOTAL:	302



Mikimiki
Coprosma propinqua



Green Ake Ake
Dodonaea viscosa



Houhi puruhi - Lacebark
Hoheria angustifolia



Ngaio
Myoporum laetum



Kaikōmako - Bellbird Tree
Pennantia corymbosa



Tarata - Lemonwood
Pittosporum eugenoides



Tōtara
Podocarpus totara



Horoeka - Lancewood
Pseudopanax crassifolia



Whauwhaupaku - Five Finger
Pseudopanax arboreus



Kōwhai
Sophora microphylla



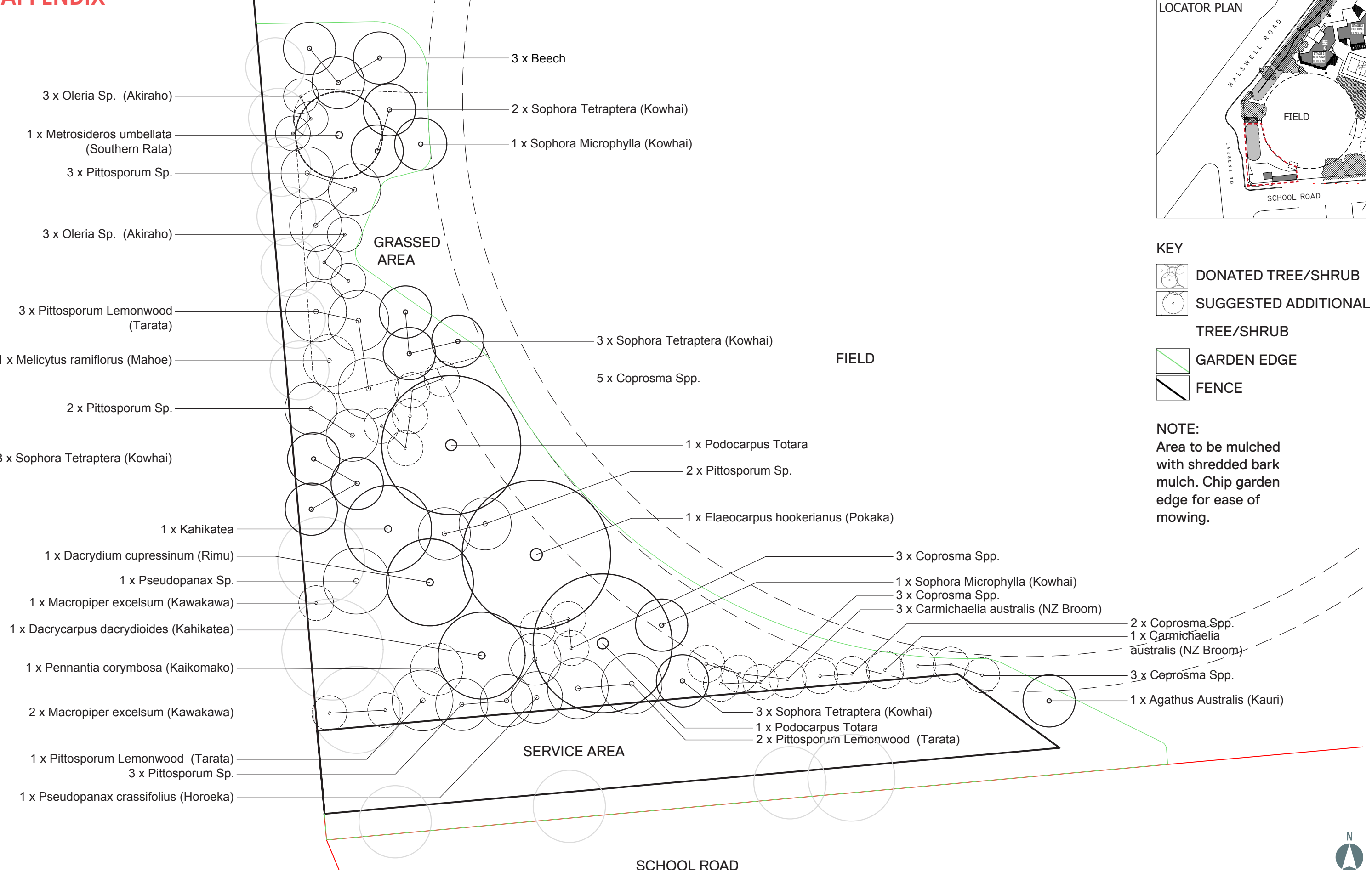
Dwarf Kōwhai
Sophora prostrata

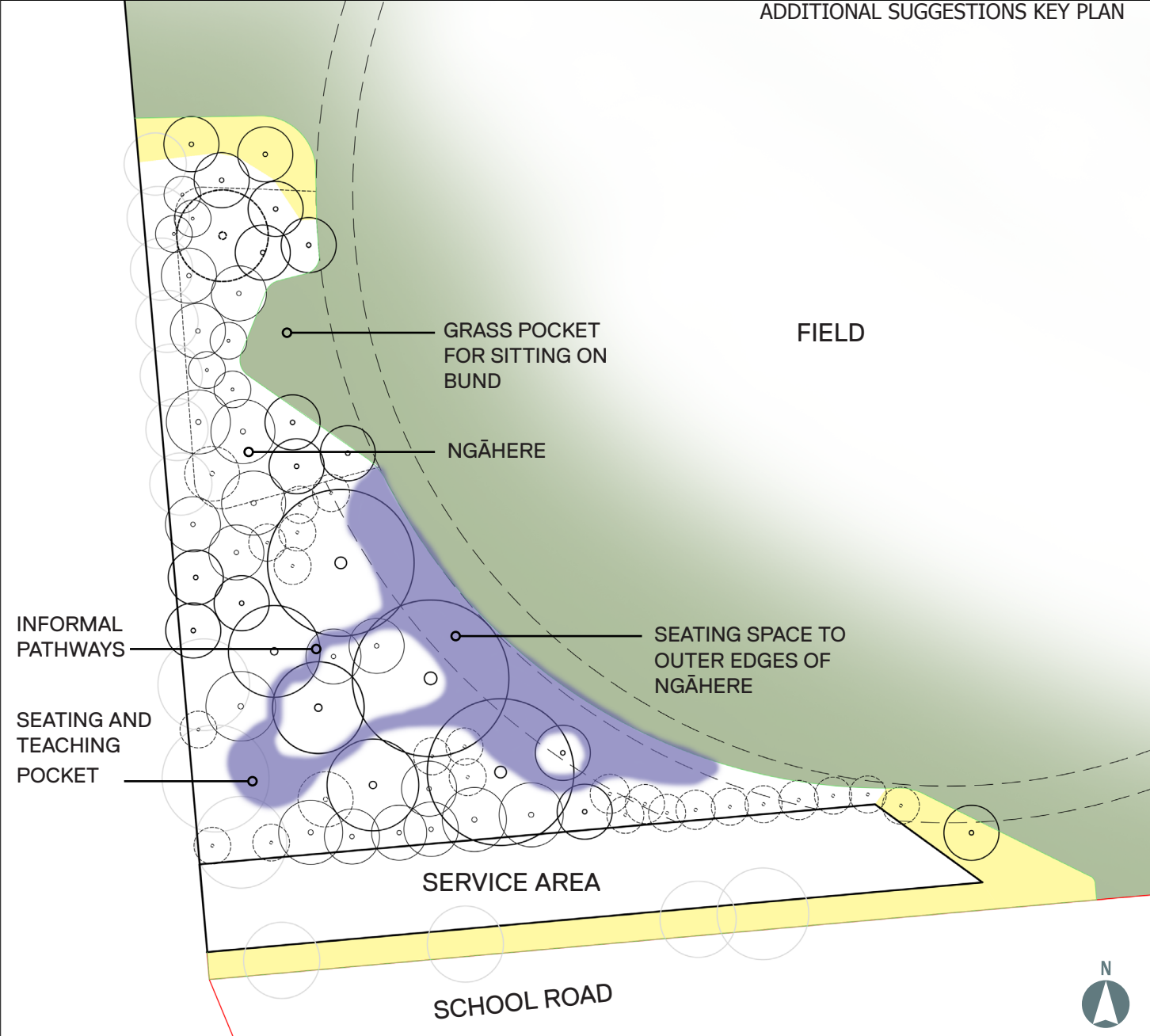


Dwarf Toe toe
Chionochloa flavicans




Red Tussock
Chionochloa rubra





SUGGESTION 01
ADDITIONAL PLANTING TO NGĀHERE AREA.
Inclusion of further appropriate species to the Ngāhere area could enhance the character of the space. Species chosen are found in the NZ forest, and include species of educational benefit - for example used by Maori in traditional medicines and for domestic use. Alongside the donated plants, consider the addition of the following species, as shown on planting plan.

PROPOSED ADDITIONAL SPECIES	PLANT INFORMATION	
	HEIGHT/ SPREAD	COST
Forest Trees 1x <i>Metrosideros umbellata</i> / Southern Rata	15m x 3 m	\$15.95
Shrubs 1 x <i>Melicytus ramiflorus</i> / Mahoe 3 x <i>Macropiper excelsum</i> / Kawakawa 1 x <i>Pennantia corymbosa</i> / Kaikomako 4 x <i>Carmichelia australis</i> / NZ Broom 5 x <i>Coprosma propinqua</i> 4 x <i>Coprosma rhamnoides</i> 4 x <i>Coprosma rubra</i> 5 x <i>Coprosma viresens</i>	8m x 2.5m 3m x 3m 8m x 3m 3m x 2.5 m 5m x 2.5m 1.5m x 1m 3m x 2m 3m x 2m	\$ 4.45 \$ 10.85 \$ 13.95 \$ 10.85 \$ 9.50 \$ 10.85
(Approx only - Sourced Southern Woods 2015-2016 Catalogue)		

SUGGESTION 02
CONSIDER GARDEN / UNDER PLANTING.
Addition of underplantings consistent with the wider school planting design would be of benefit in the areas coloured yellow. Plantings in these locations (adjacent existing gate and to end of and along fenced area) would book-end the Ngāhere area to soften and blend the forest margins with the adjacent school landscape.

SUGGESTION 03
INFORMAL PATHWAYS AND SEATING AREA.
The Ngāhere area has the potential to be utilised as a learning and social space. Plantings have been spaced to allow pathways through the forest, which could be formalised with chip, stepping-stone rocks, low plank walks or a bark surface. Informal seating pockets in the form of logs and rocks could be included within the forest plantings, while more formal seating options are a potential to the outer edges.

SUGGESTION 04
INTERPRETIVE SIGNAGE.
To supplement the experiential educational values of the Ngāhere area, interpretive signage could be utilised. Signage could be included within the seating pockets, along paths, or associated with individual plant specimens. These signs could inform the students and community about key NZ forest species, with information such as names, growing conditions, flowering/fruiting times and uses, and contemporary uses.



Mingimingi / *Coprosma propinqua*



Kaikomako / *Pennantia corymbosa*



Southern Rata / *Metrosideros excelsa*

Twiggy coprosma / *Coprosma rhamnoides*



Mikimiki / *Coprosma rubra*

Kawakawa / *Macropiper excelsum*



Mahoe / *Melicytus ramiflorus*

Mikimiki / *Coprosma viresens*



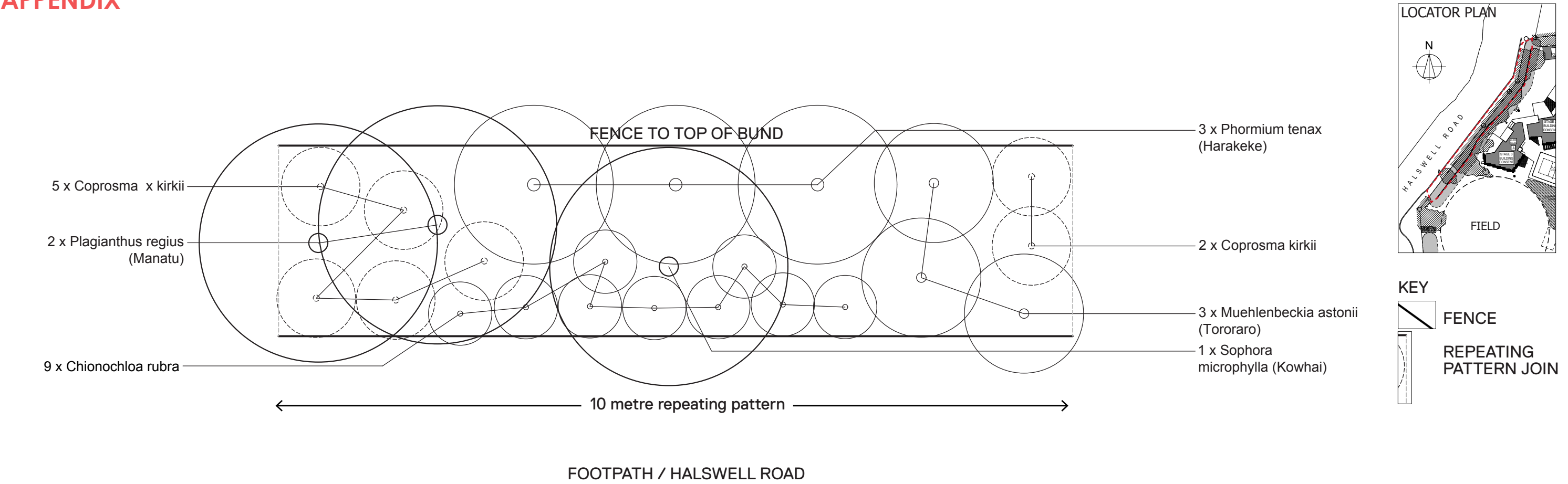
Native broom / *Carmichelia australis*

Bark pathway



Low plank walk





Existing bund

Manatu / Plagianthus regius

Kowhai / Sophora Microphylla

SUGGESTION FOR HALSWELL ROAD BUND REPETITIVE PLANTING PATTERN

Native species suitable for planting on sloped areas are indicated in the above plan. This planting layout could be implemented by repeating the proposed pattern for the length of the bund. This would enhance the aesthetic appearance of the bund, minimise the visual impact of the fence to the top of the bund and provide a lead-in along the footpath to the Ngāhere area.

Harakeke / Phormium tenax

Tororaro / Muehlenbeckia astonii

Red Tussock / Chionochloa rubra

Coprosma / Coprosma kirkii