View Instrument Details

Instrument No.	11545266.2
Status	Registered
Date & Time Lodged	03 Jun 2020 11:27
Lodged By	Craigie, Robert Finlayson
Instrument Type	Consent Notice under s221(4)(a) Resource Management Act 1991

Affected Records of Title	Land District
903194	North Auckland
903195	North Auckland
903196	North Auckland
903197	North Auckland
903198	North Auckland
903199	North Auckland

Annexure Schedule Contains 29 Pages.

Signature

Signed by Robert Finlayson Craigie as Territorial Authority Representative on 12/06/2020 01:19 PM

***** End of Report *****

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Te Kaunihera o Tāmaki Makaurau

In the matter of the Resource Management Act 1991 (The Act)

in the matter of a subdivision of land in the North Auckland Land Registration District shown on DP 539768

CONSENT NOTICE

(Pursuant to Section 221 of the Act)

I hereby certify that THE AUCKLAND COUNCIL granted its consent SUB60327035 to the subdivision of Pt Allot 22 Parish of Aotea and Section 2 Survey Office Plan 492673 shown on DP 539768 subject to conditions, including the requirement of the owners of Lots 1, 2, 3, 4, and 5 DP 539768 to comply with the conditions 1-10 and owners of lot 6 DP 539768 to comply with conditions 9-10 and on a continuing basis at no cost to the Council.

Earthworks, building design and development controls

1. All earthworks are to be undertaken in accordance with the conditions of land use consent LUC60327037 relating to establishment of accessways, geotechnical requirements, erosion and sediment controls and cultural heritage.

2. All building development shall be undertaken in accordance with the 'proposed development controls' Paragraph 2.6, of the Visual, Natural Character and Landscape Effects Assessment, prepared Bridget Gilbert Landscape Architecture, dated June 2018 which forms part of resource consent SUB60327035. A copy of Paragraph 2.6 of the Visual, Natural Character and Landscape Effects Assessment is attached. All future building development, including accessory buildings, is limited to the 'Buildable Areas' as marked T, U, V, W and X on DP 539768.

Stormwater

3. The property is served by an onsite stormwater management system that is to be retained in private ownership. The on-going operation and maintenance of the soakage system / on-site management system is the responsibility of the owner.

4. Stormwater drainage on each site shall be managed in a manner that ensures that it does not impact on the wastewater disposal area or on the disposal area on any neighbouring properties.

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5. The land owner shall demonstrate in the building consent application that the design ensures the wastewater, and any surface water runoff from the wastewater field will not access surface or subsurface stormwater drainage.

Wastewater

6. The property is served by an onsite wastewater management system that is to be retained in private ownership. The on-going operation and maintenance of the on-site management system is the responsibility of the owner.

Advice notes

A site specific wastewater assessment will be required at the time of development of the lot to confirm compliance with Rule E5 of the Auckland Unitary Plan - Operative in Part. Information on high-level wastewater constraints can be found in the report titled 'Geotechnical Assessment For A Proposed Five Lot Subdivision' *by Ground Consulting Limited, dated 18 January 2018.*

Should a design flow be based on a water usage allocation of less than 180 litres per person per day, then water saving fixtures and devices shall be installed on all water outlets within the facilities on the lot to reduce water usage and actual wastewater flows to the disposal system. These may include:

- *Dual 3/6 litre flush (or lower) toilet cisterns*
- *Aerator faucets*
- *Shower flow restrictors*
- *Water conserving automatic washing machine and dishwasher*
- *No garbage grinder*
- *No multi-head shower unit*
- *No spa bath*

7. Should wastewater disposal by a pressure compensating drip irrigation (PCDI) dispersion system be proposed, the wastewater treatment system shall be a secondary type treatment system, with its secondary treatment standard confirmed by a performance certification from the Onsite Effluent Treatment National Testing Programme in Rotorua (OSET NTP).

8. The land owner shall ensure that irrigation of the vegetation in the irrigation disposal area does not impact the health of the regenerating bush area.

Planting maintenance

9. The land owner shall maintain the enhancement planting required by Condition 8 of SUB60327035 for a period of not less than five (5) years following completion of the planting and until the planting is "fully established (i.e. 90% canopy closure) and sustainable" as determined by a suitably qualified and experienced ecologist and accepted by the Council. Maintenance shall include freeing plants from exotic grasses, weed control and the replacement of any plants that fail to establish or die during this

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time. Planting maintenance shall continue until written confirmation is received from the Team Leader, Compliance Monitoring Central that the report prepared by a suitably qualified and experienced ecologist as required in this condition, is accepted by Council.

Vegetation protection

10. In respect of the existing and proposed planting areas defined in the planting plan as prepared by Bridget Gilbert Landscape Architect (Landscape Plan and Planting Schedule, dated 31.05.2018) and referenced in Condition 1. The land owner shall retain and maintain this landscape (planting) for 5 years to the satisfaction of the council's Team Leader - Monitoring (Central) in accordance with the approved Landscape Management Plan (Landscape management Plan, prepared by Bridget Gilbert Landscape Architect, dated June 2018) which forms part of this resource consent referenced in condition 1, the owners of Lots 1, 2, 3, 4, 5 and 6 shall thereafter:

    (a) Protect and preserve all native vegetation to the satisfaction of the Council at all times.

    (b) Exclude all livestock.

    (c) Not cut down, damage or destroy, or permit the cutting down, damage or destruction of the vegetation or wildlife habitats within the areas of native vegetation to be protected.

    (d) Not do anything that would prejudice the health or ecological value of the areas of native vegetation to be protected, or their long term viability and/or sustainability. For the purposes of clarity, installation pressure compensating drip irrigation (PCDI) dispersion system within such areas shall not be considered to be a breach of this restriction.

    This condition shall be complied with on a continuing basis and registered as a Consent Notice on the Computer Freehold Register of Lots 1, 2, 3, 4, 5 and 6 at no cost to the Council. The Consent Notice shall include a copy of the Landscape Plan (Appendix 4) and Planting Schedule (Appendix 3) of the Bridget Gilbert report is attached.

Dated this 29th day of May 2020

Authenticated by the Auckland Council pursuant to
Section 221(2) of the Resource Management Act 1991

Signed by SHEIK HAMID
Senior Subdivision Advisor
Authorised officer under delegated authority

1. Maximum building footprint Lots 2, 3, 4, and 5: 300m2 per lot (excluding outdoor living areas) with no single building exceeding a footprint of 200m2.
2. Maximum building footprint Lot 1: 325m2.
3. Maximum building height: 6m.
4. Exterior wall colour controls: Light Reflectivity Value of no more than 30%.
5. Where walls are not black, roofing shall be darker in colour than exterior walls. Rooftop materials shall have a colour which has a reflectivity value of no more than 20% LRV.
6. Building form: Buildings to be stepped 'into' the landform (rather than designed to sit 'proud'). Any exposed building foundation structures (e.g. timber piles) shall be screened by the exterior cladding in views from external locations.
7. Accessory buildings to be constructed in similar materials and colours to the principal dwelling.
8. Mirror glazing is not permitted.
9. External lighting (attached to buildings or otherwise) shall be fitted with covers and be oriented downwards to minimise external light spill. All external lighting to be in accordance with the Dark Sky Sanctuary rules.
10. All water tanks, gas bottles, rubbish storage and other onsite infrastructure shall be screened to prevent it being visible from outside the site.
11. Retaining walls: maximum height 1.2m, constructed in natural stone, timber, or material and colour to match dwelling. Where level changes dictate, a stepped retaining wall can be used, provided a minimum 1.0m width landscape strip is included between the two for mitigation planting. Maximum height of each retaining wall "step": 1.2m.
12. Fencing: maximum 1.2m high, either post and rail or post and 7 wire. Timber closeboard fencing is not permitted.
13. All gates shall be timber rail or steel rail. Timber closeboard type gates are not permitted.
14. Paving material controls in relation to driveways and private curtilages: to be formed in exposed aggregate concrete, concrete with charcoal oxide (6.0kg/m3), asphalt with flush concrete edge detail (concrete coloured as before), natural stone, locally sourced gravel, timber, or dark/earth- toned unit pavers.
15. Stormwater management of driveways: rock-lined, grassed or planted swales and rain gardens shall be preferred over kerb and channel. Where kerb and channel is unavoidable (to meet Council engineering standards), materials shall comprise natural stone, dark / earth toned unit pavers , or be coloured to be visually recessive, e.g. concrete with charcoal oxide (6.0kg/m3) or exposed aggregate finish.
16. Solar panels: low reflective black glass finish with flush black frames. Units to be surface mounted on roof with no upstand and configured to form cohesive blocks, rather than laid out in a haphazard arrangement.

Appendix 3

Typical Plant Schedules

June 2018

SPECIES	SPACING	SIZE
NATIVE RESTORATION PLANTING	(m)	
Coprosma repens (Taupata)	1.4	PB3
Coprosma robusta (Karamū)	1.4	PB3
Cordyline australis (Cabbage tree)	1.4	PB3
Corynocarpus laevigatus (karaka)	3 but in groves of 4-5	PB3
Kunzea ericoides (Kānuka)	1.4	PB3
Leptospermum scoparium (Manuka)	1.4	PB3
Macropiper excelsa (Kawakawa)	1.4	PB3
Melicytus ramiflorus (Mahoe)	1.4	PB3
Metrosideros excelsa (Pohutukawa)	10	PB3
Phormium tenax (Harakeke)	1.4	PB3
Pittosporum crassifolium (Karo)	1.4	PB3
Pseudopanax lessonii (Houpara)	1.4	PB3
Vitex lucens (Puriri)	10	PB3
Enrichment species (plant after approx 3 years growth)		
Beilschmiedia taraire (Taraire)	6.0	PB 5
Dysoxylum spectabile (Kohekohe)	6.0	PB 5
Podocarpus totara (Totara)	6.0	PB 5

SPECIES	SPACING	SIZE
NATIVE RIPARIAN PLANTING	(m)	
Carex geminata (Rautahi)	1	PB3
Carex secta (Pūrei)	1	PB3
Carpodetus serratus (Putaputawetā)	1.4	PB3
Coprosma robusta (Karamū)	1.4	PB3
Cordyline australis (Cabbage tree)	1.4	PB3
Cyperus ustulatis (Umbrella sedge)	1	PB3
Dacrycarpus dacrydioides (Kahikatea)	3 but in groves of 4-5	PB3
Kunzea ericoides (Kānuka)	1.4	PB3
Leptospermum scoparium (Manuka)	1.4	PB3
Macropiper excelsa (Kawakawa)	1.4	PB3
Melicytus ramiflorus (Māhoe)	1.4	PB3
Muehlenbeckia complexa (Pohuehue)	1	PB3
Phormium sp (Harakeke)	1.4	PB3
Vitex lucens (Pūriri)	10	PB3
SPECIMEN TREE PLANTING (Indicative only, locations to be confirmed at land-use consent stage)		
Cordyline australis (Cabbage tree)	As shown	PB12
Metrosideros excelsa (Pohutukawa)	As shown	PB12
Pittosporum crassifolium (Karo)	As shown	PB12

Taumata: Proposed Boundary Relocation

22 Rosalie Bay Road, Great Barrier Island

VISUAL, NATURAL CHARACTER AND LANDSCAPE EFFECTS ASSESSMENT

Appendix 4

Landscape Management Plan

June 2018

bridgetgilbert
landscapearchitecture

Contents

1 Management Plan Purpose

1.1 To provide for the implementation, management and maintenance of the proposed native plantings that form part of the proposed development at 22 Rosalie Bay Road, Great Barrier Island and the maintenance of existing native plantings on the property. For the location, layout, character and extent of all proposed plantings covered by this Landscape Management Plan, refer to the Appendix 2 Landscape Concept and Appendix 3 Typical Plant Schedules.

2 Management Plan Strategy and Structure

2.1 It is proposed to achieve the Management Plan purpose through the:

- Implementation of the native plantings as set out in the Landscape Concept, including native restoration, native riparian and native specimen tree plantings.
- Implementation of a Maintenance Plan (including weed and pest control) throughout the entire property for a minimum period of 5 years. For the native restoration and riparian planting areas, the maintenance shall be required in accordance with the Maintenance Plan until canopy closure (i.e. ground coverage) has been achieved.

2.2 The on-going management and maintenance of these plantings shall rest with the consent holder.

3 Protection of Existing Vegetation

3.1 All existing indigenous vegetation to be retained shall be identified prior to commencing weed removal. In general, all existing native vegetation will be retained.

3.2 All existing indigenous vegetation to be retained shall be protected from damage as necessary – in particular, care shall be taken with works in the vicinity of existing trees to be retained. All earthworks and large weed removals in the vicinity of existing trees to be retained are to be undertaken by hand, with care taken to avoid existing tree roots. All construction equipment and excavated materials are to be stored outside of the dripline of existing trees.

4 Protection of Existing Archaeological Sites

4.1 Any recorded archaeological sites shall be protected from machinery and storage of materials during construction.

5 Earthworks - Erosion / Sediment Control

5.1 All earthworks shall be undertaken in accordance with Auckland Regional Council Technical Publication 90 (TP 90).

5.2 All exposed construction areas to be grass seeded or planted (where appropriate) immediately following completion of construction works in that area.

6 Weed Removal and Management

6.1 Generally, the species and character of weeds to be removed shall be identified and the appropriate removal method selected.

6.2 An indication of the methods for each weed species currently present is provided in Appendix A of this Management Plan. Appendix B details the information to be recorded as part of the Weed Management Plan.

6.3 Both the timing of operations and application of herbicides shall be in accordance with the manufacturers' recommendations. A minimum of 2 applications of Glyphosate (or other product as noted in Appendix 1) shall be applied with a minimum of 2 weeks between each application. A minimum 14 day stand down period between the last application and planting shall be observed.

6.4 In regard to areas to be planted to assist native restoration, weed removal shall ensure an area measuring 500mm square is cleared for each plant position.

6.5 All planting areas shall be in a weed free state at the time of planting.

6.6 Follow up control through the first year - generally it will be necessary to spot spray in the summer/autumn using Glyphosate taking care not to damage existing native species.

6.7 All spraying to be carried out in settled weather i.e. not windy conditions.

7 Native Specimen Tree, Native Restoration and Native Riparian Planting

Plant Material

7.1 All plant material to be eco-sourced from Great Barrier Island (where practicable).

7.2 All plant material to be well hardened off to cope with the climatic conditions of the site.

4 NATIVE SPECIMEN TREE, NATIVE RESTORATION AND NATIVE RIPARIAN PLANTING

Species Composition

7.3 The native restoration and riparian planting areas identified on the Landscape Concept are to be mass planted in accordance with the Plant Lists. While the plant material to be used shall be in general accordance with the Typical Plant Schedules, use of other local indigenous species of the correct successional stature can also be included where their seed is plentiful and viable.

Setting Out

7.4 Native restoration and riparian plant material shall be set out ensuring a random arrangement of species is achieved i.e. each species should be in groupings of no less than 3 and no greater than 11 with edges blended (no straight lines). Native specimen tree plantings shall be set out in general accordance with Landscape Concept.

7.5 The planting contractor shall be cognisant of specific site conditions relating to individual species location.

Planting

7.6 Planting shall be undertaken in the autumn and winter months. Work shall only be undertaken when the weather is suitable, i.e. mild, dull and moist, and when the ground is moist and workable. All planting operations shall be suspended during periods of severe frosts, drought, and waterlogging or persistent drying winds.

Fertiliser

7.7 Slow release fertiliser shall be applied at the time of planting to each planting hole in accordance with manufacturer's recommendations. Fertiliser application is to improve the competitiveness of plants compared with weed species in the first twelve months following planting. Fertiliser shall not be spread over the entire planting site as this will encourage weed growth.

Mulching

7.8 All plant stations shall be mulched with 100mm depth cambium park or post peelings. Where the slope exceeds 1:3, biodegradable mulch blanket squares shall be pinned to the soil surface with biodegradable pins.

8 Maintenance and Management

8.1 Refer to Maintenance Schedule

8.2 The maintenance and management responsibility of all planting areas shall rest with the consent holder.

8.3 Site inspections shall be undertaken at three monthly intervals. These inspections shall identify any management issues as they arise and shall include an appraisal of:

- dead or dangerous trees that require removal;
- weed / pest management issues including identification of appropriate control and removal methodology;
- weed releasing requirements; and,
- replacement planting requirements for native restoration and amenity planting areas.

Pest Management

8.4 Rabbit and hare activity is known to be a problem throughout this part of Great Barrier. All plants shall be fiited with a 'breath-able' rabbit guard. Rabbits and hares shall also be controlled by the use of Pindone and, if required, baiting or trapping.

8.5 Rats (if present) are to be controlled with brodifacoum bait laid in accordance with the manufacturer's recommendations.

Weed Removal and Management

8.6 Native planting areas as detailed on the Landscape Concept shall be kept free of invasive weed species for a minimum of 5 years.

8.7 Generally, the species and character of weeds to be removed shall be identified as part of the maintenance inspections undertaken at three monthly intervals referenced in the Maintenance Plan below and the appropriate removal method selected.

8.8 Both the timing of operations and application of herbicides shall be in accordance with the manufacturers' recommendations. Suggested control methods are attached in Appendix A and recording of weed management shall be in accordance with Appendix B of this Management Plan

8.9 All spraying to be carried out in settled weather i.e. not windy conditions.

Native Restoration Planting Areas: Replacement Planting

8.10 A 90% plant survival is to be achieved at all times.

8.11 Replacement planting of the native specimen tree, restoration and riparian plantings shall be of a bagged grade as per the Typical Plant Schedules with planting requirements identified in the February/March preceding the upcoming planting season.

8.12 Replacement planting shall be undertaken in accordance with section 7 of this Management Plan.

MAINTENANCE SCHEDULE														
ITEM	DESCRIPTION	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	As Required
8.6.1	Site inspection (including pest and weed control review)		●			●			●			●		
8.6.3	Fertilizing						●	●	●					
8.6.4	Weeding		●			●			●			●		●
8.6.5	Treat for pests or disease (should they be evident)		●			●			●			●		●
8.6.6	Plant replacement planting time					●								

Appendix A: Recommended Weed Control Methods

Weed	Control Method(s)	Chemical(s)	Application Rate	Timing	Remarks
Agapanthus (*Agapanthus praecox*)	Dig out and dispose off site	-	-	Year round	Only if this can be done without posing a weed hygiene risk
	Knapsack – foliar spray	Grazon	100ml per 10 litres water plus 20ml pulse	October-March	Not when flowering or seeding
	Knapsack – foliar spray	Escort[1]	5g per 10 litres water plus 20ml pulse	October-March	Not when flowering or seeding
Alligator weed (*Alternathera philoxeroides*)	Knapsack – foliar spray	Glyphosate	100ml per 10 litres water	Year round	Requires follow up control
Aristea (*Aristea ecklonii*)	Knapsack – foliar spray	Escort[1]	5g per 10 litres water	October-March	
Arum lily Flag Iris	Hand pull seedlings/small plants	-	-	Year round	
	Dig out and dispose off site	-	-	Year round	Only if this can be done without posing a weed hygiene risk
	Cut and spray stems of large plants	Escort[1]	5g per 10 litres water	October-March	Monitor for re-growth. Spray immediately following cutting.
Artillery plant (*Galeobdolon luteum*)	Foliar spray	Glyphosate	100ml per 10 litres water	October-March	
	Cut and treat stumps	Grazon	1 part Grazon to 20 parts water	October-March	
Asparagus fern (*Asparagus densiflorus*)	Knapsack/hand sprayer	Escort[1]	5g Escort plus per 10 litres water plus 20ml pulse	October-March	

Weed	Control Method(s)	Chemical(s)	Application Rate	Timing	Remarks
Bamboo	Foliar spray re-growth	Glyphosate	200ml per 10 litres water plus 20ml pulse	October-March	Monitor for re-growth Will need several treatments
	Foliar spray re-growth	Gallant	150ml per 10 litres water	October-March	Monitor for re-growth Will need several treatments
	Cut tops and treat as per Giant reed grass.				
Banana passionfruit	Hand pull seedlings/small plants	-	-	Year round	
	Cut and treat stump	Grazon	1 part Grazon to 20 parts water	October-March	Leave foliage in host to die off
	Cut and treat stump	Escort[1]	5g per 10 litres water	October-March	Leave foliage in host to die off
	Cut and treat stump	Picloram (Vigilant gel)	Apply gel to cut stem	October-March	
Barberry (Berberis glaucocarpa)	Cut and treat stumps	Grazon	1 part Grazon to 20 parts water	October-March	Apply to freshly cut surface and stems to ground level
Bartlettina (Bartlettina sordida)	Knapsack – foliar spray	Escort[1]	5g per 10 litres water	October-March	
Bear's breeches (*Acanthus mollis*)	Dig out and dispose off site	-	-	Year round	
	Cut and treat stump	Grazon	1 part Grazon to 20 parts water	October-March	
Bindweed (*Calystegia sylvatica, C. septum*)	Knapsack – foliar spray	Banvine	Follow label recommendations		
Blackberry (*Rubus fruticosus* agg.)	Knapsack – foliar spray	Escort1	5g per 10 litres water	December-April	
	Knapsack – foliar spray	Grazon	60ml per 10 litres water	December-April	

10 APPENDIX A: RECOMMENDED WEED CONTROL METHODS

Weed	Control Method(s)	Chemical(s)	Application Rate	Timing	Remarks
Black passionfruit (*Passiflora edulis*)	Handpull seedlings/small plants	-	-	Year round	
	Cut and vines and spray re-growth	Glyphosate	20ml per litre water	Cut vines in winter and spray re-growth in spring	Leave foliage in host to die off
Black wattle Australian Black wood	Hand pull seedlings/small plants	-	-	Year round	
	Cut and treat stumps	Grazon	1 part Grazon to 20 parts water	October-April	Ensure of felling that damage to surrounding native vegetation is limited.
	Drill and inject	Grazon	1 part Grazon to 20 parts water	October-April	
	Drill and inject	Escort[1]	20g Escort per litre water, plus 2 ml pulse	October – April	
Blue morning glory	Knapsack – foliar spray	Grazon	60ml per 10 litres water	November-March	
	Cut and treat stumps	Grazon	1 part Grazon to 20 parts water	November-March	Leave foliage in host to die off
Boneseed	Handpull seedlings/small plants	-	-	Year round	
	Cut and treat stumps	Grazon	1 part Grazon to 20 parts water	November-February	
Bottlebrush (*Callistemon* spp.)	Handpull seedlings/small plants	-	-	Year round	
	Cut and treat stumps	Grazon	1 part Grazon to 20 parts water	Year round	
	Drill and inject	Escort1	20g Escort per litre water, plus 2 ml pulse	Year round	
Broom	Knapsack – foliar spray	Escort[1]	5g per 10 litres water	November-February	Do not spray if seed pods have turned brown

Weed	Control Method(s)	Chemical(s)	Application Rate	Timing	Remarks
Brush wattle	Handpull seedlings/small plants	-	-	Year round	
	Cut and treat stumps	Grazon	1 part Grazon to 20 parts water	October-April	
	Drill and inject	Escort[1]	20g Escort per litre water, plus 2 ml pulse	October – April	
Buddleia (*Buddleja davidii*)	Handpull seedlings/small plants	-	-	Year round	
	Cut and treat stumps	Grazon	1 part Grazon to 20 parts water	Year round	
Buffalo grass (*Stenotaphrum secundatum*)	Knapsack – foliar spray	Gallant	60ml per 10 litres water	October-January	
Canna lily Calla lily	Dig out and dispose off site	-	-	Year round	Monitor for re-growth
Cape gooseberry	Hand pull	-	-	Year round	Monitor for re-growth
	Knapsack – foliar spray	Glyphosate	100ml per 10 litres water		For large infestations
Cape honey flower	Knapsack – foliar spray	Escort[1]	5g per 10 litres water	November-February	
Cape ivy	Cut and treat stumps	Grazon	1 part Grazon to 20 parts water	November-February	Leave foliage in host to die off
Castor oil plant (*Ricinus communis*)	Cut and treat stumps	Grazon	1 part Grazon to 20 parts water	October-March	
	Knapsack – foliar spray	Glyphosate	100ml per 10 litres water	October-March	
Cestrum (*Cestrum* spp.)	Handpull seedlings/small plants	-	-	Year round	
	Cut and treat stumps	Grazon	1 part Grazon to 20 parts water	October-March	

12 APPENDIX A: RECOMMENDED WEED CONTROL METHODS

Weed	Control Method(s)	Chemical(s)	Application Rate	Timing	Remarks
Chinese privet	Seedlings – hand pull	-	-	November-April	
	Trees – drill and inject	Escort[1]	20g Escort per litre water, plus 2ml pulse	November-April	
	Saplings - cut and stump treat	Grazon	1 part Grazon to 20 parts water	November-April	
Climbing asparagus	Knapsack/hand sprayer	Escort[1]	5g Escort plus per 10 litres water plus 20ml pulse	October-March	Foliar spray both climbing stems up to 1m high and scrambling plants in situ. Brittleness of stems means they cannot effectively be pulled off plants. Ensure no tree fern or kowhai trunks are sprayed.
Climbing dock	Knapsack	Escort[1]	5g per 10 litres water	November-February	
Cotoneaster (*Cotoneaster glaucophyllus*)	Handpull seedlings/small plants	-	-	Year round	
	Cut and treat stumps	Grazon	1 part Grazon to 20 parts water	October-March	
Crack willow/grey willow	Drill and inject/frill and spray	Escort[1]	20g Escort per litre water, plus 2ml pulse	November-February	Do not cut as every twig becomes another willow.
Creeping club moss	Knapsack/hand sprayer	Mostox	1% solution	Year round.	Ensure no tree fern or kowhai trunks sprayed
	Knapsack – foliar spray	Renovate/Organic Interceptor	Label rate		
Elaeagnus	Cut and treat stumps	Picloram (Vigilant gel)	Apply gel to freshly cut stump	October-March	Must be applied liberally within 5 mins of cutting
	Cut and treat stumps	Grazon	1 part Grazon to 20 parts water	October-March	
Elephants ear	Dig out and dispose off site	-	-	-	Monitor for re-growth
	Cut and spray stems	Escort[1]	5g per 10 litres water	October-March	Spray immediately following cutting
Fatsia (*Fatsia japonica*)	Dig out	-	-	Year round	

Weed	Control Method(s)	Chemical(s)	Application Rate	Timing	Remarks
Flame tree (*Brachychiton acerifolium*)	Drill and inject	Escort[1]	20g per litre water, plus 2ml pulse	Year round	
Fruit salad plant (*Monstera deliciosa*)	Handpull seedlings/small plants Cut and treat stump	- Grazon	- 1 part Grazon to 20 parts water	Year round October-March	
Garden nasturtium	Knapsack – foliar spray	Escort[1]	5g per 10 litres water	November-March	
German ivy	Cut stems and treat stumps Knapsack – foliar spray	Grazon Escort[1]	1 part Grazon to 20 parts water 5g per 10 litres water	November-March November-March	Leave foliage in host to die off
Giant reed	Cut and spray stumps Cut and spray re-growth Cut and spray re-growth	Glyphosate Glyphosate Gallant	1 part Glyphosate to 10 parts water 200ml per 10 litres water 150ml per 10 litres water	November-February November-February November-February	Do not break up canes. These should be removed off site and burned or taken to an approved disposal site.
Gorse, and other compostitae weeds, and legumes found in pasture such as lotus major.	Knapsack foliar spray For targeted gorse control with minimal loss of existing bush emerging	Versatill	500ml/100litres of water with wetting agent Knapsack 125ml/10 litres With wetting agent	October - March	Will target legumes and compositae species so care needed around Kowhai, Hebe and Olearia species
Hawthorn	Handpull seedlings/small plants Cut and treat stumps	- Grazon	- 1 part Grazon to 20 parts water	Year round November-March	
Hydrangea (*Hydrangea* sp.)	Dig out and remove	-	-	Year round	

14 APPENDIX A: RECOMMENDED WEED CONTROL METHODS

Weed	Control Method(s)	Chemical(s)	Application Rate	Timing	Remarks
Himalayan honeysuckle	Hand pull seedlings/ small plants.			October to February	Ensure no tuber left behind.
	Knapsack – foliar spray	Escort	5g/10 litres water + 10ml Pulse	Spring to late autumn	Not for use around native vegetation or waterways.
	Knapsack – foliar spray	Glyphosate	100ml/10 litres water + 10ml Pulse	Spring to late autumn	
	Cut and treat stems/	Escort[1]	20g/10 litres water	Spring to late autumn	For application near waterways and indigenous vegetation.
	Cut and treat stems/	Glyphosate	50:50 mix with water	Spring to late autumn	For application near waterways and indigenous vegetation.
Italian arum (*Arum italicum*)	Knapsack – foliar spray	Escort[1]	5g per 10 litres water	October-March	Monitor for re-growth. Spray immediately following cutting.
Ivy (*Hedera helix*)	Cut and treat stems/tubers	Grazon	1 part Grazon to 20 parts water	November-March	Leave foliage in host to die off
	Cut and treat stems/tubers	Escort[1]	5g per 10 litres water	November-March	
Japanese honeysuckle	Knapsack – foliar spray	Versatill	40-50mls Versatill to 10 litres water	October-March	Pull away from non-target species before spraying. Spray to run off. Ensure no epiphytic attachment.
	Cut and treat stems	Grazon	1 part Grazon to 20 parts water	October-March	Do not pull cut vegetation from host plant
Japanese spindle tree	Cut and treat stumps	Grazon	1 part Grazon to 20 parts water	November-March	

Weed	Control Method(s)	Chemical(s)	Application Rate	Timing	Remarks
Jasmine	Cut and treat stems	Grazon	1 part Grazon to 20 parts water	October-March	Do not pull cut vegetation from host plant
	Where practical foliar spray	Glyphosate	20ml per litre water and 20ml Pulse with clean water	October-March	Pull away from non-target species before spraying
	Where practical foliar spray	Escort[1]	5g per 10 litres water	October-March	
Kikuyu grass and pasture grasses in the early stages of revegetation	Knapsack – foliar spray	Glyphosate	100ml per 10 litres water	Year round	
	Knapsack – foliar spray	Gallant	150ml per 10 litres water	Year round	
Mexican daisy (*Erigeron karvinskianus*)	Knapsack – foliar spray	Glyphosate	100ml per 10 litres water	October-March	Requires regular follow up
Mexican devil (*Ageratina adenophora*)	Knapsack – foliar spray	Glyphosate	100ml per 10 litres water	October-March	
Mignonette vine	Cut and treat stump	Grazon	1 part Grazon to 20 parts water	October-March	Follow up control required to treat propagules
	Cut and treat stump	Picloram (Vigilant gel)	Apply gel to cut stem	October-March	Follow up control required to treat propagules
Mistflower (*Ageratina riparia*)	Knapsack – foliar spray	Glyphosate	100ml per 10 litres water	October-March	
Monkey apple (*Acmena smithii*)	Seedlings/small plants – hand pull	-	-	Year round	
	Tree – drill and inject	Escort[1]	20g per litre water, plus 2ml pulse	October-March	
	Sapling – Cut and stump treat	Grazon	1 part Grazon to 20 parts water	October-March	
Montbretia	Knapsack – foliar spray	Grazon	60mls per 10 litres water, 10ml Pulse per 10 litres water	October-February	

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Weed	Control Method(s)	Chemical(s)	Application Rate	Timing	Remarks
Moth plant	Cut and treat stump	Escort[1]	1 part Grazon to 20 parts water	October-March	Leave cut vegetation in host to die off. Remove seed pods if possible.
	Cut and treat stump	Picloram (Vigilant gel)	Apply gel to cut stem	October-March	Leave cut vegetation in host to die off. Remove seed pods if possible.
Palm grass (*Setaria palmifolia*)	Knapsack – foliar spray	Glyphosate	100ml per 10 litres water	October-January	
Pampas	Knapsack – foliar spray	Glyphosate	10ml per litre water	October-March best results	Use clean water and thoroughly soak centre of large plants.
	Knapsack – foliar spray	Gallant	150ml per 10 litres water plus crop oil	October-March	Best on smaller plants.
Periwinkle	Knapsack – foliar spray	Glyphosate	200ml per 10 litres water	November-March	Follow up spray as soon as re-growth big enough to treat. 4-5 treatments required 2-3 months apart.

Weed	Control Method(s)	Chemical(s)	Application Rate	Timing	Remarks
Pine (*Pinus radiata, P.Pinnaster*)	Large evergreen tree to 30m.	Forms dense stands displacing native forest through light suppression and by altering the chemical balance of the soil via needle drop.	Ringbarking: Requires the use of a chainsaw, axe or machete to remove the outer bark layer around the entire trunk circumference. The cut should be a minimum of 5cm wide/high. Felling in sections: Only to be undertaken by experienced & qualified arboricultural contractors under the guidance of an experienced & qualified arboricultural consultant. Felling and removal via winch: Only to be undertaken by experienced & qualified arboricultural / forestry contractors under the guidance of an experienced & qualified arboricultural consultant.	Poison standing: Drill 10-12mm diameter holes at 100-150mm spacing (75mm for smaller trunks), around the base of the trunk. Holes should be drilled approximately 75mm deep and encircle the entire trunk at the specified spacing.Apply via spray bottle 10grms Metsulfuron (i.e. Escort®/ Meturon® etc) & 20 mls penetrant/ surfactant per 1L of water, or Undiluted Glyphosate with no penetrant.	Felling in sections: All vegetation is to remain onsite and be stacked, where this is not possible felled in a manner that minimises impacts on the surrounding native vegetation. Poison standing: Where the trees are in large stands and likely to cause damage to native regeneration this is a preferred method in conjunction with ring barking Felling and removal via winch: Where possible all vegetation is to be removed from bounds of forest area and disposed of/ burnt as appropriate. This is appropriate for mature specimens

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Weed	Control Method(s)	Chemical(s)	Application Rate	Timing	Remarks
Poplar At year 5 Within the plant zone **Prune annually for the first 4 years** Eucalypt species Australian blackwood	Drill and inject/frill and spray	Escort[1]	20g per litre water + 10ml pulse	November-February	
Prickly hakea (*Hakea sericea*)	Handpull seedlings/small plants Cut and stump treat	- Grazon	- 1 part Grazon to 20 parts water	Year round Year round	
Willow leaved hakea (*Hakea salicifolia*)	Drill and inject	Escort[1]	20g Escort per litre water, plus 2ml pulse	Year round	
Reed sweetgrass (*Glyceria maxima*)	Knapsack – foliar spray	Glyphosate	100ml per 10 litres water	October-March	
Shrub balsam	Cut and treat stumps	Escort[1]	5g per 10 litres water	October-March	
Smilax	Knapsack – foliar spray	Escort[1]/Glyphosate	20ml Glyphosate, 5g Escort plus 20ml pulse per 10 litres water.	November-March	Foliar spray both climbing stems up to 1m high and scrambling plants in situ. Brittleness of stems means they cannot effectively be pulled off plants. Ensure no tree fern or kowhai trunks are sprayed.
Spanish heath	Cut and treat stumps	Grazon	1 part Grazon to 20 parts water	October-March	
Sweet pea shrub (*Polygala myrtifolia*)	Handpull small plants Cut and treat stumps	- Grazon	- 1 part Grazon to 20 parts water	Year round October-March	

Weed	Control Method(s)	Chemical(s)	Application Rate	Timing	Remarks
Three cornered garlic	Knapsack – foliar spray	Grazon	15ml per 10 litres water	September-December	
Tradescantia	Knapsack – foliar spray	Grazon	10ml per litre water + 2ml Pulse per litre water	November-March	Pull away from non-target species before spraying.
Tree lupin (*Lupinus arboreus*)	Cut and hand fell	-	-	Year round	
Tree privet	Cut and treat stumps	Grazon	1 part Grazon to 20 parts water	November-March	
	Drill and inject	Escort[1]	20g Escort per litre water, plus 2ml pulse	November-March	
Tuber ladder fern	Knapsack – foliar spray	Escort[1]	5g per 10 litres water	March to May	
Tutsan (*Hypericum androsaemum*)	Handpull small plants	-	-	Year round	
	Cut and treat stumps	Grazon	1 part Grazon to 20 parts water	November-March	
Velvet groundsel (*Senecio petasitis*)	Handpull small plants	-	-	Year round	
	Knapsack – foliar spray	Escort[1]	5g per 10 litres water	October-March	
Wild ginger	Hand pull seedlings/small plants.	-	-	October to February	Ensure no tuber left behind.
	Knapsack – foliar spray	Escort[1]	5g/10 litres water + 10ml Pulse	Spring to late autumn	Not for use around native vegetation or waterways.
	Knapsack – foliar spray	Glyphosate	100ml/10 litres water + 10ml Pulse	Spring to late autumn	
	Cut and treat stems/tubers	Escort[1]	20g/10 litres water	Spring to late autumn	For application near waterways and indigenous vegetation.
	Cut and treat stems/tubers	Glyphosate	50:50 mix with water	Spring to late autumn	For application near waterways and indigenous vegetation.

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Weed	Control Method(s)	Chemical(s)	Application Rate	Timing	Remarks
Woolly nightshade	Seedlings/small plants – hand pull	-	-	Year round	
	Trees – drill and inject	Escort[1]	20g Escort per litre water, plus 2ml pulse	Year round	
	Saplings - cut and treat stump	Picloram (Vigilant gel)	Apply gel to cut stems	Year round	
	Saplings - cut and treat stump	Grazon	1 part Grazon to 20 parts water	Year round	
Wild cherry	Tree – drill and inject	Escort[1]	20g Escort per litre water, plus 2ml pulse	October-March	
	Saplings – cut and treat stump	Grazon	1 part Grazon to 20 parts water	October-March	

Appendix B: Information Template for Weed Management Plan

Location/site:	
Species:	
Level of infestation:	
Location of infestation:	
Control method (manual/poison):	
Poisons to be used:	
Timing of operation:	
Native species present:	
Replanting to be undertaken:	
Site management:	
Monitoring method to be used:	
Timing of monitoring:	
Consent/approvals required:	
Contractor:	