

Information to support the Regional Pest Management Plan Proposal

- **Level of analysis for benefits and costs (National Policy Direction)**
 - **Assessment of risk**
 - **Assessment of adverse impacts**
- **Good Neighbour Rule assessment (National Policy Direction)**

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1. Determination of the level of analysis

In accordance with Clause 6(1) of the National Policy Direction, Council has undertaken an assessment to determine the appropriate level of analysis for each subject of the Regional Pest Management Plan Proposal. This assessment is outlined on pages 4-6.

Subject	<i>Assessment Criteria 1: The likely significance of the pest or the proposed measures</i>			<i>Assessment Criteria 2: Likely costs relative to likely benefits</i>			<i>Assessment Criteria 3: Uncertainty of the impacts of the pest and effectiveness of measures</i>			<i>Assessment Criteria 4: Level and quality of data available</i>			Level of Analysis Decision
	High Potential for significant interest, or Strong opposing viewpoints in community or High total costs.	Medium Potential for moderate interest, or Opposing viewpoints in some groups within community or Moderate total costs.	Low Not generally likely to be an issue for community public or organisation or Low total costs.	High Costs for the programme are likely to be similar to the benefits of the programme	Medium Costs for the programme are likely to be lower than the benefits of the programme in most scenarios.	Low Costs for the programme are likely to be substantially lower than the benefits of the programme even if the objectives are not fully achieved.	High uncertainty Not much known about the pest's impacts. Measures are untested.	Medium uncertainty Known to have impacts elsewhere in similar situations. Similar measures have been effective in other areas, or Measures have only been somewhat effective.	Low uncertainty Known to have significant impacts, spread risk known and the effectiveness of measures is well-known.	High Very high-quality current distribution data; costs and impacts well established.	Medium Some historical information or data from other sources (outside of the region or NZ). No specific targeted monitoring data. Costs and impacts capable of being estimated from case studies.	Low Little information available.	
African feather grass			✓			✓			✓	✓			Low
Bathurst Bur			✓			✓			✓	✓			Low
Boneseed			✓			✓		✓		✓			Low
Broom		✓			✓				✓		✓		Low
Brushtail possum			✓		✓				✓	✓			Low
Bur daisy			✓			✓			✓	✓			Low
Cathedral bells			✓			✓			✓	✓			Low
Chilean needle grass	✓					✓		✓		✓			Medium
Chinese pennisetum			✓			✓			✓	✓			Low
Climbing spindleberry			✓			✓			✓	✓			Low
Contorta pine			✓			✓			✓	✓			Low
Cotton thistle			✓			✓		✓			✓		Low
Corsican pine		✓				✓			✓		✓		Low

Eel grass			✓			✓			✓	✓			Low
European larch			✓			✓			✓		✓		Low
Evergreen buckthorn			✓			✓			✓	✓			Low
Giant needle grass			✓			✓			✓	✓			Low
Gorse		✓			✓				✓		✓		Low
Kangaroo grass		✓			✓			✓		✓			Medium
Madeira vine or mignonette vine			✓			✓			✓	✓			Low
Mediterranean Fanworm													Medium
Moth plant			✓			✓			✓	✓			Low
Mountain pine			✓			✓			✓		✓		Low
Nassella tussock	✓				✓				✓		✓		Medium
Parrots feather			✓			✓			✓	✓			Low
Pest fish		✓				✓		✓			✓		Low
Purple loosestrife			✓			✓			✓	✓			Low
Rabbits		✓			✓				✓	✓			Low
Reed sweet grass			✓			✓			✓	✓			Low
Rooks			✓			✓			✓	✓			Low
Rough horsetail			✓			✓		✓				✓	Low
Saffron thistle			✓			✓			✓	✓			Low
Scots pine			✓			✓			✓		✓		Low

Senegal tea			✓			✓			✓	✓			Low
Spartina		✓			✓				✓	✓			Low
Tall wheat grass			✓			✓		✓			✓		Low
Wallabies			✓			✓			✓		✓		Low
Western white pine			✓			✓			✓	✓			Low
White-edged nightshade		✓				✓			✓	✓			Low
Wilding conifers	✓					✓			✓		✓		Low
Willow-leaved hakea			✓			✓			✓		✓		Low
Woolley nightshade			✓			✓			✓		✓		Low

2. Assessment of risk, adverse impacts and Good Neighbour Rules (per subject)

African feather grass

Risks that each option will not achieve its objective NPD 6(3)

Option	No RPMP	Eradication	Sustained Control
<div> <div>Risk</div> <div>Objective</div> </div>	NA	<i>To reduce the infestation level of the subject to zero levels in an area in the short to medium term.</i>	<i>This programme would provide for ongoing control of the subject, to reduce its impacts on values and spread to other properties</i>
Technical and operation risks.		<p>High</p> <p>African feather grass is very limited in distribution and the number of plants controlled is declining. Council will continue to visit the seven sites where plants continue to be found and undertake control and search surrounding areas. The nineteen sites where plants have not been found for a very long time will continue to be monitored.</p> <p>There is a high risk that an objective of eradication will not be achieved in 10 years.</p>	<p>Low</p> <p>African feather grass is very limited in distribution and the number of plants controlled is declining. Council will continue to visit the seven sites where plants continue to be found and undertake control and search surrounding areas. The nineteen sites where plants have not been found for a very long time will continue to be monitored.</p> <p>Council will be able to maintain and possibly continue to see a decline in numbers of plants over the next 10 years.</p>
The extent to which the option will be implemented and complied with.		<p>Low</p> <p>There is a small risk that the control operations may not be carried out at all sites each year.</p>	<p>Low</p> <p>There is a small risk that the control operations may not be carried out at all sites each year.</p>
The risk that compliance with other legislation will adversely affect implementation of		Low	Low

the option.			
The risk that public or political concerns will adversely affect implementation of the option.		Low Inclusion in the RPMP provides greater certainty that funding and resources will be made available for the programme. There is a small risk that funding RPMP programmes may change.	Low Inclusion in the RPMP provides greater certainty that funding and resources will be made available for the programme. There is a small risk that funding RPMP programmes may change.
Other material risks.			

Risks that each option will not achieve its objective 6(4)

Eradication: High

Sustained Control: Low

Assessment for section 71(d)

Is African feather grass capable of causing an adverse effect on:		Comments:
Economic wellbeing?	Yes	Through pasture competition; unpalatable.
The viability of threatened species or organisms?		
The survival and distribution of indigenous plants or animals?	Yes	Habitat transformation. .
The sustainability of natural and developed ecosystems, ecological processes and biological diversity?	Yes	Competition and displacement.
Soil resources?		
Water quality?		
Human health?		
Social and cultural wellbeing?	Yes	Loss of valued natural ecosystems
The enjoyment of the recreational value of the natural environment?	Yes	Change to aesthetic values of ecosystems.
The relationship between Māori, their culture, and their traditions and their ancestral lands, waters, sites, wāhi tapu and taonga?	Yes	Change toward an ecosystem dominated by exotic species.
Animal welfare?		

Bathurst bur

Risks that each option will not achieve its objective NPD 6(3)

Option	No RPMP	Eradication	Sustained Control
<div> <div>Risk</div> <div>Objective</div> </div>	NA	<i>To reduce the infestation level of the subject to zero levels in an area in the short to medium term.</i>	<i>This programme would provide for ongoing control of the subject, to reduce its impacts on values and spread to other properties</i>
Technical and operation risks.		<p>High</p> <p>Bathurst bur is very limited in distribution. Council will continue to visit the two sites where plants continue to be found and undertake control and search surrounding areas. The thirty sites where plants have not been found for a very long time will continue to be monitored.</p> <p>Given there are so few active sites, they are readily accessible the level of risk is not high. However, it is evidence the seed is very long long-lived and readily germinate as a result of any ground disturbance; Therefore, there're is a medium level of risk that eradication is not feasible operationally.</p>	<p>Low</p> <p>Bathurst bur is very limited in distribution. Council will continue to visit the two sites where plants continue to be found and undertake control and search surrounding areas. The thirty sites where plants have not been found for a very long time will continue to be monitored.</p> <p>Given there are so few active sites, they are readily accessible the level of risk is not high. With so few sites, being able to sustain a suitable level of control over time carried a low operational risk. .</p>
The extent to which the option will be implemented and complied with.		<p>Low</p> <p>There is a small risk that the control operations may not be carried out at all sites each year.</p>	<p>Low</p> <p>There is a small risk that the control operations may not be carried out at all sites each year.</p>
The risk that compliance with other legislation will adversely affect implementation of the option.		Low	Low
The risk that public or political concerns will adversely affect		<p>Low</p> <p>Inclusion in the RPMP</p>	<p>Low</p> <p>Inclusion in the RPMP</p>

implementation of the option.		provides greater certainty that funding and resources will be made available for the programme. There is a small risk that funding RPMP programmes may change.	provides greater certainty that funding and resources will be made available for the programme. There is a small risk that funding RPMP programmes may change.
Other material risks.			

Risks that each option will not achieve its objective 6(4)

Eradication: High

Sustained Control: Low

Assessment for section 71(d)

Is Bathurst bur capable of causing an adverse effect on:		Comments:
Economic wellbeing?	Yes	Through pasture competition, effect on wool clip/quality.
The viability of threatened species or organisms?		
The survival and distribution of indigenous plants or animals?		
The sustainability of natural and developed ecosystems, ecological processes and biological diversity?		
Soil resources?		
Water quality?		
Human health?		
Social and cultural wellbeing?		
The enjoyment of the recreational value of the natural environment?	Yes	Attachment of sharp burs to clothing/equipment.
The relationship between Māori, their culture, and their traditions and their ancestral lands, waters, sites, wāhi tapu and taonga?		
Animal welfare?	Yes	Entanglement of sharp burs in wool, hair and/or fur.

Boneseed

Risks that each option will not achieve its objective NPD 6(3)

Option	No RPMP	Eradication	Sustained Control
<div> <div>Risk</div> <div>Objective</div> </div>	NA	<i>To reduce the infestation level of the subject to zero levels in an area in the short to medium term.</i>	<i>This programme would provide for ongoing control of the subject, to reduce its impacts on values and spread to other properties</i>
Technical and operation risks.		<p>High</p> <p>Boneseed is limited in distribution and the number of plants controlled is declining. However, with such long-lived seeds and the fact infestations occur in difficult terrain, not all plants are being destroyed each year.</p> <p>As a result, there is a high risk that an objective of eradication will not be achieved in 10 years.</p>	<p>Low</p> <p>Boneseed is limited in distribution and the number of plants controlled is declining.</p> <p>By visiting all known active sites each year, and placing the remainder under longer term surveillance, Council will be able to maintain and possibly continue to see a decline in numbers of plants over the next 10 years.</p>
The extent to which the option will be implemented and complied with.		<p>Low</p> <p>There is a small risk that the control operations may not be carried out at all sites each year.</p>	<p>Low</p> <p>There is a small risk that the control operations may not be carried out at all sites each year.</p>
The risk that compliance with other legislation will adversely affect implementation of the option.		Low	Low
The risk that public or political concerns will adversely affect implementation of the option.		<p>Low</p> <p>Inclusion in the RPMP provides greater certainty that funding and resources will be made available for the programme. There is a small risk that funding RPMP programmes</p>	<p>Low</p> <p>Inclusion in the RPMP provides greater certainty that funding and resources will be made available for the programme. There is a small risk that funding RPMP programmes</p>

		may change.	may change.
Other material risks.			

Risks that each option will not achieve its objective 6(4)

Eradication: High

The level of risk of not achieving an Eradication objective, within 10 years or even at a longer time scale, is very high

Sustained Control: Low

There is a lower level of risk that Council in association with Department of Conservation will be able to maintain a very low density of bone seed in Marlborough.

Assessment for section 71(d)

Is Bone seed capable of causing an adverse effect on:		Comments:
Economic wellbeing?		
The viability of threatened species or organisms?		
The survival and distribution of indigenous plants or animals?	Yes	Habitat transformation. .
The sustainability of natural and developed ecosystems, ecological processes and biological diversity?	Yes	Competition and displacement.
Soil resources?		
Water quality?		
Human health?		
Social and cultural wellbeing?	Yes	Loss of valued natural ecosystems
The enjoyment of the recreational value of the natural environment?	Yes	Change to aesthetic values of ecosystems.
The relationship between Māori, their culture, and their traditions and their ancestral lands, waters, sites, wāhi tapu and taonga?	Yes	Change toward natural ecosystems becoming dominated by exotic species.
Animal welfare?		

Broom

Risks that each option will not achieve its objective NPD 6(3)

Option	No RPMP	Combination of different programme outcomes and objectives	Combination of different programme outcomes and objectives	Sustained Control – with control zones and containment area mapped
<div> <div>Risk</div> <div>Objective</div> </div>	NA	<p>1. Waima/Ure Exclusion</p> <p><i>To prevent the establishment of the subject that is present in New Zealand but not yet established in an area.</i></p> <p>2. Control zones – Eradication</p> <p><i>To reduce the infestation level of the subject to zero levels in an area in the short to medium term.</i></p> <p>3. Rest of District – Sustained</p>	<p>1. Waima/Ure Exclusion</p> <p><i>To prevent the establishment of the subject that is present in New Zealand but not yet established in an area.</i></p> <p>2. Control zones and Rest of District – Sustained Control</p> <p><i>This programme would provide for ongoing control of the subject, to reduce its impacts on values and spread to other properties</i></p>	<p>Single Sustained Control Programme with multiple objectives and use of control zones and Rule wording to differentiate components.</p> <p><i>This programme would provide for ongoing control of the subject, to reduce its impacts on values and spread to other properties</i></p>
Technical and operation risks.		<p>High</p> <p>Due to the established nature of Broom in Marlborough, including in the proposed Control Zone areas, the risk of not eradicating Broom within the Zones would be very high.</p>	<p>High</p> <p>Due to the established nature of Broom in Marlborough, the risk of Broom becoming established in a particular Zone such as the Waima/Ure, or already established but not yet known of (be it in small amounts) is very high.</p>	<p>Low</p> <p>Within ongoing and persistent management, as many land occupiers already carry out within the Control Zones, there is a very low risk of not achieving a sustained Control objective. In most instances, the level of control will far exceed that required to ensure the populations are not expanding, and this will be encouraged.</p>
The extent to which the option will be implemented and		Low	Low	Low

complied with.				
The risk that compliance with other legislation will adversely affect implementation of the option.		Low	Low	Low
The risk that public or political concerns will adversely affect implementation of the option.		Low	Low	Low
Other material risks.				

Risks that each option will not achieve its objective 6(4)

Combination (1): High

Combination (2): High

Single Sustained Control: Low

Assessment for section 71(d)

Is Broom capable of causing an adverse effect on:		Comments:
Economic wellbeing?	Yes	Through pasture competition
The viability of threatened species or organisms?		
The survival and distribution of indigenous plants or animals?	Yes	Habitat transformation.
The sustainability of natural and developed ecosystems, ecological processes and biological diversity?	Yes	Competition and displacement.
Soil resources?		
Water quality?		
Human health?		
Social and cultural wellbeing?	Yes	
The enjoyment of the recreational value of the natural environment?	Yes	Change to aesthetic values of ecosystems.
The relationship between Māori, their culture, and their traditions and their ancestral lands, waters, sites, wāhi tapu and taonga?	Yes	Change toward natural ecosystems becoming dominated by exotic species.

Animal welfare?		
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Analysis for a Good Neighbour Rule under clause 8 of the NPD

Proposed pest	Broom
Proposed Good Neighbour Rule Rule 7.4.2.7 (Good Neighbour Rule) Occupiers shall destroy all broom (<i>Cytisus scoparius</i>) plants, on land they occupy, within 10 metres of their property boundary each year before they produce seed, where: <ul style="list-style-type: none"> a) the broom occurs continuously along a stretch of boundary greater than 50m in length, and; b) the adjoining land is clear of, or under management for broom and the land is being used for agricultural production purposes. 	
Criteria (paraphrased from National Policy Direction)	Assessment
<p>In the absence of the rule, the pest would spread to land that is adjacent or nearby within the life of the plan and would cause unreasonable costs to an occupier of that land. Taking into account:</p> <ul style="list-style-type: none"> i. The proximity and characteristics of the adjacent or nearby land, and; ii. The biological characteristics and behaviour of the particular pest. 	<p>The proposed rule outlines that it only applies to situations where the adjoining land is being used for agricultural production purposes. The spread of broom would only cause unreasonable costs over the life of the proposed plan where the land being affected is used for agricultural purposes. I.e. additional costs of control and/or loss of production.</p> <p>Biologically, broom is known to spread rapidly via the dispersal of seed to the area immediately surrounding the parent plant. Allen & Lee (2001)¹ noted this ballistic distance is the primary disperser of seed and is predominantly released <5m.</p> <p>As such, the proposed good neighbour rule relates to clearing a 10m area on the source side of the boundary. This larger buffer ensures an adequate and practical zone is cleared to ensure seed is not directly dispersed by plants across boundaries.</p>
The occupier of the land that is adjacent or nearby, is taking reasonable measures to manage the pest or its impacts	As part of the proposed rule, the occupier of adjoining land must be either clear of broom or ensuring broom is being managed.
The rule does not set a requirement on an occupier that is greater than that required to manage the spread of the pest to adjacent or nearby land. Taking into account:	The inclusion of a rule clause that specifies a minimum stretch of boundary has been done so to ensure the costs of compliance are reasonable. Situations where small numbers of plants, on small sections of boundary would see the costs of

¹ Allen RB, Lee WG 2001. Woody weed dispersal by birds, wind and explosive dehiscence in New Zealand. New Zealand Plant Protection 54: 61-66.

i. The biological characteristics and behaviour of the particular pest.	compliance (Council inspection costs and control costs) far outweigh the actions of the adjoining occupier managing spill over effects (if any).
ii. Whether the costs of compliance with the rule are reasonable relative to the costs that such an occupier would incur, from the pest spreading, in the absence of a rule.	

Brushtail Possum

Risks that each option will not achieve its objective NPD 6(3)

Option	No RPMP	Exclusion
<div style="display: flex; justify-content: space-between;"> <div style="width: 40%;">Risk</div> <div style="width: 60%;">Objective</div> </div>	NA	<i>To prevent the establishment of the subject that is present in New Zealand but not yet established in an area.</i>
Technical and operation risks.		Low Technologies and methods to carry out effective surveillance and control brushtail possums are readily available.
The extent to which the option will be implemented and complied with.		Low
The risk that compliance with other legislation will adversely affect implementation of the option.		Low
The risk that public or political concerns will adversely affect implementation of the option.		Low
Other material risks.		Medium The mainland surrounding or near to many of the possum-free islands commonly holds large possum numbers. This can increase the risk that natural dispersion to the islands may occur.

Risks that each option will not achieve its objective 6(4)

Exclusion: Low-Medium

Assessment for section 71(d)

Are brushtail possums capable of causing an adverse effect on:		Comments:
Economic wellbeing?		
The viability of threatened species or organisms?	Yes	Many of the currently possum-free islands are being treated as island sanctuaries by the Department of Conservation. These islands harbour populations of threatened species such as Little Spotted Kiwi (Long Island), Maud Island Frog (Maud Island) and Tutatara (Stephens Island).
The survival and distribution of indigenous plants or animals?	Yes	Brushtails possums have well documented adverse impacts upon numerous species of indigenous plants and animals.
The sustainability of natural and developed ecosystems, ecological processes and biological diversity?	Yes	
Soil resources?		
Water quality?		
Human health?		
Social and cultural wellbeing?	Yes	
The enjoyment of the recreational value of the natural environment?	Yes	
The relationship between Māori, their culture, and their traditions and their ancestral lands, waters, sites, wāhi tapu and taonga?	Yes	
Animal welfare?		

Bur daisy

Risks that each option will not achieve its objective NPD 6(3)

Option	No RPMP	Eradication
<div style="display: flex; justify-content: space-between;"> <div style="width: 40%;"> Risk </div> <div style="width: 60%; text-align: right;"> Objective </div> </div>	NA	<i>To reduce the infestation level of the subject to zero levels in an area in the short to medium term.</i>
Technical and operation risks.		Medium Bur daisy is very limited in distribution. Council will continue to visit the site where plants

		<p>continue to be found, undertake control, and search surrounding areas.</p> <p>Given there are so few active sites, they are readily accessible the level of risk is not high. However, it is evident the seed is long-lived and the plants that have been found are scattered over a large, steep hillside. This results in the residual operational risk not being low.</p>
The extent to which the option will be implemented and complied with.		<p>Low</p> <p>There is a small risk that the control operations may not be carried out at all sites each year.</p>
The risk that compliance with other legislation will adversely affect implementation of the option.		<p>Low</p>
The risk that public or political concerns will adversely affect implementation of the option.		<p>Low</p> <p>Inclusion in the RPMP provides greater certainty that funding and resources will be made available for the programme. There is a small risk that funding RPMP programmes may change.</p>
Other material risks.		

Risks that each option will not achieve its objective 6(4)

Eradication: Medium

Assessment for section 71(d)

Is Bur Daisy capable of causing an adverse effect on:		Comments:
Economic wellbeing?	Yes	Through pasture competition, effect on wool clip/quality.
The viability of threatened species or organisms?		
The survival and distribution of indigenous plants or animals?		
The sustainability of natural and developed ecosystems, ecological processes and biological diversity?		

Soil resources?		
Water quality?		
Human health?		
Social and cultural wellbeing?		
The enjoyment of the recreational value of the natural environment?	Yes	Attachment of sharp burs to clothing/equipment.
The relationship between Māori, their culture, and their traditions and their ancestral lands, waters, sites, wāhi tapu and taonga?		
Animal welfare?	Yes	Entanglement of sharp burs in wool, hair and/or fur.

Cathedral bells

Risks that each option will not achieve its objective NPD 6(3)

Option	No RPMP	Eradication	Sustained Control
<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;">Risk</div> <div style="width: 55%;">Objective</div> </div>	NA	<i>To reduce the infestation level of the subject to zero levels in an area in the short to medium term.</i>	<i>This programme would provide for ongoing control of the subject, to reduce its impacts on values and spread to other properties</i>
Technical and operation risks.		<p>High</p> <p>Cathedral bells is very limited in distribution and the number of plants controlled is declining. However, the high number of seedlings being discovered over a long period is showing that seeds are long-lived or are continuing to be produced by rogue mature plants.</p> <p>As a result, there is a high risk that an objective of eradication will not be achieved in 10 years.</p>	<p>Low</p> <p>Cathedral bells is limited in distribution and the number of plants controlled is declining.</p> <p>By visiting all known active sites each year, and placing the remainder under longer term surveillance, Council (in conjunction with DOC) will be able to maintain and possibly continue to see a decline in numbers of plants over the next 10 years.</p>
The extent to which the option will be		Low	Low

implemented and complied with.		There is a small risk that the control operations may not be carried out at all sites each year.	There is a small risk that the control operations may not be carried out at all sites each year.
The risk that compliance with other legislation will adversely affect implementation of the option.		Low	Low
The risk that public or political concerns will adversely affect implementation of the option.		Low Inclusion in the RPMP provides greater certainty that funding and resources will be made available for the programme. There is a small risk that funding RPMP programmes may change.	Low Inclusion in the RPMP provides greater certainty that funding and resources will be made available for the programme. There is a small risk that funding RPMP programmes may change.
Other material risks.			

Risks that each option will not achieve its objective 6(4)

Eradication: High

The level of risk of not achieving an Eradication objective, within 10 years or even at a longer time scale, is very high. The current number of plants still being destroyed at known sites along with the prolific reproductive capabilities of cathedral bells means an eradication objective is not feasible in the short to medium term and possibly not even in the long term.

Sustained Control: Low

There is a lower level of risk that Council will be able to maintain a very low density of cathedral bells in Marlborough. This will be achieved by ongoing control at sites and with structured surveillance of all known sites and other risk areas over time.

Assessment for section 71(d)

Is Cathedral bells capable of causing an adverse effect on:		Comments:
Economic wellbeing?		
The viability of threatened species or organisms?		
The survival and distribution of indigenous plants or animals?	Yes	Habitat transformation.
The sustainability of natural and developed ecosystems, ecological	Yes	Competition and displacement.

processes and biological diversity?		
Soil resources?		
Water quality?		
Human health?		
Social and cultural wellbeing?	Yes	Loss of valued natural ecosystems
The enjoyment of the recreational value of the natural environment?	Yes	Change to aesthetic values of ecosystems.
The relationship between Māori, their culture, and their traditions and their ancestral lands, waters, sites, wāhi tapu and taonga?	Yes	Change toward natural ecosystems becoming dominated by exotic species.
Animal welfare?		

Chilean needle grass

Risks that each option will not achieve its objective NPD 6(3)

Option	No RPMP	Eradication	Sustained Control
<div style="text-align: center;"> <i>Risk</i> <i>Objective</i> </div>	NA		
Technical and operation risks.		<p>High</p> <p>Biologically, Chilean needle grass is very difficult to completely remove from an area where it has been growing and seeding for a number of years. Large areas of the infestations within Marlborough fall within this category.</p> <p>As a result, setting an eradication objective for this species (to a point where no plants are found over time), carries a high risk.</p>	<p>Low-Medium</p> <p>Biologically, Chilean needle grass is very difficult to completely remove from an area where it has been growing and seeding for a number of years. Large areas of the infestations within Marlborough fall within this category.</p> <p>However, there have been ongoing improvements in the ways to suppress populations through integrated pest management. As a result, the risk of not achieving a sustained control objective is low-</p>

			medium.
The extent to which the option will be implemented and complied with.		<p>High</p> <p>In order to implement an eradication programme, the scope and scale of both regulatory and non-regulatory initiatives would be immense. Given this would need to be laid over rural communities; there is a high risk that many aspects would not be able to implemented or complied with.</p>	<p>Low-Medium</p> <p>A Sustained Control programme would provide a much lower risk, given the programme components would allow for greater integration within the community. This would result in lower risks to implementation and compliance with regulatory components.</p>
The risk that compliance with other legislation will adversely affect implementation of the option.		<p>Medium</p> <p>To give effect to eradication, the tool required and also the way in which they would need to be used, would run the risk of breaching legislation such as the Resource Management Act 1991 or the HSNO. This would be through changes in land use and/or the use of agrichemicals.</p>	<p>Low</p> <p>A Sustained Control programme predominantly operate inside the existing regulatory environment with respect to other legislation.</p>
The risk that public or political concerns will adversely affect implementation of the option.		<p>High</p> <p>In order to give effect to an effective eradication programme, there would be wide ranging impacts on the community wishing to continue to operate their farming systems or to continue to recreate within public open spaces. This would generate a large degree of adversity in the public/political landscape.</p>	<p>Low</p> <p>A Sustained Control programme predominantly operate inside the existing public/political landscape.</p>
Other material risks.			

Risks that each option will not achieve its objective 6(4)

Eradication:

Sustained Control:

Assessment for section 71(d)

Is Chilean needle grass capable of causing an adverse effect on:		Comments:
Economic wellbeing?	Yes	Through pasture competition; change to farming systems; risk of carcass downgrade
The viability of threatened species or organisms?		
The survival and distribution of indigenous plants or animals?		
The sustainability of natural and developed ecosystems, ecological processes and biological diversity?	Yes	Competition and displacement.
Soil resources?		
Water quality?		
Human health?		
Social and cultural wellbeing?	Yes	Effects on farm systems can have flow-on impact on individuals, families and the social and cultural networks within a community.
The enjoyment of the recreational value of the natural environment?	Yes	Attachment of sharp seeds to clothing
The relationship between Māori, their culture, and their traditions and their ancestral lands, waters, sites, wāhi tapu and taonga?		
Animal welfare?	Yes	Seed penetration of skin, muscle and eyes.

Chinese pennisetum

Risks that each option will not achieve its objective NPD 6(3)

Option	No RPMP	Eradication
<div style="display: flex; justify-content: space-between;"> <div style="width: 40%;"> Risk </div> <div style="width: 60%;"> Objective </div> </div>	NA	<i>To reduce the infestation level of the subject to zero levels in an area in the short to medium term.</i>

Technical and operation risks.	<p>High</p> <p>Chinese pennisetum is limited in distribution and the number of plants controlled is declining. Council will continue to visit the 10 sites where plants have been found recently to undertake control and search surrounding areas. The 43 sites where plants have not been found for a very long time will continue to be monitored. Due to the fact this plant reproduces via seed, and some of the areas infested have been so heavily in the past, there is a high risk that an objective of eradication will not be achieved in 10 years.</p>	<p>Low</p> <p>Chinese pennisetum is limited in distribution and the number of plants controlled is declining. Council will continue to visit the 10 sites where plants have been found recently to undertake control and search surrounding areas. The 43 sites where plants have not been found for a very long time will continue to be monitored.</p> <p>Council will be able to maintain and possibly continue to see a decline in numbers of plants over the next 10 years.</p>
The extent to which the option will be implemented and complied with.	<p>Low</p> <p>There is a small risk that the control operations may not be carried out at all sites each year.</p>	<p>Low</p> <p>There is a small risk that the control operations may not be carried out at all sites each year.</p>
The risk that compliance with other legislation will adversely affect implementation of the option.	<p>Low</p>	<p>Low</p>
The risk that public or political concerns will adversely affect implementation of the option.	<p>Low</p> <p>Inclusion in the RPMP provides greater certainty that funding and resources will be made available for the programme. There is a small risk that funding RPMP programmes may change.</p>	<p>Low</p> <p>Inclusion in the RPMP provides greater certainty that funding and resources will be made available for the programme. There is a small risk that funding RPMP programmes may change.</p>
Other material risks.		

Risks that each option will not achieve its objective 6(4)

Eradication: High

The level of risk of not achieving an Eradication objective, within 10 years or even at a longer time scale, is very high. Chinese pennisetum has been intensively managed for over 20 years. This has shown the difficult nature in completely eradicating an established pest plant species.

Sustained Control: Low

There is a lower level of risk that Council will be able to maintain a very low density of Chinese pennisetum in Marlborough. This will be achieved by ongoing control at sites and with structured surveillance of all known sites and other risk areas over time.

Assessment for section 71(d)

Is Chinese pennisetum capable of causing an adverse effect on:		Comments:
Economic wellbeing?	Yes	Through pasture competition; unpalatable.
The viability of threatened species or organisms?		
The survival and distribution of indigenous plants or animals?		
The sustainability of natural and developed ecosystems, ecological processes and biological diversity?	Yes	Competition and displacement.
Soil resources?		
Water quality?		
Human health?		
Social and cultural wellbeing?		
The enjoyment of the recreational value of the natural environment?	Yes	Change to aesthetic values of ecosystems.
The relationship between Māori, their culture, and their traditions and their ancestral lands, waters, sites, wāhi tapu and taonga?	Yes	Change toward natural ecosystems becoming dominated by exotic species.
Animal welfare?		

Climbing spindleberry

Risks that each option will not achieve its objective NPD 6(3)

Option	No RPMP	Eradication
<div style="display: flex; justify-content: space-between;"> <div style="width: 40%;">Risk</div> <div style="width: 60%;">Objective</div> </div>	NA	To reduce the infestation level of the subject to zero levels in an area in the short to medium term.
Technical and operation risks.		Medium Climbing spindleberry is very limited in distribution. DOC will continue to visit the 5 sites where plants have been recently found to undertake control and search surrounding areas. The 6th site where plants have not been found for a very long time will continue

		<p>to be monitored.</p> <p>Given there are so few active sites, the level of risk is not high. However, the seed is bird dispersed and plants can be difficult to detect in scrub/forest environments. Therefore, the risk is not low.</p>
The extent to which the option will be implemented and complied with.		<p>Low</p> <p>There is a small risk that the control operations may not be carried out at all sites each year.</p>
The risk that compliance with other legislation will adversely affect implementation of the option.		<p>Low</p>
The risk that public or political concerns will adversely affect implementation of the option.		<p>Low</p> <p>Inclusion in the RPMP provides greater certainty that funding and resources will be made available for the programme. There is a small risk that funding RPMP programmes may change.</p>
Other material risks.		

Risks that each option will not achieve its objective 6(4)

Eradication: Medium

Based on the current distribution and the decline in the number of plants required to be controlled, achieving zero levels of Climbing spindleberry under an Eradication programme would be achievable, but with some degree of risk.

Assessment for section 71(d)

Is climbing spindleberry capable of causing an adverse effect on:		Comments:
Economic wellbeing?		
The viability of threatened species or organisms?		
The survival and distribution of indigenous plants or animals?	Yes	Habitat transformation.
The sustainability of natural and developed ecosystems, ecological processes and biological diversity?	Yes	Competition and displacement.

Soil resources?		
Water quality?		
Human health?		
Social and cultural wellbeing?		
The enjoyment of the recreational value of the natural environment?	Yes	Change to aesthetic values of ecosystems.
The relationship between Māori, their culture, and their traditions and their ancestral lands, waters, sites, wāhi tapu and taonga?	Yes	Change toward natural ecosystems becoming dominated by exotic species.
Animal welfare?		

Contorta pine

Risks that each option will not achieve its objective NPD 6(3)

Option	No RPMP	Progressive Containment	Sustained control (post collaborative management)
<div style="text-align: center;"> <i>Risk</i> <i>Objective</i> </div>	NA	To contain or reduce the geographic distribution of the subject, or an organism being spread by the subject, to an area over time.	To reduce the infestation level of the subject to zero levels in an area in the short to medium term.
Technical and operation risks.		Low-Medium Control tools are readily available and effective. However, likely containment areas contain substantial seed sources. The sustainability of using existing tools to effectively manage surrounding areas is questionable.	Low Under the proposed programme, the level of infestation when management is to occur will be very low. Control tools are readily available and effective.
The extent to which the option will be implemented and complied with.		Medium Implementing a containment management approach in Marlborough for contorta pine has been the status quo for a number of years. Whilst	Low There is a small risk that the control operations may not be carried out by land occupiers as required by any Plan obligations.

		successful to a degree, there is a large area of land not being effectively managed due to agencies not complying with the overall containment intent. There is no suggestion this risk would not continue.	
The risk that compliance with other legislation will adversely affect implementation of the option.		Medium There is a risk that pressure to see greater levels of carbon sequestered on a national scale may make it more difficult to effectively implement wilding conifer management. Especially of large, mature infestations/plantings.	Medium There is a risk that pressure to see greater levels of carbon sequestered on a national scale may make it more difficult to effectively implement wilding conifer management. Especially of large, mature infestations/plantings.
The risk that public or political concerns will adversely affect implementation of the option.		High Committing to a programme objective of progressive containment within the RPMP will attract an expectation that to meet this objective the programme will be adequately resourced. The resources required to effectively implement a progressive containment programme will generate high level of political and/or public concern regarding affordability.	Low Inclusion in the RPMP provides greater certainty that the investment by collaborative programmes will be secured in the long term.
Other material risks.			

Risks that each option will not achieve its objective 6(4)

Progressive containment: High

The effective management of contorta pine to a progressive containment objective within a RPMP programme would set a level of expectation that effective management was to occur. As a result, there is a real risk of political and/or public concern over cost that would adversely affect the implementation of the programme.

Sustained control: Low/Medium

Given the sustained control programme would only commence in behind other collaborative initiatives, the starting point will be very low infestation levels. As such, the risk of not keeping areas subject of the programme under sustained control will be low.

Assessment for section 71(d)

Is contorta pine capable of causing an adverse effect on:		Comments:
Economic wellbeing?	Yes	Can reduce area used for extensive grazing
The viability of threatened species or organisms?	Yes	
The survival and distribution of indigenous plants or animals?	Yes	Habitat transformation.
The sustainability of natural and developed ecosystems, ecological processes and biological diversity?	Yes	Competition and displacement.
Soil resources?		
Water quality?		
Human health?		
Social and cultural wellbeing?		
The enjoyment of the recreational value of the natural environment?	Yes	Change to aesthetic values of ecosystems.
The relationship between Māori, their culture, and their traditions and their ancestral lands, waters, sites, wāhi tapu and taonga?	Yes	Change toward natural ecosystems becoming dominated by exotic species.
Animal welfare?		

Cotton thistle

Risks that each option will not achieve its objective NPD 6(3)

Option	No RPMP	Eradication	Sustained Control
<div style="display: flex; align-items: center; justify-content: center;"> <div style="transform: rotate(-45deg);">Risk</div> <div>Objective</div> </div>	NA	<i>To reduce the infestation level of the subject to zero levels in an area in the short to medium term.</i>	<i>This programme would provide for ongoing control of the subject, to reduce its impacts on values and spread to other properties</i>
Technical and operation risks.		High Cotton thistle is limited	Low Cotton thistle is limited

		<p>in distribution but the information available for one of the key sites is or relatively poor quality. Council will continue to visit all sites where plants continue to be found and undertake control and search surrounding areas. In some instances, this is carried out in conjunction with the land occupier.</p> <p>Because of the relatively poor data available, and the long-lived nature of cotton thistle seed, there is a high risk that an objective of eradication will not be achieved in 10 years.</p>	<p>in distribution but the information available for one of the key sites is or relatively poor quality. Council will continue to visit all sites where plants continue to be found and undertake control and search surrounding areas. In some instances, this is carried out in conjunction with the land occupier.</p> <p>By visiting all known active sites each year, and placing the remainder under longer term surveillance, Council will be able to maintain and possibly continue to see a decline in numbers of plants over the next 10 years. The quality of data will also improve in time.</p>
The extent to which the option will be implemented and complied with.		<p>Low</p> <p>There is a small risk that the control operations may not be carried out at all sites each year.</p>	<p>Low</p> <p>There is a small risk that the control operations may not be carried out at all sites each year.</p>
The risk that compliance with other legislation will adversely affect implementation of the option.		<p>Low</p>	<p>Low</p>
The risk that public or political concerns will adversely affect implementation of the option.		<p>Low</p> <p>Inclusion in the RPMP provides greater certainty that funding and resources will be made available for the programme. There is a small risk that funding RPMP programmes may change.</p>	<p>Low</p> <p>Inclusion in the RPMP provides greater certainty that funding and resources will be made available for the programme. There is a small risk that funding RPMP programmes may change.</p>
Other material risks.			

Risks that each option will not achieve its objective 6(4)

Eradication: High

The level of risk of not achieving an Eradication objective, within 10 years or even at a longer time scale, is very high.

Sustained Control: Low

There is a lower level of risk that Council will be able to maintain a very low density of Cotton Thistle in Marlborough

Assessment for section 71(d)

Is cotton thistle capable of causing an adverse effect on:		Comments:
Economic wellbeing?	Yes	Through pasture competition
The viability of threatened species or organisms?		
The survival and distribution of indigenous plants or animals?		
The sustainability of natural and developed ecosystems, ecological processes and biological diversity?	Yes	Competition and displacement.
Soil resources?		
Water quality?		
Human health?		
Social and cultural wellbeing?		
The enjoyment of the recreational value of the natural environment?	Yes	Large, sharp spikes on plants that can form impenetrable stands.
The relationship between Māori, their culture, and their traditions and their ancestral lands, waters, sites, wāhi tapu and taonga?		
Animal welfare?		

Corsican pine

Risks that each option will not achieve its objective NPD 6(3)

Option	No RPMP	Progressive Containment	Sustained control (post collaborative management)

<div style="text-align: right;"><i>Risk</i></div> <div style="text-align: left;"><i>Objective</i></div>	NA	To contain or reduce the geographic distribution of the subject, or an organism being spread by the subject, to an area over time.	<i>To reduce the infestation level of the subject to zero levels in an area in the short to medium term.</i>
Technical and operation risks.		<p>Low-Medium</p> <p>Control tools are readily available and effective. However, likely containment areas contain substantial seed sources. The sustainability of using existing tools to effectively manage surrounding areas is questionable.</p>	<p>Low</p> <p>Under the proposed programme, the level of infestation when management is to occur will be very low. Control tools are readily available and effective.</p>
The extent to which the option will be implemented and complied with.		<p>Medium</p> <p>Implementing a containment management approach in Marlborough for Corsican pine has been the status quo for a number of years. Whilst successful to a degree, there is a large area of land not being effectively managed due to agencies not complying with the overall containment intent. There is no suggestion this risk would not continue.</p>	<p>Low</p> <p>There is a small risk that the control operations may not be carried out by land occupiers as required by any Plan obligations.</p>
The risk that compliance with other legislation will adversely affect implementation of the option.		<p>Medium</p> <p>There is a risk that pressure to see greater levels of carbon sequestered on a national scale may make it more difficult to effectively implement wilding conifer management. Especially of large, mature infestations/plantings.</p>	<p>Medium</p> <p>There is a risk that pressure to see greater levels of carbon sequestered on a national scale may make it more difficult to effectively implement wilding conifer management. Especially of large, mature infestations/plantings.</p>
The risk that public or political concerns will adversely affect implementation of the		<p>High</p> <p>Committing to a programme objective of</p>	<p>Low</p> <p>Inclusion in the RPMP provides greater</p>

option.		progressive containment within the RPMP will attract an expectation that to meet this objective the programme will be adequately resourced. The resources required to effectively implement a progressive containment programme will generate high level of political and/or public concern regarding affordability.	certainty that the investment by collaborative programmes will be secured in the long term.
Other material risks.			

Risks that each option will not achieve its objective 6(4)

Progressive containment: High

The effective management of Corsican pine to a progressive containment objective within a RPMP programme would set a level of expectation that effective management was to occur. As a result, there is a real risk of political and/or public concern over cost that would adversely affect the implementation of the programme.

Sustained control: Low/Medium

Given the sustained control programme would only commence in behind other collaborative initiatives, the starting point will be very low infestation levels. As such, the risk of not keeping areas subject of the programme under sustained control will be low.

Assessment for section 71(d)

Is Corsican pine capable of causing an adverse effect on:		Comments:
Economic wellbeing?	Yes	Can reduce area used for extensive grazing
The viability of threatened species or organisms?	Yes	
The survival and distribution of indigenous plants or animals?	Yes	Habitat transformation.
The sustainability of natural and developed ecosystems, ecological processes and biological diversity?	Yes	Competition and displacement.
Soil resources?		
Water quality?		
Human health?		

Social and cultural wellbeing?		
The enjoyment of the recreational value of the natural environment?	Yes	Change to aesthetic values of ecosystems.
The relationship between Māori, their culture, and their traditions and their ancestral lands, waters, sites, wāhi tapu and taonga?	Yes	Change toward natural ecosystems becoming dominated by exotic species.
Animal welfare?		

Eel grass

Risks that each option will not achieve its objective NPD 6(3)

Option	No RPMP	Eradication	Sustained Control
<div style="text-align: center;"> <i>Risk</i> <i>Objective</i> </div>	NA	<i>To reduce the infestation level of the subject to zero levels in an area in the short to medium term.</i>	<i>This programme would provide for ongoing control of the subject, to reduce its impacts on values and spread to other properties</i>
Technical and operation risks.		<p>High</p> <p>Eel Grass is limited in distribution with it only being found in two locations. However, it is an aquatic species that is surface-reaching only when infestations are substantial. The infestations in Marlborough have been intensively managed for a number of years and now rely on good water visibility for the removal of younger, smaller plants. The complete removal of all plants each year very difficult in one of the main sites (Opaoa Loop) given the often poor water clarity.</p> <p>There is a high risk that an objective of eradication will not be achieved in 10 years.</p>	<p>Low</p> <p>Eel grass is limited in distribution. Coupled with current tools and methodologies available, managing infestations down to levels that are sustainable is achievable.</p> <p>Council will be able to maintain and possibly continue to see a decline in numbers of plants over the next 10 years.</p>
The extent to which the option will be		Low	Low

implemented and complied with.		There is a small risk that the control operations may not be carried out at all sites each year.	There is a small risk that the control operations may not be carried out at all sites each year.
The risk that compliance with other legislation will adversely affect implementation of the option.		Low	Low
The risk that public or political concerns will adversely affect implementation of the option.		Low Inclusion in the RPMP provides greater certainty that funding and resources will be made available for the programme. There is a small risk that funding RPMP programmes may change.	Low Inclusion in the RPMP provides greater certainty that funding and resources will be made available for the programme. There is a small risk that funding RPMP programmes may change.
Other material risks.			

Risks that each option will not achieve its objective 6(4)

Eradication: High

The level of risk of not achieving an Eradication objective, within 10 years or even at a longer time scale, is very high. Given the biological nature of eel grass and the poor water clarity the effective removal of all plants parts is very difficult, near to impossible. It is unlikely that this species will be eradicated.

Sustained Control: Low

There is a lower level of risk that Council will be able to maintain a very low density of eel grass in Marlborough

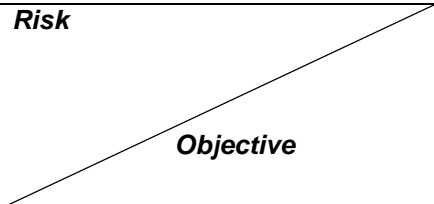
Assessment for section 71(d)

Is eel grass capable of causing an adverse effect on:		Comments:
Economic wellbeing?		
The viability of threatened species or organisms?		
The survival and distribution of indigenous plants or animals?	Yes	Habitat transformation.
The sustainability of natural and developed ecosystems, ecological processes and biological diversity?	Yes	Competition and displacement.

Soil resources?		
Water quality?		
Human health?		
Social and cultural wellbeing?	Yes	
The enjoyment of the recreational value of the natural environment?	Yes	Can form large, surface reaching stands within a water body disrupting recreational activities.
The relationship between Māori, their culture, and their traditions and their ancestral lands, waters, sites, wāhi tapu and taonga?	Yes	Change toward natural ecosystems becoming dominated by exotic species. Affecting freshwater kai gathering.
Animal welfare?		

European larch

Risks that each option will not achieve its objective NPD 6(3)

Option	No RPMP	Sustained control
<div style="text-align: center;"> Risk  Objective </div>	NA	<i>To reduce the infestation level of the subject to zero levels in an area in the short to medium term.</i>
Technical and operation risks.		Low Under the proposed programme, the level of infestation when management is to occur will be very low. Control tools are readily available and effective.
The extent to which the option will be implemented and complied with.		Low There is a small risk that the control operations may not be carried out by land occupiers.
The risk that compliance with other legislation will adversely affect implementation of the option.		Low
The risk that public or political concerns will adversely affect implementation of the option.		Low Inclusion in the RPMP provides greater certainty that the investment by collaborative programmes will be secured in the

		long term.
Other material risks.		

Risks that each option will not achieve its objective 6(4)

Sustained control: Low

Given the sustained control programme would only commence in behind other collaborative initiatives, the starting point will be very low infestation levels. As such, the risk of not keeping areas subject of the programme under sustained control will be low.

Assessment for section 71(d)

Is European larch capable of causing an adverse effect on:		Comments:
Economic wellbeing?	Yes	Can reduce area used for extensive grazing
The viability of threatened species or organisms?	Yes	
The survival and distribution of indigenous plants or animals?	Yes	Habitat transformation.
The sustainability of natural and developed ecosystems, ecological processes and biological diversity?	Yes	Competition and displacement.
Soil resources?		
Water quality?		
Human health?		
Social and cultural wellbeing?		
The enjoyment of the recreational value of the natural environment?	Yes	Change to aesthetic values of ecosystems.
The relationship between Māori, their culture, and their traditions and their ancestral lands, waters, sites, wāhi tapu and taonga?	Yes	Change toward natural ecosystems becoming dominated by exotic species.
Animal welfare?		

Evergreen buckthorn

Risks that each option will not achieve its objective NPD 6(3)

Option	No RPMP	Eradication	Sustained Control
<div> <div>Risk</div> <div>Objective</div> </div>	NA	<i>To reduce the infestation level of the subject to zero levels in an area in the short to medium term.</i>	<i>This programme would provide for ongoing control of the subject, to reduce its impacts on values and spread to other properties</i>
Technical and operation risks.		<p>High</p> <p>Evergreen buckthorn is relatively limited in distribution and the number of plants controlled is declining. However, the very difficult nature in identifying this species amongst the vegetation at some of the sites.</p> <p>As a result, there is a high risk that an objective of eradication will not be achieved in 10 years.</p>	<p>Low</p> <p>Evergreen buckthorn is limited in distribution and the number of plants controlled is declining.</p> <p>By visiting all known active sites each year, and placing the remainder under longer term surveillance, Council (in conjunction with DOC) will be able to maintain and possibly continue to see a decline in numbers of plants over the next 10 years.</p>
The extent to which the option will be implemented and complied with.		<p>Low</p> <p>There is a small risk that the control operations may not be carried out at all sites each year.</p>	<p>Low</p> <p>There is a small risk that the control operations may not be carried out at all sites each year.</p>
The risk that compliance with other legislation will adversely affect implementation of the option.		Low	Low
The risk that public or political concerns will adversely affect implementation of the option.		<p>Low</p> <p>Inclusion in the RPMP provides greater certainty that funding and resources will be made available for the programme. There is a small risk that funding RPMP programmes</p>	<p>Low</p> <p>Inclusion in the RPMP provides greater certainty that funding and resources will be made available for the programme. There is a small risk that funding RPMP programmes</p>

		may change.	may change.
Other material risks.			

Risks that each option will not achieve its objective 6(4)

Eradication: High

The level of risk of not achieving an Eradication objective, within 10 years or even at a longer time scale, is very high. Council and DOC acknowledge that they are unlikely to achieve zero levels in the next ten years (the life of the next Plan). This is mainly because of the difficulty in identifying evergreen buckthorn in amongst native vegetation and difficult terrain. It is believed that the infestations can be suppressed to a point where further dispersal is minimised and there is no increase in population size.

Sustained Control: Low

Assessment for section 71(d)

Is evergreen buckthorn capable of causing an adverse effect on:		Comments:
Economic wellbeing?		
The viability of threatened species or organisms?		
The survival and distribution of indigenous plants or animals?	Yes	Habitat transformation.
The sustainability of natural and developed ecosystems, ecological processes and biological diversity?	Yes	Competition and displacement.
Soil resources?		
Water quality?		
Human health?		
Social and cultural wellbeing?	Yes	Loss of valued natural ecosystems
The enjoyment of the recreational value of the natural environment?	Yes	Change to aesthetic values of ecosystems.
The relationship between Māori, their culture, and their traditions and their ancestral lands, waters, sites, wāhi tapu and taonga?	Yes	Change toward natural ecosystems becoming dominated by exotic species.
Animal welfare?		

Giant needle grass

Risks that each option will not achieve its objective NPD 6(3)

Option	No RPMP	Eradication	Sustained Control
<div> <div>Risk</div> <div>Objective</div> </div>	NA	<i>To reduce the infestation level of the subject to zero levels in an area in the short to medium term.</i>	<i>This programme would provide for ongoing control of the subject, to reduce its impacts on values and spread to other properties</i>
Technical and operation risks.		<p>High</p> <p>Giant Needle Grass is very limited in distribution and the number of plants being controlled is low. However, invasive grasses are notoriously difficult to manage and some of the infestations are in or near forestry operations.</p> <p>As a result, there is a high risk that an objective of eradication will not be achieved in 10 years.</p>	<p>Low</p> <p>Giant Needle Grass is very limited in distribution and the number of plants being controlled is low.</p> <p>By visiting all known active sites each year, and placing the remainder under longer term surveillance, Council will be able to maintain and possibly continue to see a decline in numbers of plants over the next 10 years.</p>
The extent to which the option will be implemented and complied with.		<p>Low</p> <p>There is a small risk that the control operations may not be carried out at all sites each year.</p>	<p>Low</p> <p>There is a small risk that the control operations may not be carried out at all sites each year.</p>
The risk that compliance with other legislation will adversely affect implementation of the option.		Low	Low
The risk that public or political concerns will adversely affect implementation of the option.		<p>Low</p> <p>Inclusion in the RPMP provides greater certainty that funding and resources will be made available for the programme. There is a small risk that funding RPMP programmes</p>	<p>Low</p> <p>Inclusion in the RPMP provides greater certainty that funding and resources will be made available for the programme. There is a small risk that funding RPMP programmes</p>

		may change.	may change.
Other material risks.			

Risks that each option will not achieve its objective 6(4)

Eradication: High

Giant Needle Grass is very limited in distribution and the number of plants being controlled is low. However, invasive grasses are notoriously difficult to manage and some of the infestations are in or near forestry operations.

Sustained Control: Low

Assessment for section 71(d)

Is Giant needle grass capable of causing an adverse effect on:		Comments:
Economic wellbeing?	Yes	Through pasture competition
The viability of threatened species or organisms?		
The survival and distribution of indigenous plants or animals?	Yes	Habitat transformation.
The sustainability of natural and developed ecosystems, ecological processes and biological diversity?	Yes	Competition and displacement.
Soil resources?		
Water quality?		
Human health?		
Social and cultural wellbeing?		
The enjoyment of the recreational value of the natural environment?	Yes	Attachment of sharp seeds to clothing
The relationship between Māori, their culture, and their traditions and their ancestral lands, waters, sites, wāhi tapu and taonga?		
Animal welfare?	Yes	Seed penetration of animal pelts

Gorse

Risks that each option will not achieve its objective NPD 6(3)

Option	No RPMP	Combination of different programme outcomes and objectives	Combination of different programme outcomes and objectives	Sustained Control – with control zones and containment area mapped
<div> <div>Risk</div> <div>Objective</div> </div>	NA	<p>4. Waima/Ure Exclusion</p> <p><i>To prevent the establishment of the subject that is present in New Zealand but not yet established in an area.</i></p> <p>5. Control zones – Eradication</p> <p><i>To reduce the infestation level of the subject to zero levels in an area in the short to medium term.</i></p> <p>6. Rest of District – Sustained</p>	<p>3. Waima/Ure Exclusion</p> <p><i>To prevent the establishment of the subject that is present in New Zealand but not yet established in an area.</i></p> <p>4. Control zones and Rest of District – Sustained Control</p> <p><i>This programme would provide for ongoing control of the subject, to reduce its impacts on values and spread to other properties</i></p>	<p>Single Sustained Control Programme with multiple objectives and use of control zones and Rule wording to differentiate components.</p> <p><i>This programme would provide for ongoing control of the subject.</i></p>
Technical and operation risks.		<p>High</p> <p>Due to the established nature of gorse in Marlborough, including in the proposed Control Zone areas, the risk of not eradicating gorse within the Zones would be very high.</p>	<p>High</p> <p>Due to the established nature of gorse in Marlborough, the risk of gorse becoming established in a particular Zone such as the Waima/Ure, or already established but not yet known of (be it in small amounts) is very high.</p>	<p>Low</p> <p>Within ongoing and persistent management, as many land occupiers already carry out within the Control Zones, there is a very low risk of not achieving a sustained Control objective. In most instances, the level of control will far exceed that required to ensure the populations are not expanding, and this will be encouraged.</p>
The extent to which the option will be implemented and		Low	Low	Low

complied with.				
The risk that compliance with other legislation will adversely affect implementation of the option.		Low	Low	Low
The risk that public or political concerns will adversely affect implementation of the option.		Low	Low	Low
Other material risks.				

Risks that each option will not achieve its objective 6(4)

Combination (1): High

Combination (2): High

Single Sustained Control: Low

Assessment for section 71(d)

Is gorse capable of causing an adverse effect on:		Comments:
Economic wellbeing?	Yes	Through pasture competition
The viability of threatened species or organisms?		
The survival and distribution of indigenous plants or animals?	Yes	Habitat transformation.
The sustainability of natural and developed ecosystems, ecological processes and biological diversity?	Yes	Competition and displacement.
Soil resources?		
Water quality?		
Human health?		
Social and cultural wellbeing?	Yes	Loss of valued natural ecosystems
The enjoyment of the recreational value of the natural environment?	Yes	Change to aesthetic values of ecosystems.
The relationship between Māori, their culture, and their traditions and their ancestral lands, waters, sites, wāhi tapu	Yes	Change toward natural ecosystems becoming dominated by exotic species.

and taonga?		
Animal welfare?		

Analysis for a Good Neighbour Rule under clause 8 of the NPD

Proposed pest	Gorse
Proposed Good Neighbour Rule Rule 7.18.2.3 (Good Neighbour Rule) Occupiers shall destroy all gorse (<i>Ulex europaeus</i>) plants, on land they occupy, within 10 metres of their property boundary each year before they produce seed, where: <p>c) the gorse occurs continuously along a stretch of boundary greater than 50m in length, and;</p> <p>d) the adjoining land is clear of, or under management for gorse and the land is being used for agricultural production purposes.</p>	
Criteria (paraphrased from National Policy Direction)	Assessment
<p>In the absence of the rule, the pest would spread to land that is adjacent or nearby within the life of the plan and would cause unreasonable costs to an occupier of that land. Taking into account:</p> <ol style="list-style-type: none"> The proximity and characteristics of the adjacent or nearby land, and; The biological characteristics and behaviour of the particular pest. 	<p>The proposed rule outlines that it only applies to situations where the adjoining land is being used for agricultural production purposes. The spread of gorse would only cause unreasonable costs over the life of the proposed plan where the land being affected is used for agricultural purposes. I.e. additional costs of control and/or loss of production.</p> <p>Biologically, gorse is known to spread (be it at a slower rate than the likes of broom) via the dispersal of seed to the area immediately surrounding the parent plant. Hill et. al (1996)² noted this ballistic distance is the primary disperser of seed and is predominantly released <5m.</p> <p>As such, the proposed good neighbour rule relates to clearing a 10m area on the source side of the boundary. This larger buffer ensures an adequate and practical zone is cleared to ensure seed is not directly dispersed by plants across boundaries.</p>
The occupier of the land that is adjacent or nearby, is taking reasonable measures to manage the pest or its impacts	As part of the proposed rule, the occupier of adjoining land must be either clear of gorse or ensuring gorse is being managed.
<p>The rule does not set a requirement on an occupier that is greater than that required to manage the spread of the pest to adjacent or nearby land. Taking into account:</p> <ol style="list-style-type: none"> The biological characteristics and behaviour 	<p>The inclusion of a rule clause that specifies a minimum stretch of boundary has been done so to ensure the costs of compliance are reasonable. Situations where there are small numbers of plants, on small sections of boundary would see the costs of compliance (Council inspection costs and control</p>

² Hill RH, Gourlay AH, Lee WG, Wilson JB 1996. Dispersal of seeds under isolated gorse plants and the impact of seed feeding insects. Proceedings of the 49th New Zealand Plant Protection Conference: 114–118.

<p>of the particular pest.</p> <p>ii. Whether the costs of compliance with the rule are reasonable relative to the costs that such an occupier would incur, from the pest spreading, in the absence of a rule.</p>	<p>costs) would far outweigh the actions of the adjoining occupier managing spill over effects (if any).</p>
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Kangaroo grass

Risks that each option will not achieve its objective NPD 6(3)

Option	No RPMP	Eradication	Sustained Control
<div> <div>Risk</div> <div>Objective</div> </div>	NA	<i>To reduce the infestation level of the subject to zero levels in an area in the short to medium term.</i>	<i>This programme would provide for ongoing control of the subject, to reduce its impacts on values and spread to other properties</i>
Technical and operation risks.		High Effective control tools to get infestation to zero levels in the short to medium term are not currently available for kangaroo grass. While the use of current herbicide and other farming practises can reduce infestation densities, there is a high risk that getting o zero levels would not be achieved.	Low The control tools that are available to manage kangaroo grass are effective in keeping infestations 'in check'. This allows for ongoing control at levels that reduce real and future impacts.
The extent to which the option will be implemented and complied with.		High The current estimated cost implications for occupiers may result in a high degree of risk that the option would not be complied with.	Low Sustained control is similar to status quo with which compliance is not a major risk.
The risk that compliance with other legislation will adversely affect implementation of the option.		Low There are some feelings within the	Low
The risk that public or political concerns will adversely affect implementation of the		Med There are some feelings within the	Low

option.		community that this species can be a beneficial species to graze. This sentiment is a minority component of the community but nonetheless present and must be taken into account.	
Other material risks.			

Risks that each option will not achieve its objective 6(4)

Eradication: High

Sustained Control: Low

Assessment for section 71(d)

Is kangaroo grass capable of causing an adverse effect on:		Comments:
Economic wellbeing?	Yes	Through pasture competition
The viability of threatened species or organisms?		
The survival and distribution of indigenous plants or animals?		
The sustainability of natural and developed ecosystems, ecological processes and biological diversity?		
Soil resources?		
Water quality?		
Human health?		
Social and cultural wellbeing?		
The enjoyment of the recreational value of the natural environment?		
The relationship between Māori, their culture, and their traditions and their ancestral lands, waters, sites, wāhi tapu and taonga?		
Animal welfare?		

Madeira vine

Risks that each option will not achieve its objective NPD 6(3)

Option	No RPMP	Eradication	Sustained Control
<div> <div>Risk</div> <div>Objective</div> </div>	NA	<i>To reduce the infestation level of the subject to zero levels in an area in the short to medium term.</i>	<i>This programme would provide for ongoing control of the subject, to reduce its impacts on values and spread to other properties</i>
Technical and operation risks.		<p>High</p> <p>Madeira Vine is very limited in distribution and the number of plants controlled remains low. However, the way in which the plant reproduces (tubers) and the difficult nature of complete removal in urban environments means there is high operational risks.</p> <p>As a result, there is a high risk that an objective of eradication will not be achieved in 10 years.</p>	<p>Low</p> <p>Madeira Vine is very limited in distribution and the number of plants controlled remains low.</p> <p>By visiting all known active sites each year, and placing the remainder under longer term surveillance, Council (in conjunction with DOC) will be able to maintain and possibly continue to see a decline in numbers of plants over the next 10 years.</p>
The extent to which the option will be implemented and complied with.		<p>Low</p> <p>There is a small risk that the control operations may not be carried out at all sites each year.</p>	<p>Low</p> <p>There is a small risk that the control operations may not be carried out at all sites each year.</p>
The risk that compliance with other legislation will adversely affect implementation of the option.		<p>Low</p>	<p>Low</p>
The risk that public or political concerns will adversely affect implementation of the option.		<p>Low</p> <p>Inclusion in the RPMP provides greater certainty that funding and resources will be made available for the programme. There is a small risk that funding</p>	<p>Low</p> <p>Inclusion in the RPMP provides greater certainty that funding and resources will be made available for the programme. There is a small risk that funding</p>

		RPMP programmes may change.	RPMP programmes may change.
Other material risks.			

Risks that each option will not achieve its objective 6(4)

Eradication: High

The level of risk of not achieving an Eradication objective, within 10 years or even at a longer time scale, is very high

Sustained Control: Low

A sustained control programme is the most appropriate programme. The operational aspects of the programme will not change in that an attempt will be made each year to control as much of the infestation as is possible.

Assessment for section 71(d)

Is madeira vine capable of causing an adverse effect on:		Comments:
Economic wellbeing?		
The viability of threatened species or organisms?		
The survival and distribution of indigenous plants or animals?	Yes	Habitat transformation.
The sustainability of natural and developed ecosystems, ecological processes and biological diversity?	Yes	Competition and displacement.
Soil resources?		
Water quality?		
Human health?		
Social and cultural wellbeing?	Yes	Loss of valued natural ecosystems
The enjoyment of the recreational value of the natural environment?	Yes	Change to aesthetic values of ecosystems.
The relationship between Māori, their culture, and their traditions and their ancestral lands, waters, sites, wāhi tapu and taonga?	Yes	Change toward natural ecosystems becoming dominated by exotic species.
Animal welfare?		

Mediterranean fanworm

Risks that each option will not achieve its objective NPD 6(3)

Option	No RPMP	Exclusion
<div style="text-align: center;"> <i>Risk</i> </div> <div style="text-align: center;"> <i>Objective</i> </div>	NA	<i>To prevent the establishment of the subject that is present in New Zealand but not yet established in an area.</i>
Technical and operation risks.		<p>Medium</p> <p>Marine pests do have an element of being difficult to detect. For example all surveillance activities are carried out by divers in the marine environment. This leads to an increased risk of false negatives.</p> <p>There is a medium risk that an objective of exclusion will not be achieved in 10 years.</p>
The extent to which the option will be implemented and complied with.		<p>Low-Medium</p> <p>The Marlborough Sounds is an extensive water body. It is not feasible to carry out surveillance or implement associated compliance activities throughout the entire water body. The level of compliance is expected to be high but will hinge largely on effective communication strategies.</p> <p>There is a low-medium risk of implementation and medium risk of the option being complied with.</p>
The risk that compliance with other legislation will adversely affect implementation of the option.		Low
The risk that public or political concerns will adversely affect implementation of the option.		<p>Medium</p> <p>The marine environment in Marlborough is a very complex environment both naturally and politically. The Exclusion option is ambitious and would result in a much greater presence of Council in a regulatory capacity. This may be seen to erode some of the sense of 'open seas' many users</p>

		enjoy.
Other material risks.		

Risks that each option will not achieve its objective 6(4)

Exclusion: Medium

The level of risk of not achieving an Exclusion objective over the life of the Plan has been assessed as being medium.

There are substantial infestations of Mediterranean fanworm in other parts of New Zealand. This is already creating pressure on Marlborough through the arrival of vessels with bio-fouling containing Mediterranean fanworm. There has also been the detection of a small number of animals in Picton Marina.

If the active response in Picton Marina cannot eliminate that population, there is a risk of Mediterranean fanworm becoming established in Picton Marina. Second to that, if vessels continue to arrive carrying bio-fouling into Marlborough, there is a risk of that bio-fouling containing Mediterranean fanworm which could be a source of establishment.

Assessment for section 71(d)

Is Mediterranean fanworm capable of causing an adverse effect on:		Comments:
Economic wellbeing?	Yes	There is approximately 3000 of mussel farming in the Marlborough Coastal Marine Zone. There are no known reports of Mediterranean fanworm on these mussel farms so all of these are at risk of becoming affected.
The viability of threatened species or organisms?		
The survival and distribution of indigenous plants or animals?		
The sustainability of natural and developed ecosystems, ecological processes and biological diversity?	Yes	Through recent surveying of marine ecosystems, there have been remnant sites of significant
Soil resources?		
Water quality?		
Human health?		
Social and cultural wellbeing?	Yes	
The enjoyment of the recreational value of the natural environment?	Yes	
The relationship between Māori, their culture, and their traditions and their ancestral lands, waters, sites, wāhi tapu and taonga?	Yes	

Animal welfare?		
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Moth plant

Risks that each option will not achieve its objective NPD 6(3)

Option	No RPMP	Eradication	Sustained Control
<div style="text-align: center;"> <i>Risk</i> / <i>Objective</i> </div>	NA	<i>To reduce the infestation level of the subject to zero levels in an area in the short to medium term.</i>	<i>This programme would provide for ongoing control of the subject, to reduce its impacts on values and spread to other properties</i>
Technical and operation risks.		<p>High</p> <p>Moth Plant is limited in distribution and ongoing management has shown reductions in the number of plants controlled. However, the way in which the plant reproduces (wind borne seed) and the difficult nature of complete removal in urban environments means there is high operational risks.</p> <p>As a result, there is a high risk that an objective of eradication will not be achieved in 10 years.</p>	<p>Low</p> <p>Moth Plant is limited in distribution and ongoing management has shown reductions in the number of plants controlled.</p> <p>By visiting all known active sites each year, and placing the remainder under longer term surveillance, Council will be able to maintain and possibly continue to see a decline in numbers of plants over the next 10 years.</p>
The extent to which the option will be implemented and complied with.		<p>Low</p> <p>There is a small risk that the control operations may not be carried out at all sites each year.</p>	<p>Low</p> <p>There is a small risk that the control operations may not be carried out at all sites each year.</p>
The risk that compliance with other legislation will adversely affect implementation of the option.		Low	Low
The risk that public or political concerns will adversely affect implementation of the		<p>Low</p> <p>Inclusion in the RPMP provides greater</p>	<p>Low</p> <p>Inclusion in the RPMP provides greater</p>

option.		certainty that funding and resources will be made available for the programme. There is a small risk that funding RPMP programmes may change.	certainty that funding and resources will be made available for the programme. There is a small risk that funding RPMP programmes may change.
Other material risks.			

Risks that each option will not achieve its objective 6(4)

Eradication: High

The level of risk of not achieving an Eradication objective, within 10 years or even at a longer time scale, is very high. While there has been a dramatic increase in the number of sites in recent years, this reflects the emphasis Council staff has placed on surveillance. The number of plants being controlled is decreasing but the volume of plants being found remains relatively high.

There is still a long way to go for this species to reach zero levels in Marlborough in accordance with the original objective of eradication.

Sustained Control: Low

A sustained control programme is the most appropriate programme. It is proposed to manage Moth Plant under a Sustained Control Programme with the ability to reassess progress over time.

Assessment for section 71(d)

Is moth plant capable of causing an adverse effect on:		Comments:
Economic wellbeing?		
The viability of threatened species or organisms?		
The survival and distribution of indigenous plants or animals?	Yes	Habitat transformation.
The sustainability of natural and developed ecosystems, ecological processes and biological diversity?	Yes	Competition and displacement.
Soil resources?		
Water quality?		
Human health?		
Social and cultural wellbeing?	Yes	Loss of valued natural ecosystems
The enjoyment of the recreational value of the natural environment?	Yes	Change to aesthetic values of ecosystems.

The relationship between Māori, their culture, and their traditions and their ancestral lands, waters, sites, wāhi tapu and taonga?	Yes	Change toward natural ecosystems becoming dominated by exotic species.
Animal welfare?		

Mountain pine

Risks that each option will not achieve its objective NPD 6(3)

Option	No RPMP	Sustained control
<div style="text-align: center;"> <i>Risk</i> / <i>Objective</i> </div>	NA	<i>To reduce the infestation level of the subject to zero levels in an area in the short to medium term.</i>
Technical and operation risks.		Low Under the proposed programme, the level of infestation when management is to occur will be very low. Control tools are readily available and effective.
The extent to which the option will be implemented and complied with.		Low There is a small risk that the control operations may not be carried out by land occupiers.
The risk that compliance with other legislation will adversely affect implementation of the option.		Low
The risk that public or political concerns will adversely affect implementation of the option.		Low Inclusion in the RPMP provides greater certainty that the investment by collaborative programmes will be secured in the long term.
Other material risks.		

Risks that each option will not achieve its objective 6(4)

Sustained control: Low

Given the sustained control programme would only commence in behind other collaborative initiatives, the starting point will be very low infestation levels. As such, the risk of not keeping areas subject of the programme under sustained control will be low.

Assessment for section 71(d)

Is mountain pine capable of causing an adverse effect on:		Comments:
Economic wellbeing?	Yes	Can reduce area used for extensive grazing
The viability of threatened species or organisms?	Yes	
The survival and distribution of indigenous plants or animals?	Yes	Habitat transformation.
The sustainability of natural and developed ecosystems, ecological processes and biological diversity?	Yes	Competition and displacement.
Soil resources?		
Water quality?		
Human health?		
Social and cultural wellbeing?		
The enjoyment of the recreational value of the natural environment?	Yes	Change to aesthetic values of ecosystems.
The relationship between Māori, their culture, and their traditions and their ancestral lands, waters, sites, wāhi tapu and taonga?	Yes	Change toward natural ecosystems becoming dominated by exotic species.
Animal welfare?		

Nassella tussock

Risks that each option will not achieve its objective NPD 6(3)

Option	No RPMP	Sustained Control
<div style="display: flex; justify-content: space-between;"> <div style="width: 40%;"> Risk </div> <div style="width: 60%;"> Objective </div> </div>	NA	<i>This programme would provide for ongoing control of the subject, to reduce its impacts on values and spread to other properties</i>
Technical and operation risks.		Low The control tools that are available to manage nassella tussock are effective in keeping infestations 'in check'. This allows for ongoing control at levels that reduce real

		and future impacts.
The extent to which the option will be implemented and complied with.		Low Sustained control is similar to status quo with which compliance is not a major risk.
The risk that compliance with other legislation will adversely affect implementation of the option.		Low
The risk that public or political concerns will adversely affect implementation of the option.		Low
Other material risks.		

Risks that each option will not achieve its objective 6(4)

Sustained Control: Low

Assessment for section 71(d)

Is nassella tussock capable of causing an adverse effect on:		Comments:
Economic wellbeing?	Yes	Through pasture competition
The viability of threatened species or organisms?		
The survival and distribution of indigenous plants or animals?		
The sustainability of natural and developed ecosystems, ecological processes and biological diversity?		
Soil resources?		
Water quality?		
Human health?		
Social and cultural wellbeing?		
The enjoyment of the recreational value of the natural environment?		
The relationship between Māori, their culture, and their traditions and their ancestral lands, waters, sites, wāhi tapu and taonga?		

Animal welfare?		
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Parrots feather

Risks that each option will not achieve its objective NPD 6(3)

Option	No RPMP	Eradication	Sustained Control
<div style="text-align: center;"> <i>Risk</i> <i>Objective</i> </div>	NA	<i>To reduce the infestation level of the subject to zero levels in an area in the short to medium term.</i>	<i>This programme would provide for ongoing control of the subject, to reduce its impacts on values and spread to other properties</i>
Technical and operation risks.		<p>High</p> <p>Parrot's Feather is very limited in distribution and ongoing management has shown reductions in the number of plants controlled. However, being aquatic and semi-submerged in nature, complete removal from a watercourse is operationally very difficult.</p> <p>As a result, there is a high risk that an objective of eradication will not be achieved in 10 years.</p>	<p>Low</p> <p>Parrot's Feather is very limited in distribution and ongoing management has shown reductions in the number of plants controlled</p> <p>By visiting all known active sites each year, and placing the remainder under longer term surveillance, Council will be able to maintain and possibly continue to see a decline in numbers of plants over the next 10 years.</p>
The extent to which the option will be implemented and complied with.		<p>Low</p> <p>There is a small risk that the control operations may not be carried out at all sites each year.</p>	<p>Low</p> <p>There is a small risk that the control operations may not be carried out at all sites each year.</p>
The risk that compliance with other legislation will adversely affect implementation of the option.		Low	Low
The risk that public or political concerns will adversely affect implementation of the		<p>Low</p> <p>Inclusion in the RPMP provides greater certainty that funding</p>	<p>Low</p> <p>Inclusion in the RPMP provides greater certainty that funding</p>

option.		and resources will be made available for the programme. There is a small risk that funding RPMP programmes may change.	and resources will be made available for the programme.
Other material risks.			

Risks that each option will not achieve its objective 6(4)

Eradication: High

The level of risk of not achieving an Eradication objective, within 10 years or even at a longer time scale, is very high.

Sustained Control: Low

There is a lower level of risk that Council will be able to maintain a very low density of parrots feather in Marlborough

Assessment for section 71(d)

Is parrots feather plant capable of causing an adverse effect on:		Comments:
Economic wellbeing?	Yes	
The viability of threatened species or organisms?	Yes	
The survival and distribution of indigenous plants or animals?	Yes	
The sustainability of natural and developed ecosystems, ecological processes and biological diversity?	Yes	
Soil resources?		
Water quality?		
Human health?		
Social and cultural wellbeing?	Yes	
The enjoyment of the recreational value of the natural environment?	Yes	
The relationship between Māori, their culture, and their traditions and their ancestral lands, waters, sites, wāhi tapu and taonga?	Yes	
Animal welfare?		

Purple loosestrife

Risks that each option will not achieve its objective NPD 6(3)

Option	No RPMP	Eradication	Sustained Control
<div> <div>Risk</div> <div>Objective</div> </div>	NA	<i>To reduce the infestation level of the subject to zero levels in an area in the short to medium term.</i>	<i>This programme would provide for ongoing control of the subject, to reduce its impacts on values and spread to other properties</i>
Technical and operation risks.		<p>High</p> <p>Purple Loosestrife is very limited in distribution. Council will continue to visit the sites where plants continue to be found, undertake control, and search surrounding areas.</p> <p>However, the seed of this plant is very long-lived. It is evident the plant is very persistent in an area and could still be being cultivated. This results in high risk that control to zero density would not be achieved.</p>	<p>Low</p> <p>Purple Loosestrife is very limited in distribution. Council will continue to visit the sites where plants continue to be found, undertake control, and search surrounding areas.</p> <p>By visiting all known active sites each year, and placing the remainder under longer term surveillance, Council will be able to maintain and possibly continue to see a decline in numbers of plants over the next 10 years.</p>
The extent to which the option will be implemented and complied with.		<p>Low</p> <p>There is a small risk that the control operations may not be carried out at all sites each year.</p>	<p>Low</p> <p>There is a small risk that the control operations may not be carried out at all sites each year.</p>
The risk that compliance with other legislation will adversely affect implementation of the option.		<p>Low</p>	<p>Low</p>
The risk that public or political concerns will adversely affect implementation of the option.		<p>Low</p> <p>Inclusion in the RPMP provides greater certainty that funding and resources will be made available for the programme. There is a small risk that funding RPMP programmes may</p>	<p>Low</p> <p>Inclusion in the RPMP provides greater certainty that funding and resources will be made available for the programme. There is a small risk that funding RPMP programmes may</p>

		change.	change.
Other material risks.			

Risks that each option will not achieve its objective 6(4)

Eradication: High

A management programme would be relatively straight forward due to the plant not being widespread and mainly confined to urban areas. However, there are two sites where the plant has been found in natural environments. There is also an ongoing risk that Purple Loosestrife will be traded as an ornamental plant.

The species will need ongoing exposure within the gardening community as a high risk species and one that is banned from sale and propagation.

Sustained Control: Low

Assessment for section 71(d)

Is purple loosestrife capable of causing an adverse effect on:		Comments:
Economic wellbeing?		
The viability of threatened species or organisms?		
The survival and distribution of indigenous plants or animals?	Yes	Habitat transformation, specifically in wetland environment.
The sustainability of natural and developed ecosystems, ecological processes and biological diversity?	Yes	Competition and displacement.
Soil resources?		
Water quality?		
Human health?		
Social and cultural wellbeing?	Yes	Loss of valued natural ecosystems
The enjoyment of the recreational value of the natural environment?	Yes	Change to aesthetic values of ecosystems.
The relationship between Māori, their culture, and their traditions and their ancestral lands, waters, sites, wāhi tapu and taonga?	Yes	Change toward natural ecosystems becoming dominated by exotic species.
Animal welfare?		

Rabbits

Risks that each option will not achieve its objective NPD 6(3)

Option	No RPMP	Sustained Control
<div style="display: flex; justify-content: space-between;"> <div><i>Risk</i></div> <div><i>Objective</i></div> </div>	NA	<i>This programme would provide for ongoing control of the subject, to reduce its impacts on values and spread to other properties</i>
Technical and operational risks.		Low There are adequate control controls available to effectively management rabbit populations
The extent to which the option will be implemented and complied with.		Low – Medium Occupiers will, in most instances, comply with obligations through pest management practises as part of their farming business plan. However, if rabbit population build to high levels, the cost of control may mean some degree of risks to compliance.
The risk that compliance with other legislation will adversely affect implementation of the option.		Low
The risk that public or political concerns will adversely affect implementation of the option.		Low- Medium Some control tools can be perceived by the community at large as being inhumane (e.g use of toxins) or do not support the approach (e.g use of new RHDC virus strains).
Other material risks.		

Risks that each option will not achieve its objective 6(4)

Sustained Control: Low – Medium

Assessment for section 71(d)

Are rabbits capable of causing an adverse effect on:		Comments:
Economic wellbeing?	Yes	Through increased competitive grazing pressure in pastoral systems, direct damage to crops and newly planted forestry species.
The viability of threatened species or		

organisms?		
The survival and distribution of indigenous plants or animals?		
The sustainability of natural and developed ecosystems, ecological processes and biological diversity?		
Soil resources?	Yes	At higher population levels, a combination of extreme grazing pressure and mechanical burrowing, there becomes bare ground exposed to the erosive action of wind and rain.
Water quality?		
Human health?		
Social and cultural wellbeing?		
The enjoyment of the recreational value of the natural environment?	Yes	In areas where high rabbits numbers cross with recreational activities e.g hiking/mountain biking, the change in landform and vegetation type can cause an adverse effect on the recreational experience.
The relationship between Māori, their culture, and their traditions and their ancestral lands, waters, sites, wāhi tapu and taonga?		
Animal welfare?		

Reed sweet grass

Risks that each option will not achieve its objective NPD 6(3)

Option	No RPMP	Sustained Control
<div style="display: flex; justify-content: space-between;"> <div style="width: 40%;"> Risk </div> <div style="width: 60%;"> Objective </div> </div>	NA	<i>This programme would provide for ongoing control of the subject, to reduce its impacts on values and spread to other properties</i>
Technical and operation risks.		<p>Low</p> <p>Reed sweet grass is very limited in distribution and ongoing management has shown the population can be kept under control.</p> <p>By visiting all known active sites each year, and placing the remainder under longer term surveillance, Council will be able to maintain and possibly continue to see a decline in numbers</p>

		of plants over the next 10 years.
The extent to which the option will be implemented and complied with.		Low There is a small risk that the control operations may not be carried out at all sites each year.
The risk that compliance with other legislation will adversely affect implementation of the option.		Low
The risk that public or political concerns will adversely affect implementation of the option.		Low Inclusion in the RPMP provides greater certainty that funding and resources will be made available for the programme.
Other material risks.		

Risks that each option will not achieve its objective 6(4)

Eradication: High

The level of risk of not achieving an Eradication objective, within 10 years or even at a longer time scale, is very high.

Sustained Control: Low

Assessment for section 71(d)

Is reed sweet grass capable of causing an adverse effect on:		Comments:
Economic wellbeing?	Yes	
The viability of threatened species or organisms?	Yes	
The survival and distribution of indigenous plants or animals?	Yes	
The sustainability of natural and developed ecosystems, ecological processes and biological diversity?	Yes	
Soil resources?		
Water quality?		
Human health?		
Social and cultural wellbeing?	Yes	
The enjoyment of the recreational value of the natural environment?	Yes	

The relationship between Māori, their culture, and their traditions and their ancestral lands, waters, sites, wāhi tapu and taonga?	Yes	
Animal welfare?		

Rooks

Risks that each option will not achieve its objective NPD 6(3)

Option	No RPMP	Exclusion
<div style="text-align: center;"> Risk <hr/> Objective </div>	NA	<i>To prevent the establishment of the subject that is present in New Zealand but not yet established in an area.</i>
Technical and operation risks.		Low Rooks are large, black birds with a very loud, distinctive call. Birds should not go un-noticed with an adequate awareness programme in the District. Control tools and techniques are available to prevent establishment.
The extent to which the option will be implemented and complied with.		Low
The risk that compliance with other legislation will adversely affect implementation of the option.		Low
The risk that public or political concerns will adversely affect implementation of the option.		Low
Other material risks.		

Risks that each option will not achieve its objective 6(4)

Exclusion: Low

Assessment for section 71(d)

Are rooks capable of causing an adverse effect on:	Comments:	
Economic wellbeing?	Yes	Direct destruction of crops sown for forage, arable or vegetable production.

The viability of threatened species or organisms?		
The survival and distribution of indigenous plants or animals?		
The sustainability of natural and developed ecosystems, ecological processes and biological diversity?		
Soil resources?		
Water quality?		
Human health?		
Social and cultural wellbeing?		
The enjoyment of the recreational value of the natural environment?		
The relationship between Māori, their culture, and their traditions and their ancestral lands, waters, sites, wāhi tapu and taonga?		
Animal welfare?		

Rough horsetail

Risks that each option will not achieve its objective NPD 6(3)

Option	No RPMP	Eradication	Sustained Control
<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;">Risk</div> <div style="width: 45%;">Objective</div> </div>	NA	<i>To reduce the infestation level of the subject to zero levels in an area in the short to medium term.</i>	<i>This programme would provide for ongoing control of the subject, to reduce its impacts on values and spread to other properties</i>
Technical and operation risks.		<p>While there have been a small number of relatively small infestations of rough Horsetail identified in Marlborough, the full extent of this plant is likely yet to be determined.</p> <p>Because of the underground root systems, effectively removing it from an area will be technically</p>	<p>While there have been a small number of relatively small infestations of rough Horsetail identified in Marlborough, the full extent of this plant is likely yet to be determined. However, through awareness campaigns, preparations can be made to place any new sites under management and</p>

		very challenging. This results in high risk that control to zero density would not be achieved.	prevent them growing and/or expanding. By visiting all known active sites each year, and placing the remainder under longer term surveillance, Council will be able to maintain and possibly continue to see a decline in numbers of plants over the next 10 years.
The extent to which the option will be implemented and complied with.		Low There is a small risk that the control operations may not be carried out at all sites each year.	Low There is a small risk that the control operations may not be carried out at all sites each year.
The risk that compliance with other legislation will adversely affect implementation of the option.		Low	Low
The risk that public or political concerns will adversely affect implementation of the option.		Low Inclusion in the RPMP provides greater certainty that funding and resources will be made available for the programme. There is a small risk that funding RPMP programmes may change.	Low Inclusion in the RPMP provides greater certainty that funding and resources will be made available for the programme. There is a small risk that funding RPMP programmes may change.
Other material risks.		Low There is a small risk that the control operations may not be carried out at all sites each year.	Low There is a small risk that the control operations may not be carried out at all sites each year.

Risks that each option will not achieve its objective 6(4)

Eradication: High

Sustained Control: Low

Assessment for section 71(d)

Is Rough Horsetail capable of causing an	Comments:
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adverse effect on:		
Economic wellbeing?		
The viability of threatened species or organisms?		
The survival and distribution of indigenous plants or animals?	Yes	Habitat transformation.
The sustainability of natural and developed ecosystems, ecological processes and biological diversity?	Yes	Competition and displacement.
Soil resources?		
Water quality?		
Human health?		
Social and cultural wellbeing?	Yes	
The enjoyment of the recreational value of the natural environment?	Yes	Can form large, dominant stands on the edges of water bodies.
The relationship between Māori, their culture, and their traditions and their ancestral lands, waters, sites, wāhi tapu and taonga?	Yes	Change toward natural ecosystems becoming dominated by exotic species. Affecting freshwater kai gathering.
Animal welfare?		

Saffron thistle

Risks that each option will not achieve its objective NPD 6(3)

Option	No RPMP	Eradication	Sustained Control
<div> <div>Risk</div> <div>Objective</div> </div>	NA	<i>To reduce the infestation level of the subject to zero levels in an area in the short to medium term.</i>	<i>This programme would provide for ongoing control of the subject, to reduce its impacts on values and spread to other properties</i>
Technical and operation risks.		High Saffron thistle is limited in distribution but the information available for one of the key sites is or relatively poor quality. Council will continue to visit all sites where plants continue	Low Saffron thistle is limited in distribution. Council will continue to visit all sites where plants continue to be found and undertake control and search surrounding areas. In some

		<p>to be found and undertake control and search surrounding areas. In some instances, this is carried out in conjunction with the land occupier.</p> <p>Because of the long-lived nature of cotton thistle seed, there is a high risk that an objective of eradication will not be achieved in 10 years.</p>	<p>instances, this is carried out in conjunction with the land occupier.</p> <p>By visiting all known active sites each year, and placing the remainder under longer term surveillance, Council will be able to maintain and possibly continue to see a decline in numbers of plants over the next 10 years.</p>
The extent to which the option will be implemented and complied with.		<p>Low</p> <p>There is a small risk that the control operations may not be carried out at all sites each year.</p>	<p>Low</p> <p>There is a small risk that the control operations may not be carried out at all sites each year.</p>
The risk that compliance with other legislation will adversely affect implementation of the option.		<p>Low</p>	<p>Low</p>
The risk that public or political concerns will adversely affect implementation of the option.		<p>Low</p> <p>Inclusion in the RPMP provides greater certainty that funding and resources will be made available for the programme. There is a small risk that funding RPMP programmes may change.</p>	<p>Low</p> <p>Inclusion in the RPMP provides greater certainty that funding and resources will be made available for the programme. There is a small risk that funding RPMP programmes may change.</p>
Other material risks.			

Risks that each option will not achieve its objective 6(4)

Eradication: High

The level of risk of not achieving an Eradication objective, within 10 years or even at a longer time scale, is very high.

Sustained Control: Low

There is a lower level of risk that Council will be able to maintain a very low density of saffron thistle in Marlborough With a robust system in place, and with saffron thistle continuing to be of limited distribution, the number of plants controlled continues to decline. However, based on the number of active sites and the volume of plants still being controlled each year, it is proposed to manage saffron thistle under a Sustained Control Programme.

Assessment for section 71(d)

Is saffron thistle plant capable of causing an adverse effect on:		Comments:
Economic wellbeing?	Yes	
The viability of threatened species or organisms?		
The survival and distribution of indigenous plants or animals?		
The sustainability of natural and developed ecosystems, ecological processes and biological diversity?		
Soil resources?		
Water quality?		
Human health?		
Social and cultural wellbeing?		
The enjoyment of the recreational value of the natural environment?	Yes	
The relationship between Māori, their culture, and their traditions and their ancestral lands, waters, sites, wāhi tapu and taonga?		
Animal welfare?	Yes	

Scots pine

Risks that each option will not achieve its objective NPD 6(3)

Option	No RPMP	Sustained control
<div style="display: flex; justify-content: space-between;"> <div style="width: 40%;"> Risk </div> <div style="width: 60%;"> Objective </div> </div>	NA	<i>To reduce the infestation level of the subject to zero levels in an area in the short to medium term.</i>
Technical and operation risks.		Low Under the proposed programme, the level of infestation when management is to occur will be very low. Control tools are readily available and effective.

The extent to which the option will be implemented and complied with.		Low There is a small risk that the control operations may not be carried out by land occupiers.
The risk that compliance with other legislation will adversely affect implementation of the option.		Low
The risk that public or political concerns will adversely affect implementation of the option.		Low Inclusion in the RPMP provides greater certainty that the investment by collaborative programmes will be secured in the long term.
Other material risks.		

Risks that each option will not achieve its objective 6(4)

Sustained control: Low

Given the sustained control programme would only commence in behind other collaborative initiatives, the starting point will be very low infestation levels. As such, the risk of not keeping areas subject of the programme under sustained control will be low.

Assessment for section 71(d)

Is scots pine capable of causing an adverse effect on:		Comments:
Economic wellbeing?	Yes	Can reduce area used for extensive grazing
The viability of threatened species or organisms?	Yes	
The survival and distribution of indigenous plants or animals?	Yes	Habitat transformation.
The sustainability of natural and developed ecosystems, ecological processes and biological diversity?	Yes	Competition and displacement.
Soil resources?		
Water quality?		
Human health?		
Social and cultural wellbeing?		
The enjoyment of the recreational value of the natural environment?	Yes	Change to aesthetic values of ecosystems.

The relationship between Māori, their culture, and their traditions and their ancestral lands, waters, sites, wāhi tapu and taonga?	Yes	Change toward natural ecosystems becoming dominated by exotic species.
Animal welfare?		

Senegal tea

Risks that each option will not achieve its objective NPD 6(3)

Option	No RPMP	Exclusion
<div style="text-align: center;"> <i>Risk</i> / <i>Objective</i> </div>	NA	<i>To prevent the establishment of the subject that is present in New Zealand but not yet established in area.</i>
Technical and operation risks.		Low With no known infestations in Marlborough, any new infestation is likely to be small in nature with adequate tools available to address a small localised infestation.
The extent to which the option will be implemented and complied with.		Low
The risk that compliance with other legislation will adversely affect implementation of the option.		Medium There is an ongoing background risk of the illegal trade and/or distribution of plants (in breach of section 52 and 52 of the Biosecurity Act 1993) that may include Senegal tea.
The risk that public or political concerns will adversely affect implementation of the option.		Low
Other material risks.		

Risks that each option will not achieve its objective 6(4)

Exclusion: Low

Assessment for section 71(d)

Is Senegal tea capable of causing an adverse	Comments:
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effect on:		
Economic wellbeing?		
The viability of threatened species or organisms?		
The survival and distribution of indigenous plants or animals?	Yes	Habitat transformation.
The sustainability of natural and developed ecosystems, ecological processes and biological diversity?	Yes	Competition and displacement.
Soil resources?		
Water quality?		
Human health?		
Social and cultural wellbeing?	Yes	
The enjoyment of the recreational value of the natural environment?	Yes	Can form large, dominant stands both on the edges of water bodies and floating mats out into the water body.
The relationship between Māori, their culture, and their traditions and their ancestral lands, waters, sites, wāhi tapu and taonga?	Yes	Change toward natural ecosystems becoming dominated by exotic species. Affecting freshwater kai gathering.
Animal welfare?		

Spartina

Risks that each option will not achieve its objective NPD 6(3)

Option	No RPMP	Eradication	Sustained Control
<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;">Risk</div> <div style="width: 45%;">Objective</div> </div>	NA	<i>To reduce the infestation level of the subject to zero levels in an area in the short to medium term.</i>	<i>This programme would provide for ongoing control of the subject, to reduce its impacts on values and spread to other properties</i>
Technical and operation risks.		Medium With the number of plants being found so low, there now runs the risk of the current methodology employed (shoulder to shoulder searches) not effective	Low The tools and methodologies currently in place will be able to effectively provide for ongoing control at very low numbers.

		at "finding the last plant".	
The extent to which the option will be implemented and complied with.		Low	Low
The risk that compliance with other legislation will adversely affect implementation of the option.		Low	Low
The risk that public or political concerns will adversely affect implementation of the option.		Medium There is a small degree of concern raised as part of investigation into the release of fine sediments from the estuary believed to be linked to the decay of the old spartina beds. While the sediment itself is the core issue, the concern was still raised.	Medium
Other material risks.			

Risks that each option will not achieve its objective 6(4)

Eradication: Medium

The number of plants being found has been steadily decreasing since the Havelock Estuary aerial control work. It has now got to a stage where, on average, less than 50 plants are being found. However, the effectiveness of existing control methodologies to achieve eradication within the term of the Plan may be questionable

Sustained Control: Low

The number of plants being found has been steadily decreasing since the Havelock Estuary aerial control work. It has now got to a stage where, on average, less than 50 plants are being found. This low level of infestation will be easily maintained, or even reduced over time.

Assessment for section 71(d)

Is spartina capable of causing an adverse effect on:		Comments:
Economic wellbeing?		
The viability of threatened species or organisms?		
The survival and distribution of	Yes	

indigenous plants or animals?		
The sustainability of natural and developed ecosystems, ecological processes and biological diversity?	Yes	
Soil resources?		
Water quality?		
Human health?		
Social and cultural wellbeing?	Yes	Reversion of the estuarine environments to those dominated by spartina
The enjoyment of the recreational value of the natural environment?	Yes	Reversion of the estuarine environments to those dominated by spartina
The relationship between Māori, their culture, and their traditions and their ancestral lands, waters, sites, wāhi tapu and taonga?	Yes	The impact on the gathering of kai
Animal welfare?		

Tall wheat grass

Risks that each option will not achieve its objective NPD 6(3)

Option	No RPMP	Eradication	Sustained Control
<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;">Risk</div> <div style="width: 45%;">Objective</div> </div>	NA	To reduce the infestation level of the subject to zero levels in an area in the short to medium term.	This programme would provide for ongoing control of the subject, to reduce its impacts on values and spread to other properties
Technical and operation risks.		High Control methodologies to effectively remove Tall Wheat Grass from an area indefinitely are still being refined.	Low From preliminary trials, it is believed through the use of existing tools, infestations can be managed to reduce infestation size in the short term.
The extent to which the option will be implemented and complied with.		Low	Low

The risk that compliance with other legislation will adversely affect implementation of the option.		Low	Low
The risk that public or political concerns will adversely affect implementation of the option.		Medium This is a new programme and also relatively new to the occupiers affected. The operational delivery may affect occupiers and how they are currently managing their property.	Medium This is a new programme and also relatively new to the occupiers affected. The operational delivery may affect occupiers and how they are currently managing their property.
Other material risks.			

Risks that each option will not achieve its objective 6(4)

Eradication: High

Sustained Control: Low

Assessment for section 71(d)

Is tall wheat grass capable of causing an adverse effect on:		Comments:
Economic wellbeing?		
The viability of threatened species or organisms?	Yes	Waikārapī Lagoon saltmarsh habitat is threatened by tall wheat grass invasion and would likely displace salt marsh vegetation types that include the At-Risk declining species <i>Mimulus repens</i>
The survival and distribution of indigenous plants or animals?	Yes	The surrounding conservation areas supports possibly the greatest diversity of wetland birds in New Zealand and the tall dense vegetation likely to result from invasion would affect a number of birds by reducing foraging and nesting areas, increasing shelter for predators and increasing fire risk.
The sustainability of natural and developed ecosystems, ecological processes and biological diversity?	Yes	
Soil resources?		
Water quality?		
Human health?		
Social and cultural wellbeing?		

The enjoyment of the recreational value of the natural environment?	Yes	Waikārapī Lagoons are of international significance to the ornithological community due to the potential for bird watching
The relationship between Māori, their culture, and their traditions and their ancestral lands, waters, sites, wāhi tapu and taonga?	Yes	The Waikārapī Lagoons and Te Pokohiwi/Boulder Bank are significant sites of cultural importance to both iwi and New Zealand's heritage.
Animal welfare?		

Wallabies

Risks that each option will not achieve its objective NPD 6(3)

Option	No RPMP	Exclusion
<div style="display: flex; justify-content: space-between;"> <div style="width: 40%;">Risk</div> <div style="width: 60%;">Objective</div> </div>	NA	<i>To prevent the establishment of the subject that is present in New Zealand but not yet established in an area.</i>
Technical and operation risks.		Medium Tools and techniques to detect wallabies at low densities are an acknowledged weakness in New Zealand. Animals are predominantly nocturnal and can evade detection easily in their ideal habitat of mixed pasture/scrub.
The extent to which the option will be implemented and complied with.		Medium There is a continued risk of illegal liberations of wallabies to create a 'closer to home' hunting resource.
The risk that compliance with other legislation will adversely affect implementation of the option.		Low
The risk that public or political concerns will adversely affect implementation of the option.		Low The increased exposure of wallabies as a threat may generate an improved understanding and acceptance within the community to exclude these animals from Marlborough.
Other material risks.		

Risks that each option will not achieve its objective 6(4)

Exclusion: Medium

Assessment for section 71(d)

Are wallabies capable of causing an adverse effect on:		Comments:
Economic wellbeing?	Yes	Some wallaby species compete directly with livestock grazing pasture and reducing the carrying capacity of farmland..
The viability of threatened species or organisms?	Yes	The habitat for wallaby species that thrive in the open mixed grassland/scrub of South Marlborough in particular, overlays with environments of national significance with respect to plant endemism.
The survival and distribution of indigenous plants or animals?	Yes	The habitat for wallaby species that thrive in the open mixed grassland/scrub of South Marlborough in particular, overlays with environments of national significance with respect to plant endemism.
The sustainability of natural and developed ecosystems, ecological processes and biological diversity?	Yes	Some wallaby species have severe grazing impacts on the understory of forest ecosystems, hindering regeneration.
Soil resources?	Yes	Due to the grazing pressures in both forested and pastoral ecosystems, this can reduce ground cover and lead to increased rates of erosion.
Water quality?	Yes	With an increase in soil erosion, the sediment load and ultimately the turbidity of waterways can be affected.
Human health?		
Social and cultural wellbeing?		
The enjoyment of the recreational value of the natural environment?		
The relationship between Māori, their culture, and their traditions and their ancestral lands, waters, sites, wāhi tapu and taonga?		
Animal welfare?		

Western white pine

Risks that each option will not achieve its objective NPD 6(3)

Option	No RPMP	Sustained control
<div style="display: flex; justify-content: space-between;"> <div style="width: 40%;">Risk</div> <div style="width: 60%;">Objective</div> </div>	NA	<i>To reduce the infestation level of the subject to zero levels in an area in the short to medium term.</i>
Technical and operation risks.		Low Under the proposed programme, the level of infestation when management is to occur will be very low. Control tools are readily available and effective.
The extent to which the option will be implemented and complied with.		Low There is a small risk that the control operations may not be carried out by land occupiers.
The risk that compliance with other legislation will adversely affect implementation of the option.		Low
The risk that public or political concerns will adversely affect implementation of the option.		Low Inclusion in the RPMP provides greater certainty that the investment by collaborative programmes will be secured in the long term.
Other material risks.		

Risks that each option will not achieve its objective 6(4)

Sustained control: Low

Given the sustained control programme would only commence in behind other collaborative initiatives, the starting point will be very low infestation levels. As such, the risk of not keeping areas subject of the programme under sustained control will be low.

Assessment for section 71(d)

Is western white pine capable of causing an adverse effect on:		Comments:
Economic wellbeing?	Yes	Can reduce area used for extensive grazing

The viability of threatened species or organisms?	Yes	
The survival and distribution of indigenous plants or animals?	Yes	Habitat transformation.
The sustainability of natural and developed ecosystems, ecological processes and biological diversity?	Yes	Competition and displacement.
Soil resources?		
Water quality?		
Human health?		
Social and cultural wellbeing?		
The enjoyment of the recreational value of the natural environment?	Yes	Change to aesthetic values of ecosystems.
The relationship between Māori, their culture, and their traditions and their ancestral lands, waters, sites, wāhi tapu and taonga?	Yes	Change toward natural ecosystems becoming dominated by exotic species.
Animal welfare?		

White-edged nightshade

Risks that each option will not achieve its objective NPD 6(3)

Option	No RPMP	Eradication	Progressive Containment	Sustained Control
<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;">Risk</div> <div style="width: 55%;">Objective</div> </div>	NA	<i>To reduce the infestation level of the subject to zero levels in an area in the short to medium term.</i>	<i>To contain or reduce the geographic distribution of the subject to an area over time.</i>	<i>This programme would provide for ongoing control of the subject, to reduce its impacts on values and spread to other properties</i>
Technical and operation risks.		High The property that harbours the historically entrenched infestation is heavily vegetated. Implementing effective control measures across all infested properties would be	Medium White-Edged Nightshade occurs on 3 properties adjoining the 'Containment' property. Being able to effectively manage the infestations on these properties is much lower risk.	High The property that harbours the historically entrenched infestation is heavily vegetated. Implementing effective control measures, even to a specified level, across all infested

		technically very difficult.	However, ensuring these infestations do not contribute to an increase the geographic distribution does carry some degree of risk.	<p>properties would be technically very difficult.</p> <p>With a Containment Area within the programme:</p> <p>Low</p> <p>White-Edged Nightshade occurs on 3 properties adjoining the 'Containment' property. Being able to effectively manage the infestations on these properties is much lower risk.</p>
The extent to which the option will be implemented and complied with.		<p>High</p> <p>As with above, the extent to which measure could be implemented will be limited.</p>	<p>Low</p> <p>With a Progressive Containment objective, measures will be able to be implemented and complied with to an acceptable extent.</p>	<p>High</p> <p>As with above, the extent to which measure could be implemented will be limited.</p> <p>With a Containment Area within the programme:</p> <p>Low</p> <p>With a Sustained Control objective, measures will be able to be implemented and complied with to an acceptable extent.</p>
The risk that compliance with other legislation will adversely affect implementation of the option.		Low	Low	Low
The risk that public or political concerns will adversely affect implementation of the option.		Low	Low	Low
Other material risks.				

Risks that each option will not achieve its objective 6(4)

Eradication: High

Progressive Containment: Medium

Sustained Control: Low

Assessment for section 71(d)

Is white-edged nightshade capable of causing an adverse effect on:		Comments:
Economic wellbeing?	Yes	Has the potential to cause losses of production on hill country pastoral systems as it forms dense thickets that displace pasture.
The viability of threatened species or organisms?		
The survival and distribution of indigenous plants or animals?	Yes	
The sustainability of natural and developed ecosystems, ecological processes and biological diversity?	Yes	When forming dense thickets, it can also displace native species and transform ecosystems to an invasive species dominated monoculture.
Soil resources?		
Water quality?		
Human health?		
Social and cultural wellbeing?	Yes	
The enjoyment of the recreational value of the natural environment?	Yes	
The relationship between Māori, their culture, and their traditions and their ancestral lands, waters, sites, wāhi tapu and taonga?	Yes	Change toward natural ecosystems becoming dominated by a new exotic species.
Animal welfare?		

Wilding conifers

Risks that each option will not achieve its objective NPD 6(3)

Option	No RPMP	Sustained control
<div style="text-align: center;"> <i>Risk</i> <i>Objective</i> </div>	NA	<i>To reduce the infestation level of the subject to zero levels in an area in the short to medium term.</i>
Technical and operation risks.		Low Under the proposed programme, the level of infestation when management is to occur will be very low. Control tools are readily available and effective.
The extent to which the option will be implemented and complied with.		Low There is a small risk that the control operations may not be carried out by land occupiers.
The risk that compliance with other legislation will adversely affect implementation of the option.		Low Inclusion in the RPMP provides greater certainty that the investment by collaborative programmes will be secured in the long term.
The risk that public or political concerns will adversely affect implementation of the option.		Low Inclusion in the RPMP provides greater certainty that the investment by collaborative programmes will be secured in the long term.
Other material risks.		

Risks that each option will not achieve its objective 6(4)

Sustained control: Low

Given the sustained control programme would only commence in behind other collaborative initiatives, the starting point will be very low infestation levels. As such, the risk of not keeping areas subject of the programme under sustained control will be low.

Assessment for section 71(d)

Are wilding conifers capable of causing an adverse effect on:		Comments:
Economic wellbeing?	Yes	Can reduce area used for extensive grazing

The viability of threatened species or organisms?	Yes	
The survival and distribution of indigenous plants or animals?	Yes	Habitat transformation.
The sustainability of natural and developed ecosystems, ecological processes and biological diversity?	Yes	Competition and displacement.
Soil resources?		
Water quality?		
Human health?		
Social and cultural wellbeing?		
The enjoyment of the recreational value of the natural environment?	Yes	Change to aesthetic values of ecosystems.
The relationship between Māori, their culture, and their traditions and their ancestral lands, waters, sites, wāhi tapu and taonga?	Yes	Change toward natural ecosystems becoming dominated by exotic species.
Animal welfare?		

Willow-leaved hakea

Risks that each option will not achieve its objective NPD 6(3)

Option	No RPMP	Eradication (on D'Urville Island)	Sustained Control (on D'Urville Island)
<div style="text-align: center;"> <i>Risk</i> <i>Objective</i> </div>	NA	<i>To reduce the infestation level of the subject to zero levels in an area in the short to medium term.</i>	<i>This programme would provide for ongoing control of the subject, to reduce its impacts on values and spread to other properties</i>
Technical and operation risks.		Medium The current level of infestation on D'Urville Island is within the achievable level of objectives. However, that same level of infestation still carries a medium level risk of not achieving an eradication objective in a medium term due to the pure biology of the plant and prolific seeding	Low With suitable control tools available, there is a much lower risk to not being able to effectively control this species.

		nature.	
The extent to which the option will be implemented and complied with.		Low	Low
The risk that compliance with other legislation will adversely affect implementation of the option.		Low	Low
The risk that public or political concerns will adversely affect implementation of the option.		Medium They may be some adverse reaction by a small number of occupiers to a programme occurring on their land. Whilst a last resort, regulatory aspects of a programme can overcome land access issues.	Low
Other material risks.			

Risks that each option will not achieve its objective 6(4)

Eradication: Medium

Sustained Control: Low

Assessment for section 71(d)

Is willow-leaved hakea capable of causing an adverse effect on:		Comments:
Economic wellbeing?		
The viability of threatened species or organisms?		
The survival and distribution of indigenous plants or animals?	Yes	When forming dense thickets, it can also displace native species and transform ecosystems to an invasive species dominated monoculture.
The sustainability of natural and developed ecosystems, ecological processes and biological diversity?	Yes	When forming dense thickets, it can also displace native species and transform ecosystems to an invasive species dominated monoculture.
Soil resources?		
Water quality?		
Human health?		

Social and cultural wellbeing?	Yes	
The enjoyment of the recreational value of the natural environment?	Yes	
The relationship between Māori, their culture, and their traditions and their ancestral lands, waters, sites, wāhi tapu and taonga?	Yes	Change toward natural ecosystems becoming dominated by a new exotic species.
Animal welfare?		

Woolly nightshade

Risks that each option will not achieve its objective NPD 6(3)

Option	No RPMP	Eradication	Sustained Control
<div style="text-align: center;"> <i>Risk</i> <hr style="border: 0; border-top: 1px solid black; width: 100%;"/> <i>Objective</i> </div>	NA	<i>To reduce the infestation level of the subject to zero levels in an area in the short to medium term.</i>	<i>This programme would provide for ongoing control of the subject, to reduce its impacts on values and spread to other properties</i>
Technical and operation risks.		High The level of infestation and the nature of the terrain where the infestation occurs will make effective management very difficult.	Medium The level of infestation and the nature of the terrain where the infestation occurs will make effective management very difficult. However, there is a lower risk of being able to control the subject.
The extent to which the option will be implemented and complied with.		Low	Low
The risk that compliance with other legislation will adversely affect implementation of the option.		Low	Low
The risk that public or political concerns will adversely affect implementation of the option.		Medium Permissive access to some of the land on D'Urville to carry out management may be somewhat of a risk. This will require the building of relationships with the	Medium Permissive access to some of the land on D'Urville to carry out management may be somewhat of a risk. This will require the building of relationships with the

		occupiers with an absolute last resort being the use of Biosecurity Act powers.	occupiers with an absolute last resort being the use of Biosecurity Act powers.
Other material risks.			

Risks that each option will not achieve its objective 6(4)

Eradication: High

Sustained Control: Medium

Assessment for section 71(d)

Is woolly nightshade capable of causing an adverse effect on:		Comments:
Economic wellbeing?		
The viability of threatened species or organisms?		
The survival and distribution of indigenous plants or animals?	Yes	When forming dense thickets, it can also displace native species and transform ecosystems to an invasive species dominated monoculture.
The sustainability of natural and developed ecosystems, ecological processes and biological diversity?	Yes	When forming dense thickets, it can also displace native species and transform ecosystems to an invasive species dominated monoculture.
Soil resources?		
Water quality?		
Human health?		
Social and cultural wellbeing?	Yes	
The enjoyment of the recreational value of the natural environment?	Yes	
The relationship between Māori, their culture, and their traditions and their ancestral lands, waters, sites, wāhi tapu and taonga?	Yes	Change toward natural ecosystems becoming dominated by a new exotic species.
Animal welfare?		