

Workshop 19/2/2026, Ecology

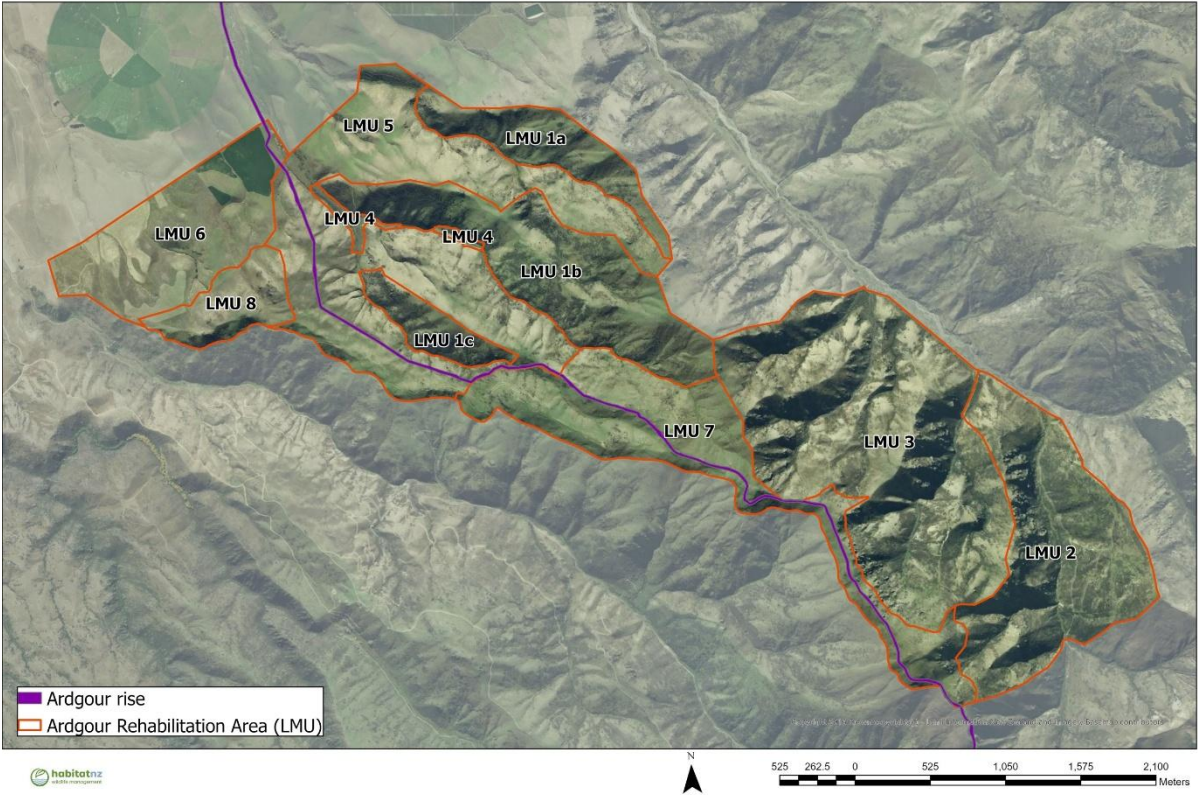
Present	Agreed Actions	Completed / Response
<p>Santana Damian Spring Cheryl Low Mary Askey Mark Chrisp Joshua Leckie Matt Baber Keith Barber Graham Ussher Zac Milner Jeroen Luring David Norton DOC Pene Williams Marie Payne Max Crowe Dean van Meirlo Roger Colbourne Justyna Giejsztowt CODC Mike Harding ORC Shay McDonald Rebecca Teel Trudy Anderson</p>	<p>Provision of method for assessing the degree of net loss</p>	<p>Alliance Ecology and RMA Ecology – Matt and Graham Expected biodiversity outcomes are assessed for residual effects once the benefits associated with the proposed residual effects management package are considered, with expected outcomes assigned as follows:</p> <ul style="list-style-type: none"> • Net Gain: where biodiversity offsetting can be demonstrated. • Net Positive: where biodiversity compensation is expected to deliver a positive outcome for the ecological value based on professional judgement. • Uncertain: where the success of an action cannot be predicted with sufficient confidence to assign as Net Positive or Net loss. • Net Loss: where, based on current information, a negative outcome is assumed. In such cases—despite proposed restoration or enhancement measures—the benefits cannot be demonstrated (without further research) to adequately address the residual adverse effects within a 35-year reasonable time frame. <p>Where a Net Loss outcome is identified once offset or compensation actions are taken into account, the scale of that Net Loss for impacted habitat types is further described using a qualitative scale (negligible, low, moderate, high, very high). While applied for a different purpose in the Ecological Impact Assessment Guidelines (EclAG), Table 8 in the guidelines also provides a means for contextualising the scale of Net Loss, rather than as an additional formal effects test (see Table 10 below).</p> <p>The key difference is that the EclAG magnitude-of-effect table describes an effect before offsetting or compensation have been applied, whereas for the purposes of the Alliance Ecology Assessment of Ecological Effects report, this table is adapted to assign a magnitude of loss that remains after all aspects of the effects management hierarchy have been exhausted. That is, after all effects have been avoided, minimised, remedied, offset, compensated and any other relevant positive ecological effects considered.</p>

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		<p data-bbox="763 312 2011 419">TABLE 10: CRITERIA FOR DESCRIBING THE LOCAL MAGNITUDE OF LOSS FOR IMPACTED HABITAT TYPES AFTER RESIDUAL EFFECTS MANAGEMENT MEASURES HAVE BEEN CONSIDERED (ADAPTED FROM ECIAG TABLE 8)</p> <table border="1" data-bbox="763 424 2029 1279"> <thead> <tr> <th data-bbox="763 424 954 515">Magnitude of loss</th> <th data-bbox="954 424 2029 515">Description</th> </tr> </thead> <tbody> <tr> <td data-bbox="763 515 954 767">Very high</td> <td data-bbox="954 515 2029 767">Total loss of, or very major alteration to, key elements/features of the existing baseline¹ conditions, such that the post-development character, composition and/or attributes will be fundamentally changed and may be lost from the site altogether; AND/OR Loss of a very high proportion of the known population or range of the element/feature</td> </tr> <tr> <td data-bbox="763 767 954 979">High</td> <td data-bbox="954 767 2029 979">Major loss or major alteration to key elements/features of the existing baseline conditions such that the post-development character, composition and/or attributes will be fundamentally changed; AND/OR Loss of a high proportion of the known population or range of the element/feature</td> </tr> <tr> <td data-bbox="763 979 954 1192">Moderate</td> <td data-bbox="954 979 2029 1192">Loss or alteration to one or more key elements/features of the existing baseline conditions, such that the post-development character, composition and/or attributes will be partially changed; AND/OR Loss of a moderate proportion of the known population or range of the element/feature</td> </tr> <tr> <td data-bbox="763 1192 954 1279">Low</td> <td data-bbox="954 1192 2029 1279">Minor shift away from existing baseline conditions. Change arising from the loss/alteration will be discernible, but underlying character, composition</td> </tr> </tbody> </table>	Magnitude of loss	Description	Very high	Total loss of, or very major alteration to, key elements/features of the existing baseline ¹ conditions, such that the post-development character, composition and/or attributes will be fundamentally changed and may be lost from the site altogether; AND/OR Loss of a very high proportion of the known population or range of the element/feature	High	Major loss or major alteration to key elements/features of the existing baseline conditions such that the post-development character, composition and/or attributes will be fundamentally changed; AND/OR Loss of a high proportion of the known population or range of the element/feature	Moderate	Loss or alteration to one or more key elements/features of the existing baseline conditions, such that the post-development character, composition and/or attributes will be partially changed; AND/OR Loss of a moderate proportion of the known population or range of the element/feature	Low	Minor shift away from existing baseline conditions. Change arising from the loss/alteration will be discernible, but underlying character, composition
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¹ Baseline conditions are defined as 'the conditions that would pertain in the absence of a proposed action' (EIANZ, 2018).

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			<p>and/or attributes of the existing baseline condition will be similar to pre-development circumstances or patterns; AND/OR</p> <p>Having a minor effect on the known population or range of the element/feature</p>
		Negligible	<p>Very slight change from the existing baseline condition. Change barely distinguishable, approximating the 'no change' situation; AND/OR</p> <p>Having negligible effect on the known population or range of the element/feature</p>
	<p>Look up using possum chew cards versus tracking tunnels for rats and mice? (Most cost effective, either is suitable)</p>	<p>Habitat NZ - Keith</p> <p>Chew cards are a reliable quantitative index of rat abundance (Ruffell et al., 2015). We accept the reviewer's point that chew cards are not a reliable quantitative index for mouse abundance, and we will amend the text to remove any implication that they provide a robust measure of mouse density. The original intent was to note that chew cards may provide a qualitative signal of mouse presence, although we acknowledge this is insufficient as a monitoring tool if mouse monitoring is a formal requirement. However, our monitoring programme is designed to track the species we are controlling. We are not proposing mouse control outside the sanctuaries, and therefore, we do not currently consider mouse monitoring appropriate for the Mine restoration zone or Rehabilitation areas outside the Sanctuaries.</p>	
	<p>Clarify notes in management plan around aerial animal control for different species. Keith</p>	<p>MGL</p> <p>Useful feedback has been obtained from the administering agencies and consent authorities for several aspects of management plans, including agreed matters to be updated. MGL is not proposing amendments to management plans at this time but anticipates making amendments to various management plans at a later date as part of the processing of BOGP application.</p>	
	<p>Update wording in Pest Management Plan wrt monitoring</p>		

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	review – aligning with the BOMP review	
	Develop / update management regime specific biodiversity outcomes for each management areas - Matt. Reflect in SMP, specifically appendix G of SMP - Keith.	
	Provide shapefiles for figures 1,2 and 3 in part B of the LERMP.	Shapefiles provided to DOC, CODC and ORC 9/03/2026.
	Clarify native woody veg outcomes – change from percentages to hectares	<p>Biodiversity Solutions Ltd – David Norton</p> <p>In the Ardgour Restoration Area Management Plan (ARAMP), 35-year outcome 1 currently reads:</p> <p><i>“In LMUs 1, 2 and 3, the area of woody vegetation where native woody species comprise >50% of the ground cover has increased by 50% over that mapped in 2026.”</i></p> <p>The agency ecologists found this wording confusing and requested that this outcome be updated to reference hectares of habitat change rather than percentages. For clarity, the location of LMUs 1, 2 and 3 is shown in Figure 1 below. LMU1 comprises three discrete areas in the catchment of an unnamed creek that drains northwest into the Lindis River. LMUs 2 and 3 are in the Dry Creek catchment.</p>

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		 <p data-bbox="763 1066 2002 1137">Figure 1. Location of LMU1 (Broad Gully Shrublands), LMU 2 (Upper Dry Creek shrublands) and LMU3 (Lower Dry Creek Shrublands).</p> <p data-bbox="763 1161 2029 1313">Of the seven vegetation types identified in the RMA Ecology Vegetation Values Assessment report, the key vegetation type relevant here is Native Dominant Scrubland. In this vegetation type, the average coverage of native woody vegetation is 54.5%. It is this vegetation type that 35-year outcome 1 is aiming to see increase in area by 50% over the next 35 years.</p>

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		<p>Vegetation mapping undertaken by RMA Ecology (as described in the Vegetation Values Assessment report) shows that there is currently (2025) 21.6 ha of Native Dominant Scrubland in LMU1 and 82 ha in LMU2 (see Table 2 in the ARAMP as appended below). Therefore, it is expected that the area of Native Dominant Scrubland will increase from 21.6 to 32.4 ha in LMU1 and from 82 to 123 ha in LMU2 (ie. an increase of 50% in each LMU). It is also expected that most of this increase will occur in areas that are currently mapped as Mixed Tussock Shrubland and Grassland and Mixed Scrubland.</p> <p>LMU3 is problematic in terms of this outcome as there is no vegetation that meets the definition of Native Dominant Scrubland currently present. There is, however, 83.8 ha of Mixed Scrubland and it is expected that some of this will, because of restoration management, develop to the extent that it meets the definition of Native Dominant Scrubland in 35-years' time. It is therefore proposed that in 35-years' time there will be 8 ha of vegetation that meets the definition of Native Dominant Scrubland in LMU3. 8 ha is 10% of the area of Mixed Scrubland currently present in this LMU and this is thought to be a realistic target for this LMU.</p> <p>I therefore propose that 35-year outcome 1 is reworded as follows:</p> <p>“The area of vegetation that meets the definition of Native Dominant Scrubland has increased from 22 to 32 ha in LMU1, 82 to 123 ha in LMU 2 and 0 to 8 ha in LMU3 over 35-years from the commencement of management described in this plan”</p> <p>Appendix: From the Ardgour Restoration Area Management Plan</p> <p>Table 2. Land Management Unit summary (Vegetation types: ExP, Exotic pasture; MDH, Mixed depleted herbfield (cushionfield) and grassland; MTS, Mixed tussock shrubland and grassland; MSc, Mixed scrubland; NDT, Native dominated tussockland; NHS, Native herbfield and shrubland; NDS, Native dominated scrubland).</p>

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		LM U	Unit name	Area (ha)	Current vegetation types (ha)						
					Exp	MDH	NH S	NDT	MTS	MS c	ND S
		1	Broad Gully shrublands	217.2	38.1	11.1	0.0	33.0	112.4	0.8	21.6
		2	Upper Dry Creek shrublands	167.6	0.6	0.0	0.0	21.1	61.6	2.3	82.0
		3	Lower Dry Creek shrublands	298.6	0.6	35.0	0.0	58.8	120.5	83.8	0.0
		4	Alluvial valley flats	8.1	0.0	0.8	0.0	0.0	6.0	0.0	1.3
		5	Cushionfields	261.3	70.7	138.6	0.0	1.7	35.1	15.1	0.0
		6	Exotic pasture	113.6	110.4	2.9	0.0	0.0	0.0	0.3	0.0
		7	Short tussock grassland	158.2	27.1	20.1	5.5	93.0	12.4	0.0	0.0
		8	Predator free area	38.3	12.3	20.0	0.0	0.0	3.2	0.0	2.9
	Targeted future site visit in relation to Ardgour restoration area discussed as a possibility	David Norton (Biodiversity Solutions Ltd) and Zac Milner (RMA Ecology) gave a one day site tour of the Ardgour Restoration Area 13 March 2026 to Mike Harding (CODC) and Max Crowe (DOC).									
	Explore how fire risk may be addressed /managed through proposed conditions	MGL recognises that the risk of fire represents a significant potential setback to both the delivery of the biodiversity outcomes and to the substantial financial investment already committed to mitigation and uplift measures. For this reason, MGL has a strong operational incentive to minimise fire risk across all management areas and will implement robust fire-prevention and response measures as part of standard site management.									

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		<p>The Ardgour Restoration Area Management Plan Section 3.11.</p> <p>3.11 Fire management</p> <p><i>Fire is perhaps the single biggest risk to the success of the restoration management proposed for the Ardgour Restoration Area. For fire to occur, three conditions need to be met – presence of sufficient biomass to burn, dry conditions to promote burning and an ignition source. The restoration management being undertaken in the Ardgour Restoration Area will create more biomass and increasingly dry summers will create conditions for fire. Ignition sources are most likely to come from either adjacent farming operations (burn offs) or from people traversing through the area (accidental or deliberate fires). Public access up the new Ardgour Rise Road is seen as a major risk to the success of the Ardgour restoration project. Several approaches can be used to reduce fire risk including grazing grassland to keep biomass low, especially along the Ardgour Rise Road alignment, liaising with adjacent landowners to limit or exclude burn-offs on land adjacent to the Ardgour Restoration Area, and erecting educational signs highlighting fire risk at any stopping points on the new road alignment. All three approaches will be used here.</i></p> <p>Year five goals:</p> <p><i>Fire has not compromised the restoration outcomes from the management work undertaken here.</i></p> <p>Management actions:</p> <p><i>Year 1 – erect educational signs highlighting fire risk at stopping points on the Ardgour Rise Road.</i></p> <p><i>Year 1 onwards – graze LMU’s 5, 6 and 7 to maintain in an herbaceous state to reduce the chance of fire spreading from the Ardgour Rise Road.</i></p> <p><i>Year 1 onwards – liaise with adjacent landowners to limit or exclude burn-offs on adjacent land.</i></p> <p>Any fire event would not remove or diminish MGL’s obligations under the relevant consent conditions. Accordingly, we are happy to consider the extent to which fire-risk minimisation measures should be formalised within consent conditions. This can be worked through</p>

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		collaboratively with the agencies in the upcoming consent-conditions workshop sessions, to ensure that any conditions are effective, proportionate, and appropriately aligned with existing management plans and statutory responsibilities.