

**Workshop Biodiversity, Offsetting and Compensation 20 February 2026**

Present	Agreed Actions	Completed /Response
<p><b>Santana</b>                      Damian Spring                      Cheryl Low                      Mary Askey                      Mark Chrisp                      Joshua Leckie                      Matt Baber                      Keith Barber                      Graham Ussher                      David Norton                      Robyn Simcock  <b>DOC</b>                      Pene Wiliams                      Marie Payne                      Max Crowe                      Clare Flemming                      Dean van Meirlo                      Justyna Giejsztowt                      Liz Williams  <b>CODC</b>                      Mike Harding  <b>ORC</b>                      Shay McDonald                      Rebecca Teele                      Trudy Anderson</p>	<p>MGL ecologist to review understanding of existing pH levels, and how that might affect rehab outcomes</p>	<p><b>Keith Barber (Habitat NZ) and Robyn Simcock (Bioeconomy Science Limited)</b>                      Fertiliser history has been discussed with farmers on Bendigo and Ardgour stations, and no useful historical soil test records exist for the majority of the 2,000-odd ha restoration and rehabilitation area. Soil pH and broader nutrient status will be considered as part of restoration and rehabilitation planning, with findings incorporated into the relevant management plans as appropriate.</p> <p>With respect to soils, the Applied Research Plan for Cushionfields proposes:                      (a) Cushionfields: Soil measurements as part of ARP1 - the baseline cushionfield survey in Year 1  <i>‘Collection and analysis of soil samples. It is anticipated c.140 samples are needed to cover the gradient and that analysis will be confined to nitrogen, phosphorus, sulphur, and organic matter. Sodium and salinity will only be measured if any suspected saline areas are encountered. Soil pH is not considered a driver on these soils and farmers do not apply lime to these hills.’ (p18)</i>                      (b) Spring Annuals. Soil measurements as part of identifying the environmental niche of the spring annuals  <i>‘This systematic baseline ecological survey will collect information on soils (salinity/sodicity, depth, nutrients, drainage status, water-holding and organic content), landforms, aspect/elevation/slope, co-occurring plant species, surface features (bare ground, scarification, rabbit/sheep dung) and land use (intensity of grazing, e.g. rabbit pellets). A subset of permanent sites will be established to facilitate remeasurements.’ p39</i></p>
	<p>Lizard salvage and fence/sanctuary – legal planning around</p>	<p>Lizard workshop (Teams Meeting) held 13 March 2026 to discuss. Agenda included:</p> <ul style="list-style-type: none"> <li>• Tussock McCanns skink identification</li> </ul>

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	<p>salvaging and interplay between wildlife act and FTA. Be more effects management / outcomes base. Not either or, maybe a package fences – discussion on use of sanctuaries for residual effects, MGL to consider. Set up lizard workshop – teams meeting</p>	<ul style="list-style-type: none"> <li>• Salvage methodology and level of effort</li> <li>• Relocation site management</li> <li>• Lizard habitat rehabilitation within the project footprint</li> <li>• Offset/Compensation options for improving outcomes for lizards</li> <li>• Residual Effects Management Requirements for net positive outcomes (benefits that are expected to outweigh outcomes)</li> </ul> <p>Attendees: Matt Baber, Keith Barber, Graham Ussher, Mandy Tocher, Justyna Giejsztowt, Marie Payne, Shay McDonald, Trudy Anderson, Mark Chrisp , Mary Askey, Cheryl Low</p>
	<p>Amend CODC condition 111 to delete second sentence of clause b (ii) and replace with requirement for robust peer review analysis</p>	<p>Condition updated and provided to EPA 10/03/2026.</p> <p>Mining of the Come-in-Time Open Pit</p> <p>Condition 111 of the CODC Land Use Consent and Conditions (D.01) is proposed to be amended as follows:</p> <p>Mining of the 23.26 ha Come-in-Time (CIT) Open Pit (including establishing haul roads) will be staged to allow the implementation of the Cushionfield ARP:</p> <ol style="list-style-type: none"> <li>1. The early disturbance area can proceed from the commencement date of this consent within the 2.7 hectare area shown in Attachment D; and</li> <li>2. Disturbance of the remainder of the CIT Open Pit footprint can only proceed if sufficient numbers of spring annuals are discovered in the wider Dunstan Ecological District such that either net gain outcomes can be demonstrably achieved, and/or the population of the two spring annuals within the CIT Open Pit footprint recorded in 2025 is equal to or less than 1% of the known population of</li> </ol>

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		<p>these spring annuals plants in the wider Dunstan Ecological District. This can be demonstrated by either one or a combination of the following methods:</p> <ol style="list-style-type: none"> <li>1. The propagation and / or species recovery in the surrounding offsetting and compensation sites as informed by the Cushionfield ARP; and / or</li> <li>2. The discovery of further spring annual populations within the wider Dunstan Ecological District.</li> </ol>
	<p>Provide vector data for the contingency zones</p>	<p>Vector data sent to ORC, CODC, DOC 17/03/2026.</p> <p>The map illustrates the likely disturbed areas and associated buffer zones within the Direct Disturbance Footprint (DDF). The DDF has been recalculated as 613 hectares, reflecting the inclusion of the Sanctuary fencelines, which were not part of the original footprint. The fencelines have now been incorporated using a calculation of fence length multiplied by a 5 metre width, resulting in an additional 2.93 hectares.</p> <p>Ongoing detailed design work has enabled the consolidation of haul roads and optimisation of infrastructure placement. As a result, we expect the overall disturbed footprint to reduce from the current estimate of 483.1 hectares. As detailed design is still in progress, we are not formally claiming the potential reductions shown within the buffer areas at this stage. Instead, the buffers demonstrate the flexibility embedded in the design process, allowing refinement as more detailed engineering, environmental, and materials management information becomes available.</p> <p>The design team remains focused on minimising the development footprint wherever practicable. This includes careful consideration of locations for storing substantial volumes of brown rock and topsoil, with an emphasis on reducing the extent of earthworks. A smaller, more efficient footprint directly reduces the</p>

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		<p>volume of material requiring movement, supporting both improved project outcomes and reduced environmental disturbance.</p>
	<p>Biosecurity and Plant Pest Management Plan to identify management for Californian Poppy and blue borage, site wide but in particular in cushion fields</p>	<p>The BPPMP (Biosecurity and Pest Plant Management Plan) (Habitat NZ, 2025) thoroughly addresses weed management in cushionfield areas, with details provided throughout the sections relating to cushionfield zone management and in the appendices.</p> <p>Cushionfield areas sit within a dedicated Cushionfield Plant Pest Control Zone (Zone C), one of five spatially defined control zones across the site. The key features of Zone C management are:</p> <ul style="list-style-type: none"> <li>• <b>Objective:</b> Elimination or control of all 27 identified plant pest species, while explicitly prioritising protection of sensitive ecology and ongoing research activities. The 27 ‘species’ listed in Table 1 in the BPPMP include some groups of species (e.g. all prunus, all non-native climbing vines, all wilding conifers).</li> <li>• <b>Methods:</b> Only light-touch methods (as specified in Appendix E) are permitted. That's not an oversight — it's a deliberate constraint reflecting the sensitivity of these communities and the need to avoid disturbance to the threatened spring annual species that co-occur with target weeds in cushionfield habitat.</li> <li>• <b>Species targets:</b> All 27 plant pest species either present on site or capable of being present on site are targeted, with management objectives (minimisation vs control) varied by species depending on biology and actual threat level.</li> <li>• <b>Field implementation:</b> Appendix E provides species-specific guidance via field-ready cards for each of the eight control groups, covering preferred and alternative methods, timing, equipment, chemicals, success criteria, and contingency approaches.</li> </ul>

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		<ul style="list-style-type: none"> <li data-bbox="949 240 2011 427">• Adaptive management: Management intensity in cushionfields will be refined as outcomes from ongoing ecological research come through, which is a sensible practice for ecologically sensitive areas like these. This is outlined in the ‘Applied Research Plan for conservation management, rehabilitation and expansion of cushionfield’</li> </ul> <p data-bbox="902 475 2011 703">The BPPMP pulls together requirements and outcomes from the broader restoration and rehabilitation plans into a practical field manual — covering control methods, monitoring requirements, and thresholds for successful control — so site management can easily understand the programme, crews have everything they need to execute the work on the ground, and management agencies have a clear basis for auditing compliance.</p> <p data-bbox="902 751 2011 855">We note the BPPMP will undergo further review and refinement as part of the FTAA process and welcome any feedback directed at improving the cushionfield weed management provisions specifically.</p>
	Further rationale to justify values assessment / representativeness	<p data-bbox="902 871 1989 1018">Matt Baber (Alliance Ecology) and Graham Ussher (RMA Ecology) Agency ecologists have expressed particular concern around the assignment of value for one of the four sub-criteria, namely representativeness, which can be assigned one of the following categories: Very Low, Low, Moderate, or High.</p> <p data-bbox="902 1066 1995 1212">The habitat/values assessment has been undertaken in accordance with the Ecological Impact Assessment Guidelines. For this sub-criterion, the categories for each habitat type are set out in Table 12, Assessment of Ecological Effects (Alliance Ecology, 2025).</p> <p data-bbox="902 1260 2011 1364">Additional explanatory comments have been provided below to further clarify the rationale for the values assigned for each habitat type and to address the matters raised during the workshops.</p>

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		<b>Habitat type</b>	<b>Assessment of ecological value attributes based on EIANZ guidelines (Table 12 in the Assessment of Ecological Effects (Alliance Ecology 2025), with additional explanatory comment provided below</b>
		Exotic pasture or herbfield	<p><i>Table 12 assessment in relation to representativeness</i></p> <p><i>Representativeness: <b>Very Low.</b></i></p> <p><i>Poorly representative of any historic or present-day indigenous vegetation community. Some areas comprehensively cultivated with no native component. Dunstan ED heavily modified; this vegetation community contains small scale patches or sparsely scattered native tussock, scrub, or herbs.</i></p> <p><b>Further comment:</b> This assessment reflects the highly modified nature and the absence of representative native habitat types, noting that as set out in the description, native species do exist in small patches within this habitat type. This does not alter the overall assessment of representativeness as very low. However, the presence of native species, including some at risk species, is reflected in the assessment of other sub-criteria. Specifically, in the ‘diversity and pattern’ sub criterion which is assessed as ‘Low’, the assessment of ‘rarity and distinctiveness’ as ‘moderate’, the assessment of ecological context as ‘Low,’ and in turn the assignment of pasture as having ‘Low’ ecological value overall.</p> <p>I note further that had I assigned representativeness as ‘Low’ instead of ‘Very Low’, the overall assignment of Ecological Value would still be ‘Low’ overall as per Table 6 of the EclAG.</p>

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			I am comfortable with this assessment of representativeness as 'Very Low' and the overall ecological value of this habitat type as 'Low'.
		Mixed depleted herbfield (cushionfield) and grassland	<p><i>Table 12 assessment in relation to representativeness</i>  <b>Representativeness: Moderate</b></p> <p><i>Pre-human, this vegetation community may have been most prevalent on the post-glacial Upper Clutha inland outwash gravels and moraines. This community has a high proportion of exotic vegetation (69 %), although it is still representative of present day cushionfield community within the ED which has been severely impacted by irrigation, subdivision and viticulture developments.</i></p> <p>Further comment: The main driver for the assessment of representativeness for this habitat type as 'Moderate' and not 'High' is because it is highly modified and exotic-dominated.</p> <p>I note further that had I assigned representativeness as 'High' instead of 'Moderate', the overall assignment of Ecological Value would still be 'Very High' overall as per Table 6 of the EclAG.</p> <p>I am comfortable with this assessment of representativeness as 'Moderate' and the overall ecological value of this habitat type as 'Very high'</p>
		Mixed tussock shrubland and exotic grassland	<p><i>Table 12 assessment in relation to representativeness</i>  <b>Representativeness: Low</b></p> <p><i>This vegetation community is unlikely to have existed in any similar form pre-human and is heavily dominated by exotic species.</i></p>

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			<p>Further comment: The main driver for the assessment of representativeness for this habitat type as ‘Low’ and not higher is because it is highly modified and exotic-dominated. The benchmark against which this is assessed is the best representation of native tussockland and native shrubland in the region and I consider this assigned habitat type to be far removed from that, noting that it includes reasonable areas of exotic grassland.</p> <p>I am comfortable with this assessment of representativeness as ‘Low’ and the overall ecological value of this habitat type as ‘moderate’</p>
		Mixed scrubland	<p><i>Table 12 assessment in relation to representativeness</i></p> <p><i>Representativeness: <b>Low</b></i></p> <p><i>Mixed scrubland at the site has a total woody vegetation coverage of 39 % and of that 61 % is exotic and 39% is native. This vegetation community is not representative of grey shrubland in the ED elsewhere where coverage and native dominance can be higher.</i></p> <p>Further comment: The main driver for this assessment of representativeness as ‘Low’ and not higher is because it is highly modified and exotic-dominated. The benchmark against which this is assessed is the best representation of native shrubland in the region and I consider this habitat type to be of considerably lower representativeness than that.</p> <p>I am comfortable with this assessment of representativeness as ‘Low’ and the overall ecological value of this habitat type as ‘moderate’</p>

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		Native dominant tussockland	<p><i>Table 12 assessment in relation to representativeness</i></p> <p><b>Representativeness: <i>Moderate</i></b></p> <p><i>In pre-human times, short tussockland would likely have been restricted to dry basins and river valleys (McGlone, 2001; Walker &amp; Lee, 2000). This vegetation community expanded following anthropogenic deforestation and is now typical for the ED, despite usually containing a high proportion of exotic pasture grasses amongst interstitial spaces. Twenty-eight Nationally or Regionally At Risk or Threatened plant species, including the At Risk – Declining celadon mat daisy and Festuca mathewsii subsp. mathewsii which are most common in this vegetation community within the ESA. Tussock is 28 % coverage in this vegetation community, likely limited by grazing, and 33 % native plant species overall. A site containing higher coverage of tussock and of native species overall would score high.</i></p> <p>Further comment: The main driver for the assessment of representativeness for this habitat type as ‘Moderate’ and not ‘High’ is because while native dominant, it is also highly modified. The benchmark against which this is assessed is the best representation of native tussockland in the region, which would occur in areas where livestock are excluded and mammalian browsers are at lower levels enabling more palatable species to establish and persist.</p> <p>I am comfortable with this assessment of representativeness as ‘Moderate’ and the overall ecological value of this habitat type as ‘High’</p>
		Native taramea	<p><i>Table 12 assessment in relation to representativeness</i></p>

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		herbfield and shrubland	<p><i>Representativeness: <b>Moderate</b></i></p> <p><i>This vegetation community, encompassing mainly taramea-tūmatakuru / matagouri but variable, has likely expanded following anthropogenic deforestation and loss of most tall tussocklands and is now typical in some high montane and low alpine areas of the ED. Highest proportion of native species coverage (48 %) compared to the rest of the vegetation communities within the ESA.</i></p> <p>Further comment: The main driver for the assessment of representativeness for this habitat type as ‘Moderate’ and not ‘High’ is because it is highly modified. The benchmark against which this is assessed is the best representation of Native taramea herbfield and shrubland in the region, which would occur in areas where livestock are excluded and mammalian browsers are at lower levels, enabling more palatable species to establish and persist.</p> <p>I am comfortable with this assessment of representativeness as ‘Moderate’ and the overall ecological value of this habitat type as ‘High’</p>
		Native dominant scrubland	<p><i>Table 12 assessment in relation to representativeness</i></p> <p><i>Representativeness: <b>Moderate</b></i></p> <p><i>There is no original forest left in the ED. The two forms of native dominant scrubland within the ESA (kānuka scrubland and grey shrubland), while not likely to be representative of an original ecosystem, are highly typical of present-day native vegetation communities within the ED.</i></p>

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			<p>Further comment: The main driver for assessing representativeness for this habitat type as ‘Moderate’ and not ‘High’ is because it is highly modified. The benchmark against which this is assessed is the best representation of Native dominated scrubland in the surrounding landscape and broader region, which includes areas where livestock are excluded and mammalian browsers are at lower levels so more palatable species can establish and persist.</p> <p>I am comfortable with this assessment of representativeness as ‘Moderate’ and the overall ecological value of this habitat type as ‘Very High’</p>
		Seepage wetlands	<p><i>Table 12 assessment in relation to representativeness</i></p> <p><b>Representativeness: <i>Moderate</i></b></p> <p><i>Condition and ‘naturalness’ are low to moderate, with high stock impacts and high coverage of exotic species greater than typical for lowland wetlands in the Dunstan ED and Central Otago ER.</i></p> <p>Further comment: The main driver for the assessment of representativeness for this habitat type as ‘Moderate’ and not ‘high’ is because it is highly modified. The benchmark against which this is assessed is the best representation of seepage wetlands in the region, which would occur in areas where livestock are excluded and mammalian browsers are at lower levels so more palatable native species can establish and persist.</p> <p>I am comfortable with this assessment of representativeness as ‘Moderate’ and the overall ecological value of this habitat type as ‘Moderate’</p>

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		Gully fens	<p><i>Table 12 assessment in relation to representativeness</i>  <b>Representativeness: <i>Low</i></b>  <i>Low to moderate condition and ‘naturalness’. Degraded condition is fairly typical of lowland/montane wetlands in the Dunstan ED and Central Otago ER.</i></p> <p>Further comment: The main driver for the assessment of representativeness for this habitat type as ‘Low’ and not higher is because it is highly modified. The benchmark against which this is assessed is the best representation of gully fens in the region, which would occur in areas where livestock are excluded and mammalian browsers are at lower levels so more palatable native species can establish and persist.</p> <p>I am comfortable with this assessment of representativeness as ‘Low’ and the overall ecological value of this habitat type as ‘Moderate’</p>
		Swamps and marshes	<p><i>Table 12 assessment in relation to representativeness</i>  <b>Representativeness: <i>Moderate</i></b>  <i>Condition and ‘naturalness’ are moderate relative to other wetlands in the Dunstan ED and Central Otago ER, with native Carex sedgelands common, and stock impacts mostly moderate.</i></p> <p>Further comment: The main driver for the assessment of representativeness for this habitat type as ‘Moderate’ and not ‘High’ is because it is modified. The benchmark against which this is assessed is the best representation of swamps and marshes in the region, which would occur in areas where</p>

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			<p>livestock are excluded and where swamps and marshes are larger and have higher indigenous dominance.</p> <p>I am comfortable with this assessment of representativeness as 'Moderate' and the overall ecological value of this habitat as 'High'</p>
	<p>Further information to illustrate conservatism in impact scale and correct concerns that impacts have been under-estimated or not considered</p>	<p>Alliance Ecology, RMA Ecology and Habitat NZ</p> <p>To address concerns that impacts have been under-estimated or not considered, further work has been undertaken to clarify the quantum of impacts and to illustrate that level of conservatism that has been applied. In essence, the assessment of effects has assumed a 610 ha Direct Disturbance Footprint in which habitat clearance was assumed. However, this is a considerable over-estimate on the basis that:</p> <ul style="list-style-type: none"> <li>• Of the 610 ha the actual disturbance is expected to be 483.1 ha (79%) with the remaining 21% constituting buffers. We can't rule out that certain areas within buffer habitat will be subject to habitat clearance and it is unclear the degree to which this is potentially counter balanced by areas proposed for actual disturbance that aren't disturbed.</li> <li>• All of the 610 ha is assigned a vegetation or habitat category and neither the existing Thompson-Gorge Road (1.52 ha), or existing farm tracks, or areas subject to consented mining exploration permits have excluded from the 610 ha. As such, the actual amount of habitat disturbance will be less than 483.1 ha, although the proportion of actual disturbance to buffer within the DDF will remain the same or similar.</li> </ul> <p>In addition to loss within the DDF, it is assumed that habitat loss associated with the construction of pest-exclusion fences is 2.93 ha (this habitat clearance was stated but was incorrectly assumed to be part of the DDF). The 2.93 ha of loss assumes the loss of all vegetation along the fence at average width of 5m, which is conservative and likely more than will be required, particularly since there are existing tracks along part of both sanctuaries</p>	

