

**BEFORE COMMISSIONER PANEL APPOINTED BY
MACKENZIE DISTRICT COUNCIL**

In the matter of the Resource Management Act 1991

And

In the matter of an application by Godley Peaks Station Limited to establish Homestead and Accessory Buildings at Godley Peaks Station, Lake Tekapo.

**EVIDENCE OF GLENN ALISTER DAVIS ON BEHALF OF
GODLEY PEAK STATION (ECOLOGY)**

16 March 2026

Duncan Cotterill

Solicitor acting: Katherine Forward / Derek
McLachlan
PO Box 5, Christchurch 8140

Phone +64 3 379 2430
katherine.forward@duncancotterill.com
derek.mclachlan@duncancotterill.com

MAY IT PLEASE THE PANEL:

Current Position

My full name is Glenn Davis. I am a Director and Principal Environmental Scientist of e3Scientific Limited. I have been in this position since 2007.

Qualification and Experience

- 1 I have over 25 years' postgraduate work experience in environmental management and hold a BSc in Ecology and MSc in Geography.
- 2 I have worked as a professional ecologist in Otago and Southland since 2007. During this time, I have completed ecological investigations for a wide range of projects for the tourism, agricultural, forestry and land development sectors and a provided ecological support to regional and territorial authorities in the development of biodiversity provisions in district plans, technical review of consulting reports and provide ecological advice to district and regional councils in compliance matters.
- 3 I have completed ecological assessments on many high-country properties in the South Island, provided ecological advice in high tenure review processes and supported LINZ in the review of pastoral lease applications for vegetation disturbance. This experience provides me with a sound understanding of the ecological values within our high-country environments and also the challenges associated with farming in these areas.

Environment Court Practice Note

- 4 While this is a Council Hearing, I acknowledge I have read and am familiar with the Environment Court's Code of Conduct for Expert Witnesses, contained in the Environment Court Practice Note 2023, and agree to comply with it.
- 5 Other than where I state that I am relying on the advice on another person, I confirm that the issues addressed in this statement are within my area of expertise. I have not omitted to consider material that facts known to me that might alter or detract from the opinions that I express.

ASSESSMENT OF PROPOSAL

Scope of Evidence

- 6 The scope of my evidence includes:
 - 6.1 Setting out the ecological context of Godley Peak Station.

- 6.2 Methodology undertaken to map the vegetation communities and determine ecological values.
- 6.3 Setting out the ecological values of Godley Peak Station and the documented ecological attributes as set out in Godley Peak Station Farm Biodiversity Plan (**FBP**).
- 6.4 Setting out the context of the proposed FBP protections and enhancements for Godley Peak Station.
- 6.5 Setting out the ecological values of the land consisting of the proposed homestead and access road upgrade on Godley Peak Station.
- 6.6 Ecological effects of the proposed construction of a homestead and access road upgrade on Godley Peak Station.
- 6.7 Identifying landscape mitigation planting and measures required to ensure successful establishment.
- 6.8 Response to Planners Report (section 42A) and conditions.

ECOLOGICAL CONTEXT

- 7 Godley Peaks Station is located approximately 15 km north of Lake Tekapo township at the end of Godley Peaks Road. The Station was formerly part of Godley Peaks Pastoral Lease that covered an area of 14,493 hectares (ha). In 2021, the property owner accepted a Substantive Proposal from the Crown which resulted in the return of 11,883 ha of high country to the Crown for conservation purposes and the remaining 2,676 ha being designated as freehold land.
- 8 Godley Peaks Station lies at the western end of the 'Mackenzie Basin', the largest intermontane basin east of the Southern Alps. The farm ranges in elevation from approximately 700m asl at the foreshore of Lake Tekapo to a high point of 1,178m on the moraine bench on the southern slopes of Mistake Peak.
- 9 The station straddles the boundary of the Goldey and Tekapo Ecological Districts (ED). Hill country to the north of the Station lies within the Godley ED and includes the upper slopes of the alluvial fan above the Cass River, the middle reaches of Mistake River and the hillslopes east of Mistake River. This ED includes high mountains and glaciated valleys and is in the rain shadow of the Main Divide (1000-5000mm p/a), but with slightly higher rainfall than

the rest of the Station. Vegetation was likely affected by infrequent fires spilling over from drier areas to the east.

- 10 The rest of the Station is located within the Tekapo ED, which includes the relatively dry (600-1600mm p/a rainfall), more recently deposited extensive subdued landforms of moraine and fluvial origin (McEwen 1987). Pre-human vegetation of this district was strongly influenced by a harsh intermontane basin climate and infrequent fires.
- 11 Since the late 1850's, most of the Station has experienced modification with burning and grazing of tussock country, rabbit infestations and the spread of introduced weeds.
- 12 Today, short tussock grasslands are the most common native vegetation community occurring on the undulating moraine and outwash surfaces. Wetlands with varying composition persist in depressions across this landscape. Tall tussock grassland dominates the hillslopes. Shrublands are regenerating in small gullies on the main hillslopes and on the lake terrace escarpment near Lake Tekapo. The more extensive areas of shrubland are regenerating on steep slopes below Mistake Peak and the steep terrace escarpments above the Mistake River.
- 13 Four of the five major landforms on Godley Peaks Station are considered naturally uncommon ecosystems including alluvial fans, alluvial outwash surfaces, braided riverbeds and moraine surfaces.

METHODOLOGY FOR DOCUMENTING THE ECOLOGICAL VALUES OF GODLEY PEAK

- 14 In order to assess the ecological values of Godley Peak Station we completed an assessment of indigenous biodiversity on Godley Peaks Station using existing ecological information available for the Station and similar habitats nearby (particularly the Godley Peaks Conservation Resources report of 2003).
- 15 This work was supported by visiting the site on the 20 February 2024 and 11-12 March, 2024. The field survey included visiting the full range environments across the station and recording botanical information to advance the understanding of the ecological values of the property.

ECOLOGICAL VALUES OF GODLEY PEAK STATION

- 16 I do not reproduce comprehensive summary of ecological values as part of this evidence, but refer to Section 3 of the FBP, however discuss application to the Environment Canterbury Regional Policy Statement (**RPS**).

Ecological significance

- 17 The RPS provides criteria to support a standardised approach to the assessment of 'ecological significance'. A habitat is considered 'ecological significant' if it meets one or more of the four criteria. Ecological significance was assessed for the 14 vegetation communities and habitats present on Godley Peak station.
- 17.1 Representativeness: All indigenous vegetation across the 14 vegetation communities were characteristic of the natural diversity of the Tekapo and Godley ecological districts and are therefore consistent within the representativeness criteria.
- 17.2 Rarity/Distinctiveness: All five landform units have rare and/or distinctive characteristics. The lower section of the moraine and alluvial outwash surfaces lie within an environment that has less than 20% indigenous vegetation cover remaining. All associated indigenous vegetation is therefore considered rare with respect to this assessment criteria. Furthermore, of the five major landforms on Godley Peaks Station, four (i.e., moraine, alluvial fan, alluvial outwash and braided rivers) are listed as originally rare ecosystems. The riverine system includes nationally 'Endangered' braided riverbeds and 'Critically Endangered' outwash gravels.
- 17.3 Diversity and Pattern: Four of the five landform types on Godley Peaks Station have significant diversity and pattern with diverse vegetation communities (moraine surfaces, riverine surfaces, hillslopes, and alluvial outwash surface). The alluvial fan was considered not to have significant diversity and pattern, with only fescue short tussock grasslands present on this landform unit, patterns and diversity relating to environmental gradients are minimal.
- 17.4 Ecological Context: All five landform units on Godley Peaks Station are significant with respect to ecological context. These landforms all provide important linkages between high altitude and low altitude habitats, as well as wet and dry habitats, enabling movement of biota

across the station and the broader landscape. The riverine systems and alluvial outwash surfaces provide important breeding habitat for (sometimes rare) birds, freshwater fish, lizards and invertebrates. The two lagoons (Raupo and Mick's) also provide important breeding habitat. The hillslopes include the southern-most edge of regenerating totara forests which are unique to the area on the east side of the Southern Alps where there is a natural gap in the native beech forests. These shrublands provide a buffer to the more extensive shrubland communities to the north.

- 18 In summary, the indigenous vegetation and habitat situated within undeveloped areas of the property contain at least some values that are consistent with the Environment Canterbury assessment criteria. All indigenous vegetation present was at least in part representative of the natural diversity of the Tekapo and Godley Ecological Districts, and the majority of the indigenous communities are in an environment with less than 20% indigenous vegetation cover remaining, contain rare or threatened species, and are situated within a naturally rare environment. Appendix A of the FPB outlines areas the broad area containing significant indigenous vegetation and habitat on Godley Peak Station.

GODLEY PEAKS STATION BIODIVERSITY MANAGEMENT PLAN

- 19 I developed the Godley Peak Station **FBP** with the objective of protecting and enhancing the biodiversity values of the property. The FBP has significantly advanced the ecological knowledge of the property including the identification of rare plant communities and rare and threatened plant species that were previously unrecorded. This knowledge supports Godley Peak Stations management of biodiversity values and together with extensive protection and restoration commitments will contribute to the maintenance and enhancement of ecological values across Godley Peak Station.
- 20 The following sets out the proposed suite of measures designed to achieve this stated objective.

Retirement From Grazing

- 21 The retirement of some areas with high ecological value from grazing activities. These areas have been specifically identified as they demonstrate high value or regenerative potential that can be protected or enhanced. Retirement of this area of current farmland will protect identified ecological values through separation from land use activity and enhance the existing values through natural regeneration over time.

- 22 The FBP includes: ¹
- 22.1 2.5 km of new fencing that would exclude grazing from approximately 70 ha of land in the upper Mistake River catchment.
 - 22.2 500 metres of new fencing that will result in retiring approximately 3 ha of land in the northern part of McCabes block, a diverse shrubland with good representation of a pre-settlement vegetation community.

Dryland cushionfield/prostrate shrub monitoring

- 23 The field survey identified areas of the dryland cushionfield/prostrate shrubland on the moraine surface that contain a range of threatened and at-risk species.² The FBP proposes to complete a baseline survey of the moraine to fully understand the distribution and extent of the vegetation and implement a 5 yearly monitoring programme to assess if the management regime is maintaining the diversity and coverage of this community.
- 24 The objective of the monitoring is to understand whether there is any change to this community in response to environmental conditions (climatic, weed and pest conditions) and/or farm management. ³

Restoration Planting

- 25 Restoration of wetlands through active planting regime and stock exclusion:
- 25.1 Godley Peak Station is in the process of fencing wetlands and a planting programme (28,100 plants) to assist with the function and ecological enhancement of wetlands was proposed within the intensively farmed alluvial outwash surface. The focus of these plantings will be to improve nutrient cycling, slow the flow of water and increase biodiversity through utilising species that are often no longer present.
 - 25.2 In addition, the station proposes to plant the perimeter of the irrigation pivots with indigenous species to bring back indigenous plants back onto the intensively developed outwash surface. Based on length of planting approximately 19,200 plants would be installed.

¹ Appendix F, Figure 8, page 45

² Appendix F, Figure 6

³ Appendix F, page 52

Lake face planting

- 26 The lake face⁴ has lost many species that were historically present. Godley Peak Station proposes to plant a further 1000 plants within the lake face matagouri shrubland community to enhance the biodiversity of the lake faces near the proposed house site. For clarity, these plants provide ecological enhancement, although I understand that Ms Pfluger also considers these plantings to hold landscape mitigation value as well.

Weed Control

- 27 Woody weed control and wilding conifer control is a focus for the station and work to remove crack willow from the property is a priority. Crack willow forms dense monoculture thickets in wetlands and waterways of the property, impacting the natural hydrology and outcompeting indigenous species. The objective of the willow control programme is to remove all existing mature trees and stands of willow by the year 2030 with a combination of methods.
- 28 The majority of the control work will be undertaken using the cut and paste method (felling the tree/any growing shoots and applying herbicide to the stump). Where the herbicide poisoning of the trees is not effective and new growth is observed following control work additional rounds of herbicide application to the cambium layer (exposed by either peeling back the layers of bark or drilling into the tree) near the site of growth will be required. Where saplings are present application of a suitable herbicide to the foliage can be used. All wilding conifers within the area will be controlled using the cut and paste method, where saplings are present these can be removed by hand ensuring all roots are removed. All areas mapped as significant indigenous vegetation will be monitored for the encroachment of wilding conifer species, and where wilding or invasive species arise within the monitoring zones they shall be removed.

Pest and Predator Control

- 29 Godley Peak station has an ongoing rabbit control programme, and a commercial hunting business that removes up to 500 Himalayan thar (*Hemitragus jemlahicus*) a year from the property. Left unmanaged these populations can cause significant damage to the high alpine vegetation communities. The FBP secures ongoing pest and predator control work which complements the existing hunting/trapping network.

⁴ Appendix F, Figure 9

- 30 In summary, I consider the implementation of the FBP will represent a significant contribution to protecting and enhancing the biodiversity of Godley Peak Station.

ECOLOGICAL EFFECTS OF THE ACCESS ROAD AND HOMESTEAD

Assessment methodology

- 31 I walked over the proposed homestead site on the 20 February 2024 and noted that the site is situated in an intensively developed paddock that was covered in bare ground and stubble of the former crop. This was confirmed by a detailed survey of two 2 x 2 metre quadrats placed in the development footprint by e3scientific ecologist Liam Salemink-Waldren.

Assessment Results

- 32 The survey was undertaken on the 27th of September 2024 and recorded the quadrats to be sparsely vegetated with the dominant species being barley grass (*Hordeum vulgare*) and perennial ryegrass (*Lolium perenne*). In addition, a number of exotic herbs were recorded including stork's bill (*Erodium* sp.), nettle (*Urtica urens*), and hawksbeard (*Crepis capillaris*). There is no indigenous vegetation present that will be impacted by the development of the homestead.
- 33 With respect to faunal values associated with the development footprint the existing cover provides no cover for lizard species and therefore no suitable habitat. Furthermore, the disturbance regime of the farming operations will prohibit the development of lizard habitat. Likewise, there is no suitable habitat for avifauna species given the farming operations with only occasional foraging habitat present.

Access Track

- 34 An existing well formed farm track is proposed as the access road for the homestead. The farm track traverses through a small portion (northern extent) of a mapped Site of Natural Significance (SON) associated with the Cass River. My site investigation found that the area of existing formed track does not contain vegetation of ecological significance. The vegetation adjacent to the existing track through the SON consists of an exotic herbfield consisted of sheep's sorrel, mouse ear chickweed, mallow, sweet vernal, red-stemmed storks bill (*Erodium cicutarium*), woolly mullien (*Verbascum thapsus*), hare's foot trefoil (*Trifolium arvense*), parsley piert (*Aphanes arvensis*), viper's bugloss (*Echium vulgare*) and shepherd's purse (*Capsella*

bursa-pastoris). My understanding is that the application does not seek to widen/expand the existing formed track.

- 35 Outside of the SON and leading up to the proposed homestead is an area of intensively developed grazed land consisting of browntop (*Agrostis capillaris*), yarrow (*Achillea millefolium*), sheep's sorrel (*Rumex acetosella*), mouse ear chickweed (*Cerastium fontanum*), mallow (*Malva* sp.), cocksfoot (*Dactylis glomerata*), sweet vernal (*Anthoxanthum odoratum*), white clover (*Trifolium repens*) and scotch thistle (*Cirsium vulgare*). No indigenous species were recorded within this area of developed pasture.
- 36 The habitat present in the access road and proposed homestead is not suitable for indigenous herpetofauna species as it provides no cover for lizard species and therefore no suitable habitat. Similarly, no suitable habitat is present for indigenous avifauna species given the disturbance regime of farm operations and only occasional foraging habitat present. Of the species likely to utilise the land for foraging purposes all are classified as Not Threatened with the exception of the At Risk – Declining South Island pied oystercatcher/tōrea (*Haematopus finschi*).
- 37 Notwithstanding the exotic nature of the vegetation and low faunal values along the access track, I understand there is no requirement to upgrade the farm track. I therefore conclude that there will be no change in ecological effects associated with use of the track to access the proposed homestead site.

Creek Crossing

- 38 Installation of a culvert is proposed within a creek along the access track to support access to the homestead. Installation of the culvert can comply with the permitted activity rules of the Regional Plan (Rule 5.137 & 5.141) for permitted structures and associated discharges.
- 39 For completeness, I assessed the species present at the creek crossing location and do not consider vegetation present to exhibit wetland characteristics. I do not consider the crossing to be in a wetland.

MITIGATION PLANTING

- 40 I have reviewed the revised landscape plan filed with Council on 23 January 2026 and provide the following comments.
- 40.1 The seven species groups generally include indigenous tussock, shrubland and tree species that are present or would likely have

been present within the Mackenzie Ecological Region. The only exception would be *Pittosporum eugenioides*. This species could be changed to *Pittosporum tenuifolium* if plant species from the Ecological Region was required. Otherwise, I have reviewed and maintain position that the planting palettes identified with Mr Baxter's landscape plans are appropriate.

- 40.2 The beech and pittosporum species included for screening would not have originally been present on the outwash surface. However, they have been selected for speed of growth and I can confirm that a height of 2.5 metres in 3 years is a reasonable expectation providing the plants are irrigated and sheltered in accordance with the planting recommended planting/best practice identified on Mr Baxter's plans.⁵
- 40.3 I note the temporary shelter belt planting of *Pinus attenuata* x *radiata* is proposed to assist with the screening of buildings and shelter the indigenous plantings. I support the planting of the pine shelter belt as it will support the establishment of the native plantings.

Response to Planners (section 42A Report)

- 41 I have reviewed the planners report and attached ecological peer review and make the following comments.
- 42 The ecological peer review considers the ecological assessment completed to support the application lacks detail to draw a conclusion on the effects of the application. The peer review makes comment that my Ecological Report is 'light on detail'⁶ – I consider my report to be appropriate and proportionate for the following reasons:
- 43 In relation to the access road:
- 43.1 The access road alignment is already well formed, currently well used for farming purposes and minimal work is required.
- 43.2 The access road is approximately 3000 metres in length. Most of the formed road (2700 metres) travels through intensively developed farmland. No indigenous species were recorded, nor would I expect to find indigenous species in this community.

⁵ Mr Baxter Evidence,

⁶ Ecological Peer Review at section 3

- 43.3 Approximately 300 metres of the access road moves through an exotic herbfield community. Although not recorded during the survey undertaken at the end of September (Spring) I agree with the ecological peer review that the exotic herb field could contain indigenous species and that some species (if present) would (if present) be more apparent later in Spring. Notwithstanding this point, the road alignment through this area is already formed for farming purposes and no additional disturbance is required.
- 43.4 Degraded natural inland wetlands proposed for restoration are located in close proximity to the formed farm access road near the Homestead Pond. The access road is well formed through this area and there is no earthworks or disturbance required.
- 43.5 I do support the proposed condition in relation to the access track, which the evidence of Mr Vivian adopts:

“The access must be of metalled formation and not exceed a formed width of 3.5m.”

- 44 The ecological peer review generally accepts the FBP is a comprehensive document. The review comments are based on providing alternative options for biodiversity management to potentially achieve better biodiversity outcomes. I address some of these comments below.
- 44.1 The peer review suggest retirement of the McCabes Block may result in unintended weed growth including wilding pine establishment with the removal of stock. I agree that stock play a role in controlling woody weeds and that woody weeds could expand if left unchecked. Notwithstanding this point, weed control is a core pillar in the management of the farm and close monitoring of the McCabes Block will be undertaken. I consider providing the block is closely monitored that the ecological benefits of indigenous shrubland expansion across the block can be achieved.
- 44.2 The peer review suggests that the restoration planting around the pivot irrigators would better placed in riparian areas such as along Mistake Creek. Planting of irrigation perimeters is proposed as they are areas that will receive additional water that will support plant establishment. Soils are also well formed compared to the riparian margins of Mistake Creek which are rocky substrate. I also note that some of the pivot irrigator plantings are in close proximity to wetlands

which provides some connectivity to wider habitat. I maintain the position that these proposed plantings are preferable.

- 45 The peer review suggests restoration planting of wetlands may have unintended consequences for marsh arrow grass (*Triglochin palustris*) and other low stature species. I agree with this concern but note that many of the wetlands are highly degraded and dominated by exotic rushes and grasses. Maintaining these population was anticipated as part implementation of the FBP process. I consider that this can be managed through the FBP production and certification process.
- 46 The peer review largely agrees with the plants selected into the wetlands except for the use of *Olearia lineata* based on the reviewers opinion that this species occurs in lowland to montane environments up to 300 metres asl and is therefore not suitable for planting on the site. I disagree with the peer reviews recommended change from *Olearia lineata* to *Olearia odorata* for two reasons.
- 46.1 Firstly, I have surveyed *Olearia lineata* in Otago and can confirm this species grows at least up to 600 metres elevation and I see no reason why it would not grow to high elevations. I am also aware of *Olearia lineata* growing to approximately 600 metres asl in the Upper Rakaia and Rangitata catchments.
- 46.2 Secondly, in my experience *Olearia lineata* grows well in wet soils and on wetland margins and is better suited to wetland planting that *Olearia odorata*.
- 47 The peer reviewer agrees with most of the plant species proposed for the Lakeside plantings but suggests the exclusion of a number of species including mountain totara, mountain toatoa, bog pine and *Olearia lineata*. As discussed, I disagree with the peer reviewer that *Olearia lineata* is not ecologically appropriate as I am aware that this plant grows to much higher elevations than *suggested* and generally performs well in restoration work I have overseen. I also disagree with the peer reviewer that mountain totara is not suitable. The planting site is within the climatic range that this species is known to occur and is present on the lower slopes of Mistake Peak. Notwithstanding the above, we appear to largely be in agreement regarding the species mix for the various restoration areas.
- 48 In addition, Ms Pfluger makes recommendation that the lakeface plantings are to be incorporated in the landscape master plan. I have no issue with this

recommendation. I do note these plantings have been proposed for biodiversity enhancement and not intended for immediate fast growth landscape mitigation. As a result, the fast growth performance requirements applied to other mitigation areas do not apply to this specific area of lake face planting, which is intended to develop naturally over time. The species selected are tolerant of dry conditions however the use of plant shelters and mulch over 10 cm thick is recommended to protect the plants from high winds and pests and improve soil moisture retention. I consider that proposed condition 8 (landscape planting and maintenance plan) will appropriately ensure that appropriate measures are utilised.

Conditions

49 I have reviewed the proposed consent conditions, included within the Evidence of Mr Vivian, in particular condition (3 – indigenous vegetation); Condition 6 (lakeface planting); condition 7-9 (LPMP) and conditions (27-29 Farm Biodiversity Plan).

CONCLUSIONS

50 The access track and homestead are situated on areas of the farm that have been formed for farm access or are intensively developed. As such, there is no requirement to disturb indigenous vegetation.

51 The FBP has identified significant ecological values (including threatened and at-risk plant species) that were previously unrecorded. This work ensures the farming operation is now cognisant of these values. The farm has committed to a full survey of the cushion field/prostrate shrubland on the Moraine environment ensuring these sensitive communities are managed and monitored appropriately contributing to the management of biodiversity in the Mackenzie District.

52 In addition, implementation of the FBP retires areas of the farm to support shrubland expansion, incorporates a significant ecological restoration programme and weed and pest control work. The biodiversity managed through the FBP represents a considerable contribution and should be viewed as a significant ecological benefit to Godley Peak and the wider Mackenzie District.

Glenn Davis

16 March 2026