Memorandum

To: BOGP Expert Panel

From: Santana Minerals Limited

Date: 17 August 2026

Re: Response to Memorandum of Counsel for ORC regarding spring annuals survey

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This memorandum addresses the comments made in the Memorandum of Counsel for ORC regarding spring annuals survey. Paragraphs 1 to 3 of the memorandum were administrative. Paragraphs 4 to 10 make comments on the survey which are addressed below. Since the points relating to spring annuals surveys overlap with other questions from RFI 11 this memo is provided to provide an overall context for the RFI11 response.

4. As the Panel noted at [10] of Minute 40, the Survey results indicate that the population and distribution of the four spring annuals species (Species) surveyed are likely to be greater than indicated in initial surveys provided by the applicant.

The 2025 survey showed substantial populations of the species distributed from Dry Creek in the north to State Highway 8 in the west, outside of the DDF (Figure 1). There are further large areas of potential spring annual habitat on Ardgour Station and private land south of SH8 between Bendigo Loop Rd and Cromwell that have not been surveyed. MGL has identified up to 3000 hectares of potentially suitable[1] habitat for survey in 2026, including the Direct Disturbance Footprint (DDF). More than half has not been previously surveyed.

Increasing the search area and intensity has resulted in more populations being identified and many more individuals estimated (Table 1). MGL expects the expanded survey in 2026 to further increase the number and areal extent of populations.

National Population including MGL survey	**2024**	**2025**
Ceratocephala pungens[2]	647	13,150
Myosotis brevis[3]	35,200	70,115
Myosaurus minimus subsp novae zealandiae[4]	Not recorded	153,130
Area survey (hectares)	266	895

Table 1 Known National Population for three spring annuals.

[1] Suitable habitat includes north to west facing slopes, depleted herfield and grassland and sparsely vegetated habitats as identified through desk top mapping. Permission to access from private landowners is required for some areas. Experienced botanists at time of survey determine suitability or extent of area surveyed.

[2] Part of the national population data is drawn from: Ewans, R. (2025, December 2). Summary: Ceratocephala pungens (Ref. OIAD-5832). Department of Conservation. The other part is from the 2024 and 2025 surveys.

[3] Part of the national population data is drawn from: Prebble, J. M., Symonds, V. V., Tate, J. A., & Meudt, H. M. (2022). Taxonomic revision of the southern hemisphere pygmy forget-me-not group (Myosotis; Boraginaceae) based on morphological, population genetic and climate-edaphic niche modelling data. Australian Systematic Botany, 35(1), 63–94 The other part is from the 2024 and 2025 sureys

[4] Population is 2025 survey count

5. Importantly, this includes within the Project's direct disturbance footprint (DDF), which had the highest concentration of Species of all the areas surveyed; the Survey records that the highest concentrations of Ceratocephalus pungens (Threatened – Nationally Critical), Myosurus minimus (At Risk – Declining), and Myosotis brevis (Threatened – Nationally Vulnerable) were located within the DDF.

Referring to Table 2 below, while the species listed were all found in the DDF larger populations of each species are found outside of the DDF in the surrounding landscape:

The 2025 survey:

- increased the known population of *Ceratocephala pungens* by 20 times and showed that 60% of the known population is outside the DDF.
- doubled the known population of *Myosotis brevis* and showed that 79% of the known population is outside the DDF.
- Showed that 75% of the known population of *Myosurus minimus* subsp. *novae-zelandia* population is outside of the DDF (the national population of M. minimus was not previously recorded prior to this survey).

2025 survey data	**National Population** (%)	**Outside DDF** (%)	**DDF (inc. CIT pit)** (%)	**CIT pit** (%)	**DDF – CIT** (%)
Ceratocephala pungens	13,150 (100%)	7910 (60%)	5,220 (40%)	2,725 (19%)	2,725 (21%)
Myosotis brevis	79,115 (100%)	62,605 (79%)	16,605 (21%)	6,895 (9%)	9710 (12%)
Myosurus minimus* subsp. *novae-zelandiae	153,130 (100%)	114,600 (75%)	38,530 (25%)	35,635 (23%)	2,895 (2%)

Table 2: Known National Population for three spring annuals by location

MGL draft condition (Schedule One Common Conditions *C103)* prevents the disturbance of the CIT pit until the population within the CIT pit boundary is less than 1% of the known population (i.e. known population outside of the DDF).

If the CIT pit is not mined, based on current known individuals then 79% of *Ceratocephala pungens and* 88% of *Myosotis brevis* and 98% *of Myosurus minimus* subsp *novae zealandiae* will not be disturbed by the BOGP. As more populations are discovered in future surveys this proportion of the population outside the DDF is likely to increase.

6. Additionally, the Survey identified that all Species were present within the early disturbance CIT Open Pit Area (in particular, large numbers of Myosotis brevis).

All three species are in the CIT early disturbance area including (2025 survey):

- *Ceratocephala pungens* – one population of approximately 5 plants
- *Myosotis brevis* – three populations of approximately 5 plants and one population of approximately 750plants
- *Myosurus minimus* subsp novae zealandiae - one population of approximately 300 plants

For perspective total known populations are:

- *Ceratocephala pungens* – 13,150
- *Myosotis brevis* – 75,115
- *Myosurus minimus* – 153,130

7. Large areas of the DDF are yet to be surveyed. Based on the Survey results, Ms Anderson considers it highly likely that unsurveyed areas of the DDF contain significant populations of the Species (including in environments outside of cushionfields), reinforcing that the DDF is a "hot spot" for these Species.

All of the DDF was assessed for potential habitat and was surveyed by botanists who are experienced in spring annual surveys realistically expected to find spring annuals. Figure 2 shows populations in areas surveyed in 2024 (blue) and 2025 (green). Some areas of potential habitat in the DDF on Ardgour Station were not surveyed in 2025 due to lambing restricting access, however they were surveyed in 2024. The 2024 survey was very late in the season so probably missed some populations, particularly of *Ceracephala pungens*

In 2025, on accessible areas of the DDF, the survey deliberately included areas not surveyed in 2024 (i.e. higher elevation and dry spurs) as a methodology/assumption check. Most of the high potential habitat has been surveyed several times.

All three species were mainly found on sparsely vegetated silty soils, in shallow hollows on ridges and just off the tops of ridges, in cushionfield and in other open non-grassy vegetation. *M. brevis* and *M. minimus* subsp. novae-zelandiae were also found in kānuka woodlands. Kānuka woodlands are not found on the DDF.

Areas not surveyed in the DDF were generally south or southeast facing, or had a thick cover of scrub (olearia, matagourie), tussock or improved pasture. Interestingly spring annuals were found on the north western faces of Ardgour Station hill country that were mapped as exotic grassland.

Both the 2024 and 2025 surveys had constraints as described in the reports *RMA Ecology Vegetation Values Assessment (2025)* and *Results of a survey of spring annual herb species on Bendigo and Ardgour Stations, 2025 (2026)*. The 2024 survey was late in the season after lambing (November) and while some populations of spring annuals had senesced and

potentially disappeared by the time of the survey the areas indicated where later growing spring annuals are located. The 2025 survey areal extent was restricted due to lambing. However since the 2025 survey was substantially larger and better aligned with the growing season substantially more populations were found throughout the Bendigo area from State Highway 8 in the west to Dry Creek in the north.

The populations identified in 2024 on areas that were not surveyed in 2025 are indicative of where populations are likely to be found in future surveys. The majority of populations are within the CIT pit which is protected by condition C103 or near the CIT pit which will not be disturbed unless CIT pit is mined (Figure 3).

It is also likely that unsurveyed areas outside of the DDF also contain significant populations of spring annuals as evidenced by the populations found during the 2025 survey on the northwestern faces of Ardgour Station hill country north of the DDF and on private land around vineyards and in kanuka shrubland west of BOGP (Figures 4 and 5).

8. ***In light of these findings, Ms Anderson considers that the impacts of the Project on the Species will not be predominantly limited to the proposed CIT Open Pit Area. Self-evidently, the applicant's proposal to exclude the CIT Open Pit Area from open-cast mining unless it is demonstrated that populations within that footprint represent less than 1% of the known populations within the Dunstan Ecological District will not assist to address the project's effects on the Species elsewhere.***

The effects of the project on known populations within the Dunstan Ecological District are limited by the disturbance footprint. As discussed above there are substantial known populations outside the DDF. If the footprint is lessened by excluding the CIT pit area from mining then the effects are further lessened.

Using Ceratocephala pungens, Threatened – Nationally Critical, as an example, based on the 2025 survey the known national population is currently 13,150. If CIT were to be mined in the future then the known national population must be greater than 249,500 as per the requirement of condition C103.

If no further populations were ever found (unlikely give the broadscale survey program) and all populations in the DDF outside of CIT were disturbed then the known national population would be 10,425, almost 80% of the known population.

	CIT pit population	**National population**	**CIT Outcome**
Ceratocephala pungens	2,495 (19%)	13,150 (100%)	Not mined
	2,495 (1%)	249,500 (100%)	Mined
Myosotis brevis	6,895 (9%)	79,115 (100%)	Not mined
	6,895 (1%)	7,911,500 (100%)	Mined

MGL has addressed the effects on spring annuals in several ways:

- Ongoing broadscale survey, which will be driven by the desire to increase the known population of *Ceratocephala pungens* and *Myosotis brevis* to enable mining. This work alone has the potential to move these species to lesser Threatened categories.
- Research into the life cycle (germination, flowering and pollination requirements) and habitat requirements for spring annuals via the Applied Research Plan.
- Research into propagation and the establishment of new populations via the Applied Research Plan.
- Research into the establishment and maintenance of cushionfield, one of the known habitats for spring annuals vis the Applied Research Plan.

Successful mining of CIT pit means that MGL would have not only successfully a delivered 99% increase in known populations of *Ceratocephela pungens and Mysotis brevis* but also 10 years of botanical and ecosystem research. If CIT is not mined there will still be 10 years of targeted research, 12-14 years of targeted surveys and at worst, a loss of approximately 20% of *Ceratocephela pungens* and 9% of *Mysotis brevis* individuals.

If BOGP were not to occur the outcomes for spring annuals are more uncertain. Ongoing broadscale population surveys (post 2026) will not be undertaken; research will not be funded. Topdressing and over sowing will likely continue, weeds will not be managed. BOGP presents a unique opportunity to substantially grow and develop the understanding of spring annuals over a relatively short period. Without BOGP the residual effect will likely remain high negative through ongoing active farm management, vineyard and other developments but without any of the broadscale surveys or research being proposed through the BOGP.

9 As such, Ms Anderson considers the Survey indicates that the impact of the Project on the Species is likely to have been underestimated by the applicant's experts. Further Spring surveys would be required of the entire DDF, prior to any disturbance activities, to understand the full extent of the effects of the Project.

The expert assessment and additional spring survey results provided demonstrate that the impact of the project on the species has not been underestimated by experts for MGL. The analyses in the responses to the questions above show that further spring surveys of the DDF are not required prior to disturbance activities.

10. ORC has considered whether there are any practicable consent conditions that could substantially reduce these effects while enabling the proposed mining activities to proceed. To date it has not been able to identify any such conditions.

MGL disagrees with the conclusion that no practical conditions are available. The proposed comprehensive condition set directly addresses uncertainty and manages effects. The conditions require:

- continued spring annual survey programmes;
- applied research;
- assessment against success criteria;
- monitoring and reporting
- adaptive management;
- independent peer review;
- contingency actions;
- compensation triggers;
- the CIT protection mechanism.

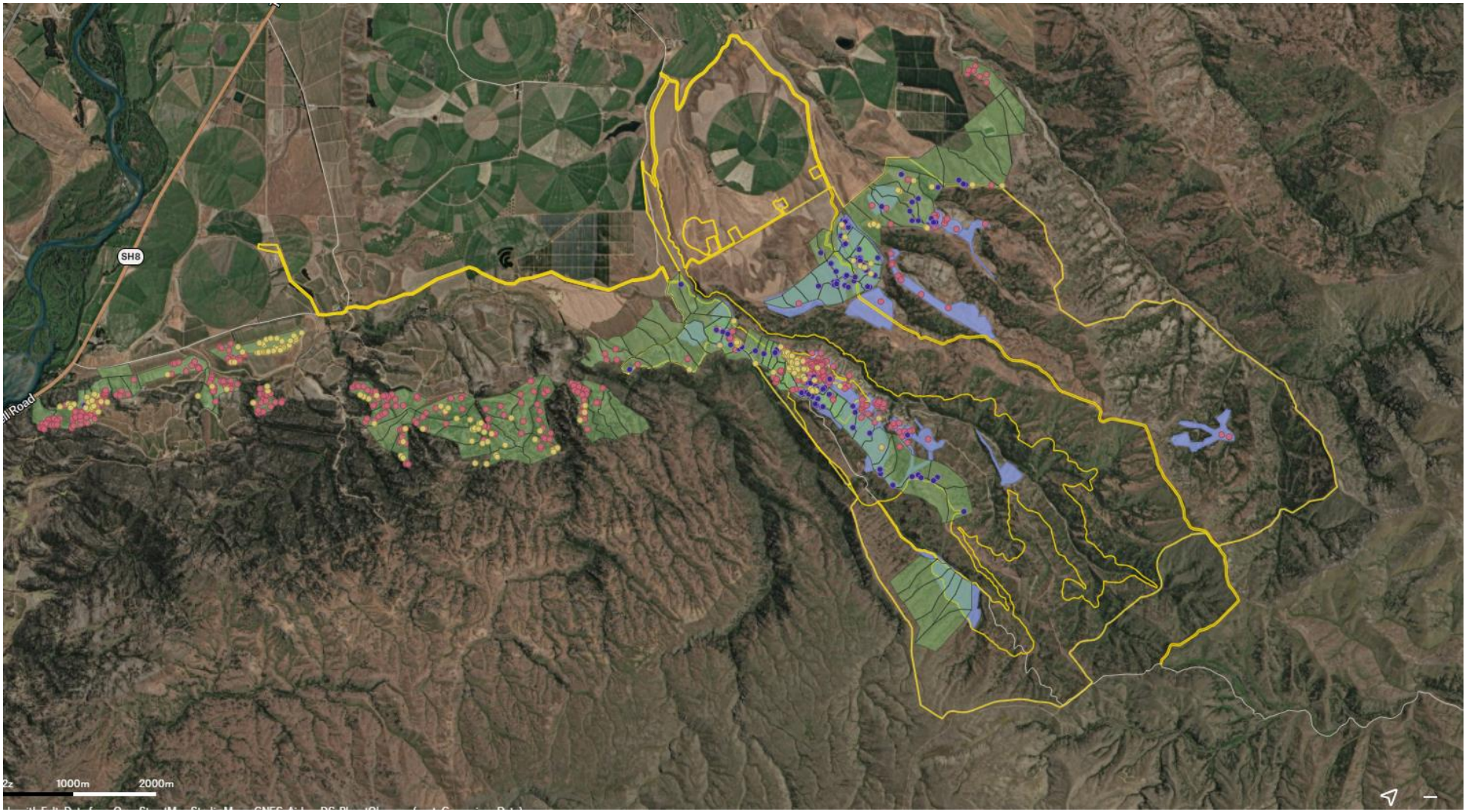

Figure 1: Area Surveyed in 2024 (blue) and 2025 (green) showing population locations Myosotis brevis (pink), Ceratocephala pungens (blue), Myosurus minimus (yellow)

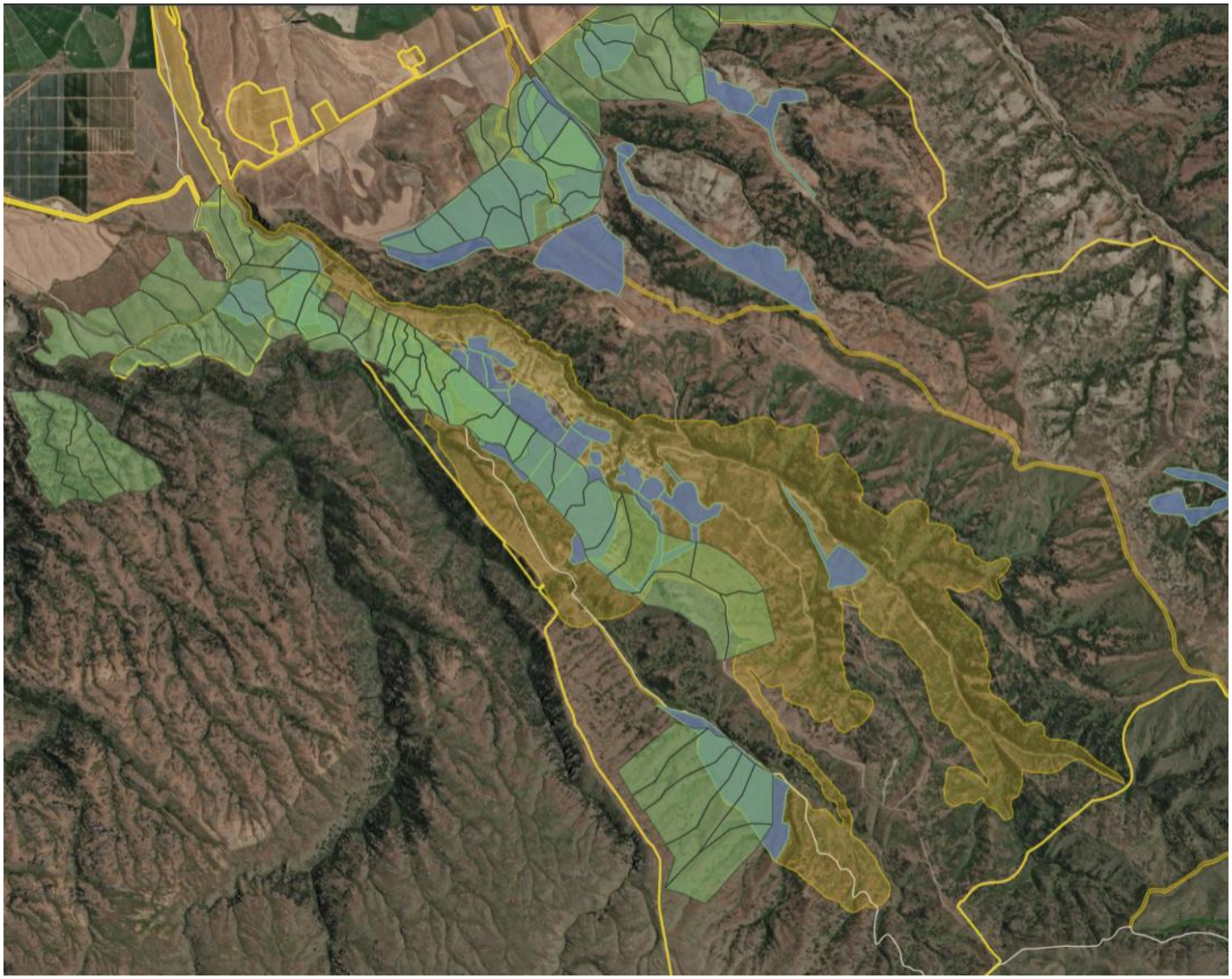

Figure 2 Survey areas on the DDF (mustard), 2024 (blue), 2025 (green)

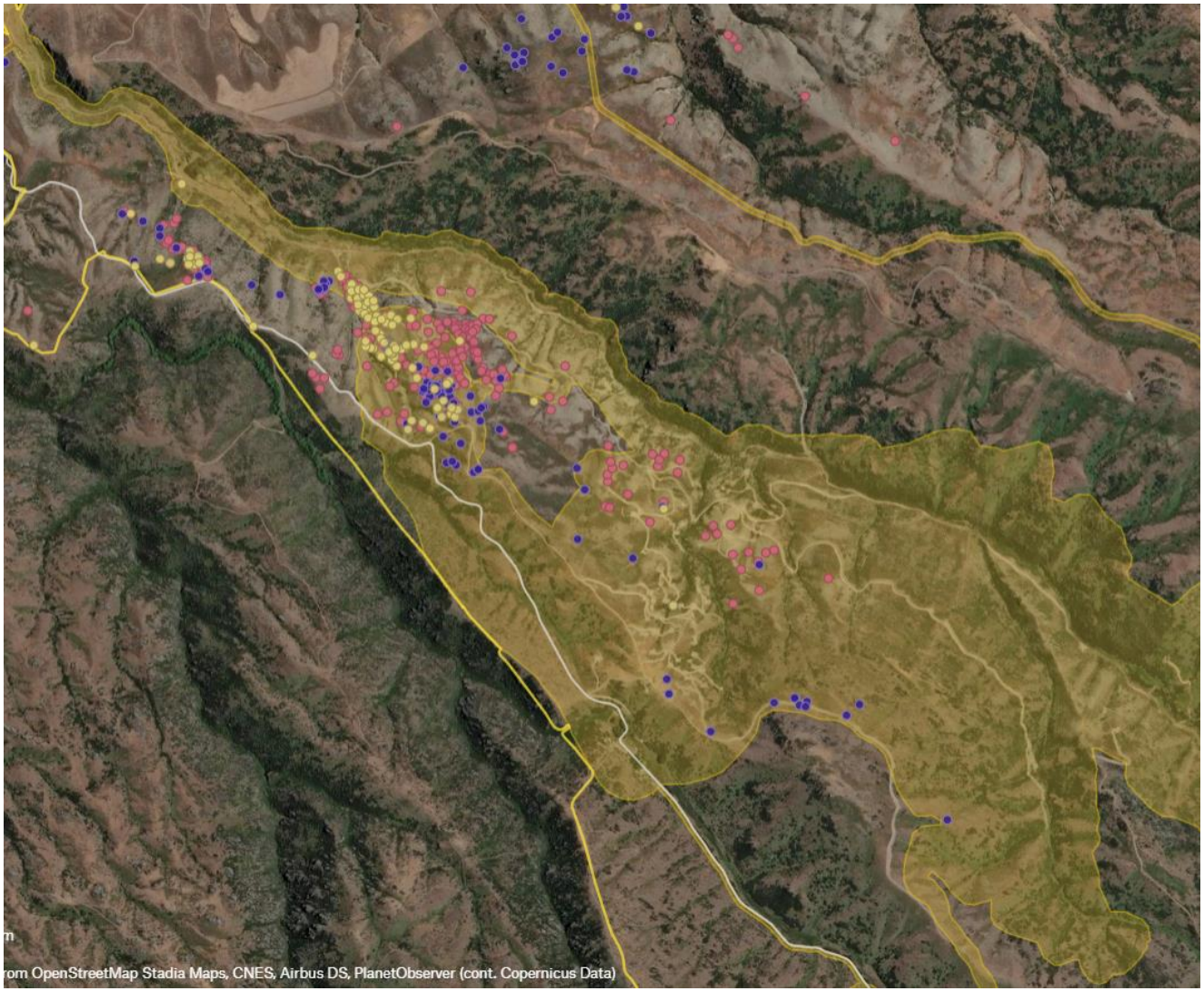

Figure 3 Population locations Myosotis brevis (pink), Ceratocephala pungens (blue), Myosurus minimus (yellow), 2024 and 2025 surveys.

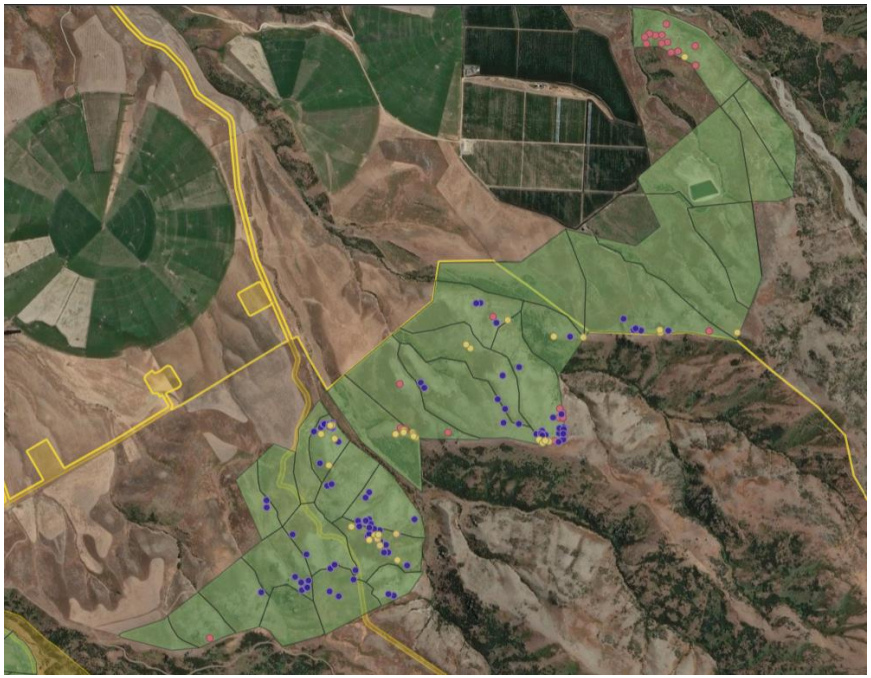

Figure 4 Population locations found on northwestern faces of Ardgour Station hill country, 2025 survey. Myosotis brevis (pink), *Ceratocephala pungens (*blue), *Myosurus minimus* (yellow). *Extent of survey (green) limited by lambing.*

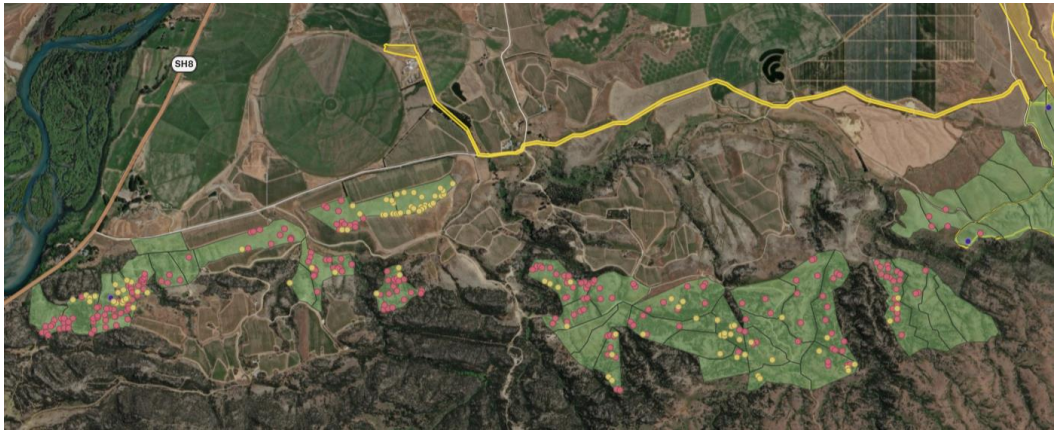

Figure 5 Population locations found on kanuka shrubland and terraces, 2025 survey. Myosotis brevis (pink), *Ceratocephala pungens (*blue), *Myosurus minimus* (yellow).