

THE VICTORIAN GOVERNMENT'S
TRIAL GRAZING PROGRAM IN THE
ALPINE NATIONAL PARK

Implications under the Environment
Protection and Biodiversity
Conservation Act 1999

9 February 2011

The Victorian Government's Trial Grazing Program in the Alpine National Park – Implications under the Environment Protection and Biodiversity Conservation Act 1999

Biosis Research Pty. Ltd.

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INTRODUCTION

Biosis Research Pty. Ltd. has been requested by the Victorian National Parks Association (VNPA) to provide a report on whether the Victorian Government's trial grazing in the Alpine National Park (see <http://www.dpi.vic.gov.au/DSE/nrenpr.nsf/fid/59243D224D9951D9CA25782B0021ACA2> for a description of these trials) would or would not require referral under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

Under the EPBC Act, a person who proposes to take an action that will have, or is likely to have, a significant impact on a matter of national environmental significance must refer that action to the Australian Government minister for a decision on whether assessment and approval is required under the EPBC Act. Substantial penalties apply for taking such an action without approval (civil penalties up to \$5.5 million or criminal penalties up to seven years imprisonment).

This report provides an assessment, based on existing, readily available data, as to whether or not the trial grazing program constitutes an action requiring referral.

ASSESSMENT

Is "Trial Grazing" An Action?

'Action' is defined broadly in the EPBC Act and includes: a project, a development, an undertaking, an activity or a series of activities, or an alteration of any of these things. The Federal Department of Sustainability, Environment, Water, Population and Communities' (SEWPaC) Significant Impact Guidelines – Matters of Environmental Significance: Significant impact guidelines 1.1 (<http://www.environment.gov.au/epbc/publications/nes-guidelines.html>) state that actions include *inter alia* research activities and agricultural activities. The Victorian Government clearly states that the trial grazing is a research program, therefore we conclude that it is an "action" under the EPBC Act. As the trials appear to have started prior to the development of a research program, it may be that they are currently best described as agricultural activities; in which case, they are also an action.

Are Matters of National Environmental Significance Present in the Trial Grazing Sites?

The matters of national environmental significance under the EPBC Act are:

- listed threatened species and ecological communities
- migratory species protected under international agreements
- Ramsar wetlands of international importance
- the Commonwealth marine environment
- World Heritage properties
- National Heritage places
- Great Barrier Reef Marine Park, and
- nuclear actions.

There are no Ramsar wetlands, marine environments or World Heritage properties within or near the trial grazing areas. The areas are not within the Great Barrier Reef Marine Park. The actions are not nuclear actions. None of these matters are considered further in this report.

Listed Threatened Species and Ecological Communities

An action will require approval if the action has, will have, or is likely to have a significant impact on a species listed in any of the following categories:

- extinct in the wild
- critically endangered
- endangered, or
- vulnerable.

An action will also require approval if the action has, will have, or is likely to have a significant impact on an ecological community listed in any of the following categories:

- critically endangered, or
- endangered.

An assessment of the known or likely presence of listed species and ecological communities was made by overlaying the boundaries of the six trial grazing areas (provided by the Department of Sustainability and Environment) with high altitude wetlands mapping and significant species records from the Victorian Biodiversity Database (the Department's flora and fauna database) (Figures 1 to 5). The results are summarised below by trial site. Only species and ecological communities listed under the EPBC Act are discussed in this report.

Heywood Trial Site (Figure 1)

No mapped records of listed species or ecological communities occur within the site. The site is immediately east and north of multiple records of the listed species Long-footed Potoroo *Potorous longipes* (Vulnerable) and Smoky Mouse *Pseudomys fumeus* (Endangered). The Heywood site is in an area where there has been very little flora or fauna survey and the lack of records from within the

site is likely to reflect this paucity of survey rather than a lack of biodiversity values. In our view it is very likely that there is habitat for the Smoky Mouse within this site and there is potential habitat for the Long-footed Potoroo.

Given the lack of survey and the presence close by of listed species, combined with the high likelihood of habitat for these species being present in the site, we conclude that the Heywood trial site is likely to support species listed under the EPBC Act.

Higgins Trial Site (Figure 2)

There are mapped records of three listed flora species from within or immediately adjacent to the Higgins trial site. We believe that one of these species, Leafy Greenhood *Pterostylis cucullata* (Vulnerable) should be discounted as the listing applies to the coastal sub-species, and that sub-species is unlikely to be the one recorded here. The record of Grey Groundsel *Senecio georgianus* (listed as Extinct) has poor positional accuracy, and its location requires confirmation. However, we are satisfied that the record is in or near the trial site. Clover Glycine *Glycine latrobeana* (Vulnerable) has been recorded from just outside the trial site. Given the ecology of this species, it is highly likely that it also occurs within the trial site.

Two mapped wetland plant communities, Wet Alpine Heathland and Alpine Peatland/Wet Alpine Heathland, occur within or closely adjacent to the trial site. These plant communities both fall within the floristic definition of the EPBC-listed ecological community Alpine *Sphagnum* Bogs and Associated Fens (Endangered). This community is also potential habitat for the listed Alpine Tree Frog *Litoria verreauxii alpina* (Vulnerable).

Given the presence within and close by of listed species and a listed community, combined with the presence of habitat for the Alpine Tree Frog, we conclude that the Higgins trial site is known to support an ecological community listed under the EPBC Act, and is likely to support at least two listed species.

Lovick Trial Site (Figure 3)

Two mapped wetland plant communities, Wet Alpine Heathland and Alpine Peatland/Wet Alpine Heathland, occur within and closely adjacent to the trial site. These plant communities both fall within the floristic definition of the EPBC-listed ecological community Alpine *Sphagnum* Bogs and Associated Fens (Endangered). This community is also potential habitat for the listed Alpine Tree Frog (Vulnerable).

Given the presence within and close by of a listed ecological community, combined with the presence of habitat for the Alpine Tree Frog, we conclude that the Lovick trial site is known to support an ecological community listed under the EPBC Act, and is likely to support a listed fauna species.

McCormack Trial Site (Figure 4)

The mapped plant community Alpine Peatland/Wet Alpine Heathland, occurs within and closely adjacent to the trial site. This plant community falls within the floristic definition of the EPBC-listed ecological community Alpine *Sphagnum* Bogs and Associated Fens (Endangered). This community is also potential habitat for the listed Alpine Tree Frog (Vulnerable). The tree frog has been recorded

within 10 kilometres of the trial site. The EPBC-listed species Spotted Tree Frog *Litoria spenceri* (Endangered) has been recorded from within the trial site.

Given the presence of a listed species and a listed ecological community, combined with the presence of habitat for the Alpine Tree Frog, we conclude that the McCormack trial site is known to support species and an ecological community listed under the EPBC Act, and is likely to support at least one other listed species.

Rogers Trial Site (Figure 5)

There are no mapped records of listed species or communities for the Rogers trial site (which consists of two separate areas). There are mapped records of the listed species Spot-tailed Quoll *Dasyurus maculatus maculatus* (Endangered) from about a kilometre from the trial site. This species requires very large home ranges and almost certainly would also occur within the trial site.

The trial site is also in an area where there has been very little flora or fauna survey and the lack of records from within the site is likely to reflect this paucity of survey rather than a lack of biodiversity values. In our view it is very likely that there is habitat for the Spot-tailed Quoll within this site and there is potential for listed flora species to occur there also.

Treasure Trial Site (Figure 6)

There are mapped records of two listed species from within and immediately adjacent to the Treasure trial site, Dwarf Sedge *Carex paupera* (Vulnerable) and Alpine Tree Frog *Litoria verreauxii alpina* (Vulnerable).

Two mapped wetland plant communities, Wet Alpine Heathland and Alpine Peatland/Wet Alpine Heathland, occur within or closely adjacent to the trial site. These plant communities both fall within the floristic definition of the EPBC-listed ecological community Alpine *Sphagnum* Bogs and Associated Fens (Endangered). This community is also potential habitat for the listed Alpine Tree Frog.

Given the presence within and close by of listed species and a listed community, combined with the presence of habitat for the Alpine Tree Frog, we conclude that the Treasure trial site is known to support at least two listed species and an ecological community listed under the EPBC Act.

General Comments on Flora and Fauna Data Adequacy

An even cursory review of the distribution of records of listed species in the Victorian alps shows that the records are largely concentrated along areas of easy access (e.g. 2-wheel drive roads), ski resorts and other development areas (i.e. sites where intensive surveys have been required as part of the permitting process) or at sites of particular scientific interest for research (e.g. Bogong High Plains, Mt Baw Baw). Any site that does not meet these criteria is likely to have never been fully surveyed or, at best, has not been the subject of survey within the last 20-30 years.

This is consistent with the distribution of records of listed species in or around the trial sites – most records are adjacent to roads. Some of the trial sites are rugged and isolated and are unlikely to have been ever surveyed. Given this, there is a high likelihood that listed species and ecological

communities occurrences would be found if surveys were undertaken at the trial sites. Such surveys have routinely been required for other actions undertaken in the Victorian alps.

Additionally, any surveys that were undertaken in the past may well have been undertaken when grazing was previously occurring on the trial sites. At such a time, species sensitive to the presence of cattle would be hard to detect or absent. This would likely include flora and fauna species reduced by grazing and those reduced by effects such as trampling of alpine bog environments. The re-introduction of grazing to the trial sites prior to any environmental survey has meant that the opportunity for proper pre-trial environmental assessment is likely to have been reduced already.

National Heritage

The whole Alpine National Park is listed as a National Heritage place. National heritage places are recognised as a matter of national environmental significance under the EPBC Act. Consequently, any action that is likely to have a significant impact on heritage properties and places must be referred to the Minister and undergo an environmental assessment and approval process.

Are There Likely to Be Significant Impacts?

A 'significant impact' is an impact which is important, notable, or of consequence, having regard to its context or intensity. To be 'likely', it is not necessary for a significant impact to have a greater than 50% chance of happening; it is sufficient if a significant impact on the environment is a real or not remote chance or possibility. (Definitions as per Significant Impact Guidelines – Matters of Environmental Significance: Significant impact guidelines 1.1).

If there is scientific uncertainty about the impacts of an action and potential impacts are serious or irreversible, the precautionary principle is applicable. Accordingly, a lack of scientific certainty about the potential impacts of an action will not itself justify a decision that the action is not likely to have a significant impact on the environment.

Significant Impact Guidelines require indirect impacts to be assessed also. As there appear to be few fences in the trial areas, it is presumed that the cattle cannot be restricted to the mapped areas in most cases. The potential extent of impacts from cattle roaming outside the mapped areas is not clear but needs to be assessed fully. In addition, there will be downstream effects from reduced water quality and other aquatic impacts, as well as the potential for the continued spread of invasive weeds introduced by the cattle into areas outside the trial areas.

Significant Impact Criteria – Endangered Species

An action is likely to have a significant impact on an endangered species if there is a real chance or possibility that it will:

- lead to a long-term decrease in the size of a population*
- reduce the area of occupancy of the species*
- fragment an existing population into two or more populations*
- adversely affect habitat critical to the survival of a species*
- disrupt the breeding cycle of a population*

- *modify, destroy, remove, isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline.*

There are at least three listed endangered species known or likely to be present in the area covered by the trial sites: Smoky Mouse *Pseudomys fumeus*, Spot-tailed Quoll *Dasyurus maculatus maculatus* and Spotted Tree Frog *Litoria spenceri*.

As the information on the trial provides almost no detail as to how the action will be undertaken, only a general assessment of impacts can be made here. This lack of detail means that the precautionary approach is particularly important in making any assessment of impacts.

Previous cattle grazing in the Australian alps provides ample evidence that the general impacts of grazing on natural habitats in the Australian alps include habitat alteration through loss of grazing sensitive species, physical damage through pugging and erosion, introduction and spread of weeds, reduction in water quality, damage and drying of bogs and fens and changes in vegetation composition.

This combination of impacts has the potential to adversely affect habitat critical to the survival of for all these species and to modify, destroy, remove, isolate or decrease the availability or quality of habitat to the extent that each of the species is likely to decline. The Spotted Tree Frog habitat is probably at most risk.

Significant impact criteria – Vulnerable Species

An action is likely to have a significant impact on a vulnerable species if there is a real chance or possibility that it will:

- *lead to a long-term decrease in the size of an important population of a species*
- *reduce the area of occupancy of an important population*
- *fragment an existing important population into two or more populations*
- *adversely affect habitat critical to the survival of a species*
- *disrupt the breeding cycle of an important population*
- *modify, destroy, remove or isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline*
- *result in invasive species that are harmful to a vulnerable species becoming established in the vulnerable species' habitat*
- *introduce disease that may cause the species to decline, or*
- *interfere substantially with the recovery of the species.*

There are at least four listed Vulnerable species known or likely to be present in the area covered by the trial sites: Dwarf Sedge *Carex pauper*, Clover Glycine *Glycine latrobeana*, , Long-nosed Potoroo *Potorous longipes*, and Alpine Tree Frog *Litoria verreauxii*.

As the information on the trial provides almost no detail as to how the action will be undertaken, only a general assessment of impacts can be made here. This lack of detail means that the precautionary approach is particularly important in making any assessment of impacts.

The general impacts of grazing on natural habitats in the Australian alps are well known and include habitat alteration through loss of grazing sensitive species, physical damage through pugging and erosion, introduction and spread of weeds, reduction in water quality, damage and drying of bogs and fens and changes in vegetation composition.

This combination of impacts has the potential to adversely affect habitat critical to the survival of all these species, or to modify, destroy, remove, isolate or decrease the availability or quality of habitat to the extent that each of the species is likely to decline, or to result in invasive species that are harmful to a vulnerable species becoming established in the vulnerable species' habitat, or to introduce disease that may cause the species to decline, or to interfere substantially with the recovery of the species. The Alpine Tree Frog habitat is at high risk, as cattle preferentially graze this habitat. Cattle grazing is also identified as a threat to *Carex pauper* in the Recovery Plan for the species. *Glycine latrobeana* is also potentially at risk from grazing impacts.

The Long-nosed Potoroo population in the Victorian alps is a disjunct and isolated population of very high significance, and meets the definition of an "important population". Any impacts on this population clearly have the potential to lead to a long-term decrease in the size of an important population of a species, and to reduce the area of occupancy of an important population.

Significant impact criteria – Endangered Communities

An action is likely to have a significant impact on an endangered ecological community if there is a real chance or possibility that it will:

- *reduce the extent of an ecological community*
- *fragment or increase fragmentation of an ecological community, for example by clearing vegetation for roads or transmission lines*
- *adversely affect habitat critical to the survival of an ecological community*
- *modify or destroy abiotic (non-living) factors (such as water, nutrients, or soil) necessary for an ecological community's survival, including reduction of groundwater levels, or substantial alteration of surface water drainage patterns*
- *cause a substantial change in the species composition of an occurrence of an ecological community, including causing a decline or loss of functionally important species, for example through regular burning or flora or fauna harvesting*
- *cause a substantial reduction in the quality or integrity of an occurrence of an ecological community, including, but not limited to:*
 - assisting invasive species, that are harmful to the listed ecological community, to become established, or*

-- causing regular mobilisation of fertilisers, herbicides or other chemicals or pollutants into the ecological community which kill or inhibit the growth of species in the ecological community, or

- interfere with the recovery of an ecological community.

One listed Endangered ecological community is known from or likely to be present in the area covered by the trial sites, Alpine *Sphagnum* Bogs and Associated Fens. Trampling, browsing and grazing by hard-hooved non-native animals are identified as a threat to the Alpine *Sphagnum* Bogs and Associated Fens (Endangered) ecological community in the EPBC Act Policy statement for the community. The community will be rapidly degraded by grazing impacts. Every one of the above seven significant impact criteria will almost certainly apply.

Significant Impact - National Heritage

Under the EPBC Act, there are five circumstances where it is an offence to take an action that will have a significant impact on the National Heritage values of a National Heritage place. Of these five, one appears to apply here:

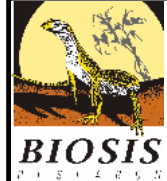
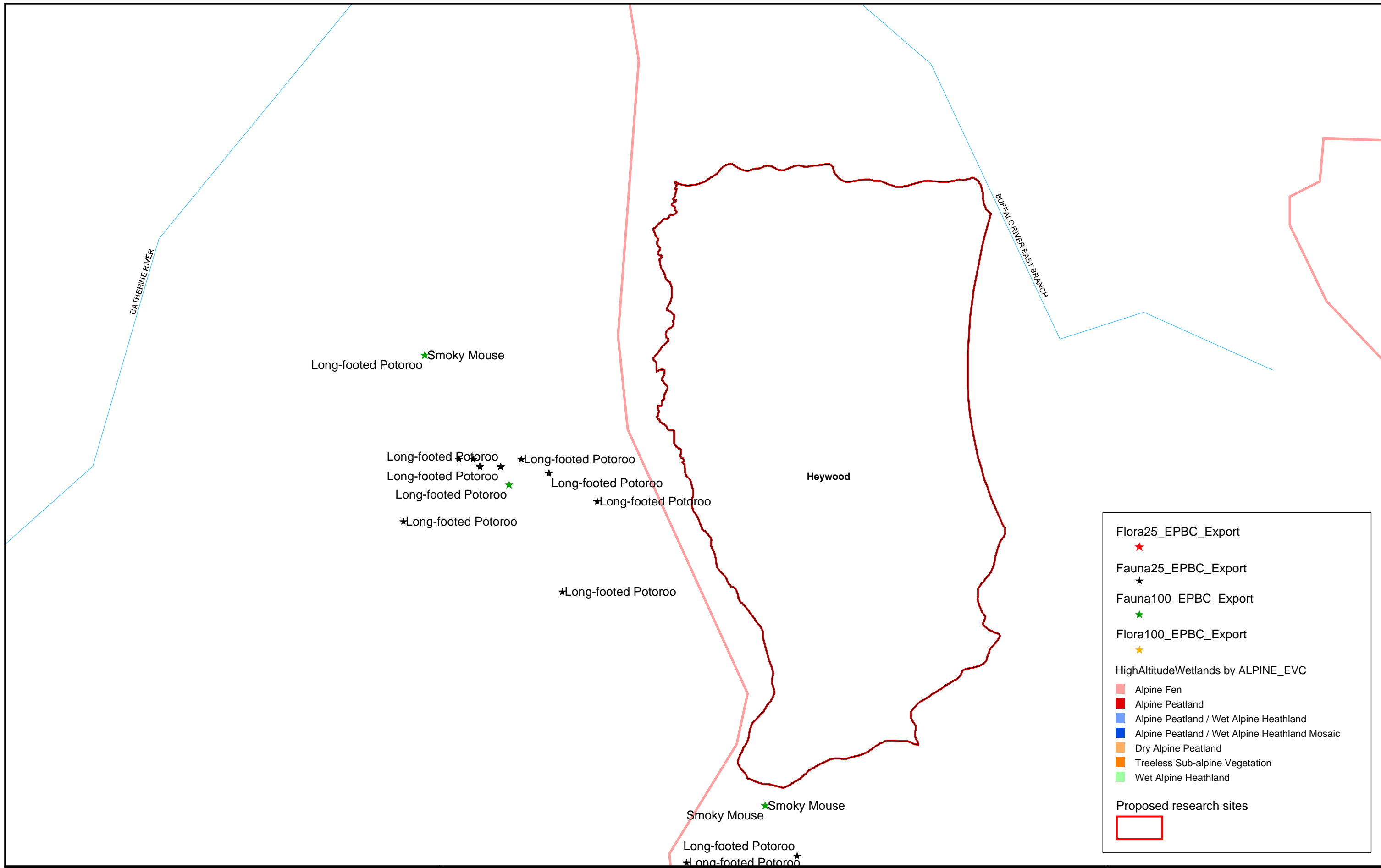
The action impacts on values for which Australia has obligations under Article 8 of the Biodiversity Convention. Article 8 concerns Australia's obligations to undertake in situ conservation of biodiversity.

As set out earlier in this report, there is clearly the potential for significant impacts from the program on a range of listed species and endangered communities. Such impacts may contravene Article 8. This issue would therefore seem to require referral.

CONCLUSION

The Victorian Government's trial grazing program has been evaluated against criteria provided in Significant Impact Guidelines – Matters of Environmental Significance: Significant impact guidelines 1.1. On that basis the Victorian Government's trial grazing program would appear to clearly require referral under the EPBC Act because:

- a) The trial grazing is clearly an action under the Act.
- b) There are known and likely matters of national environmental significance located within and near the area of the proposed action.
- c) There is the potential for significant impacts from the program on a range of listed species and endangered communities.
- d) All the trial sites are within a registered National Heritage place.
- e) There appear to be no measures proposed in the program to reduce or mitigate impacts.



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Figure 1. Proposed research area Heywood, EPBC matters

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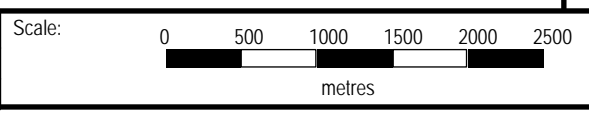
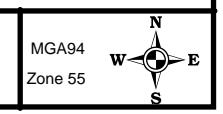
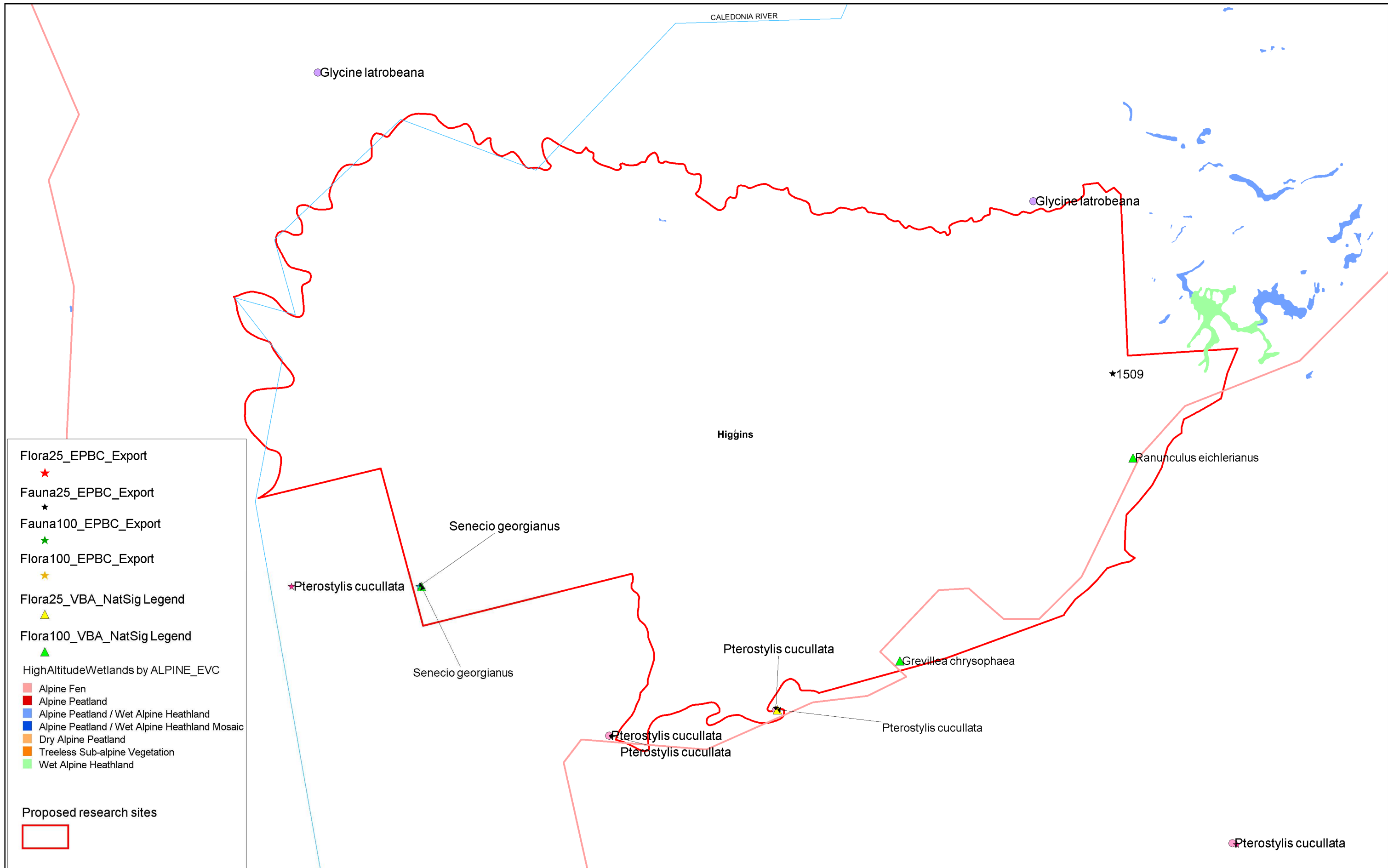
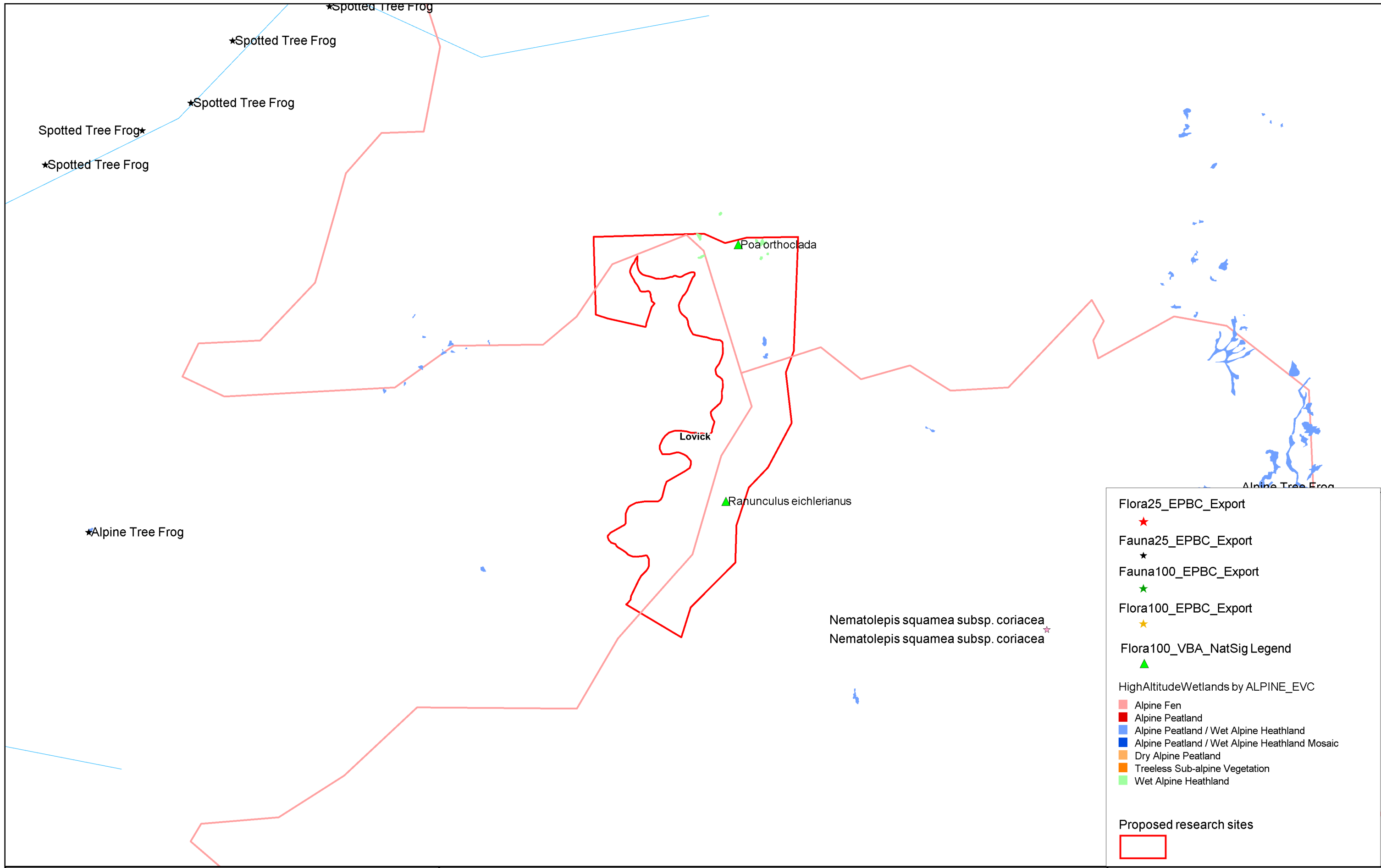


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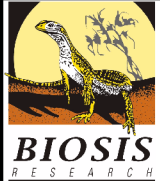







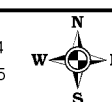
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 ■ Dry Alpine Peatland
 ■ Treeless Sub-alpine Vegetation
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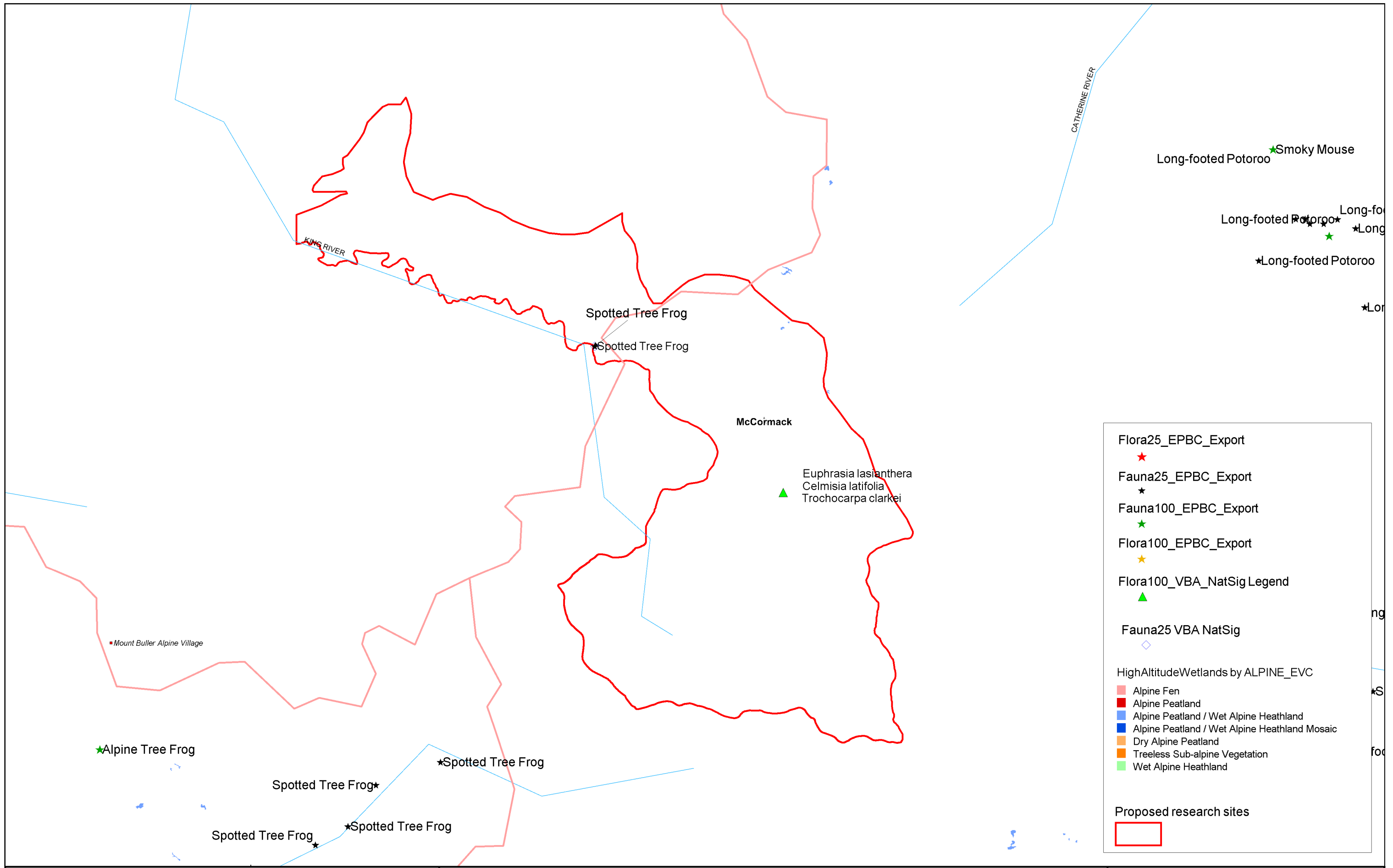
Proposed research sites
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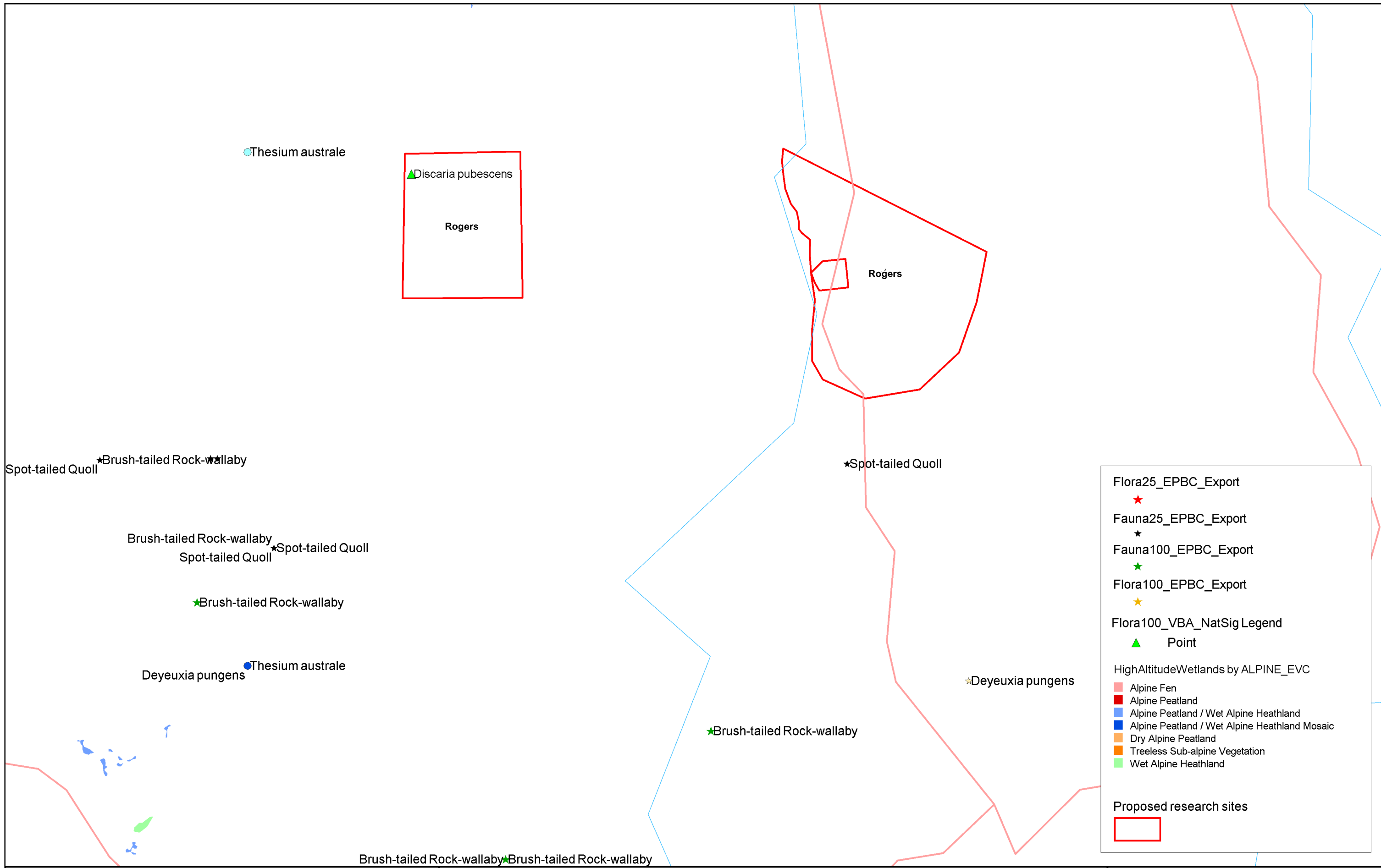

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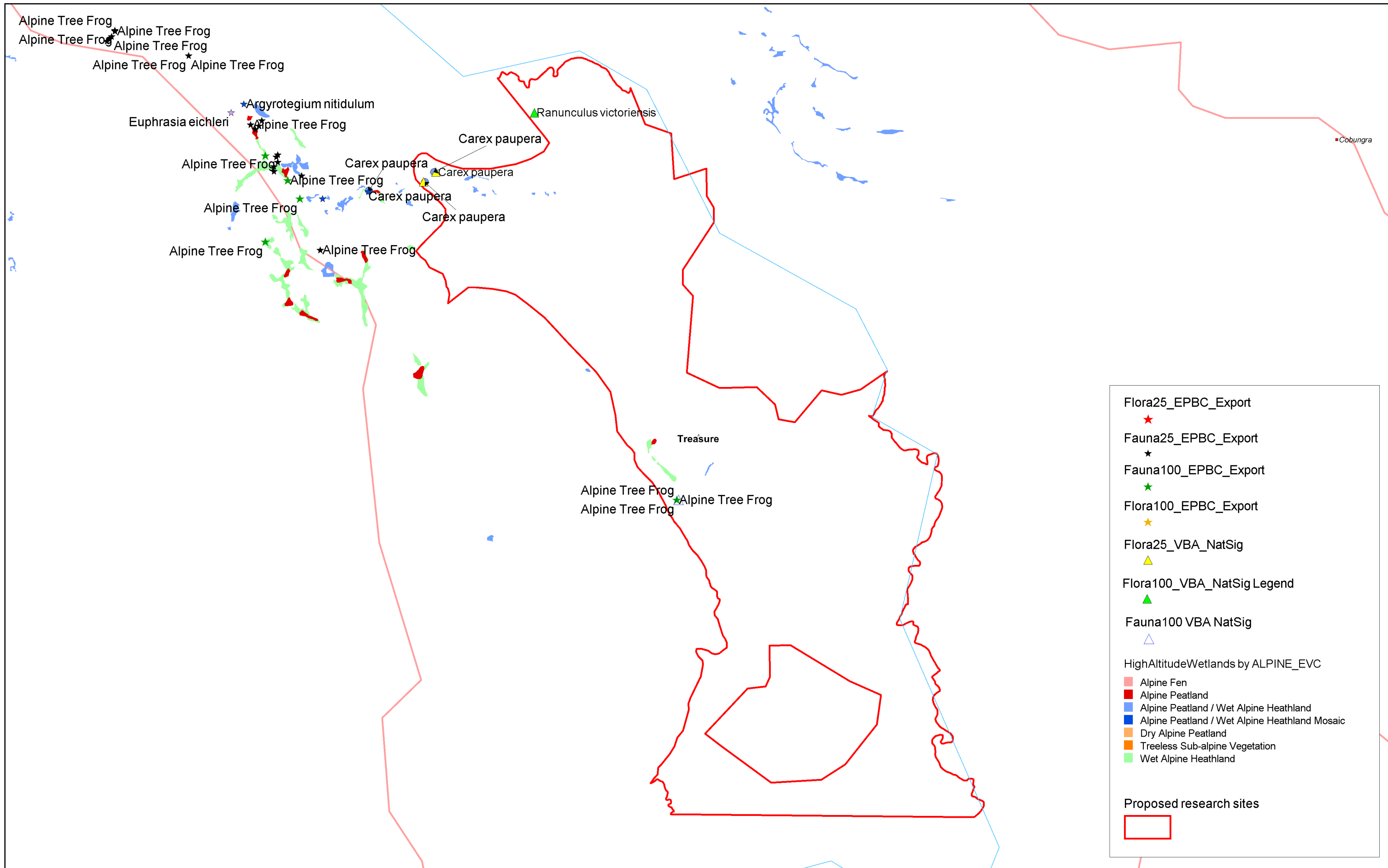
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Figure 3. Proposed research area Lovick, EPBC matters
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HighAltitudeWetlands by ALPINE_EVC

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- Alpine Peatland
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- Alpine Peatland / Wet Alpine Heathland Mosaic
- Dry Alpine Peatland
- Treeless Sub-alpine Vegetation
- Wet Alpine Heathland

Proposed research sites
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Figure 6. Proposed research area Treasure, EPBC matters