



Superb Parrots (Polytelis swainsonii) at Boda-Kaiser

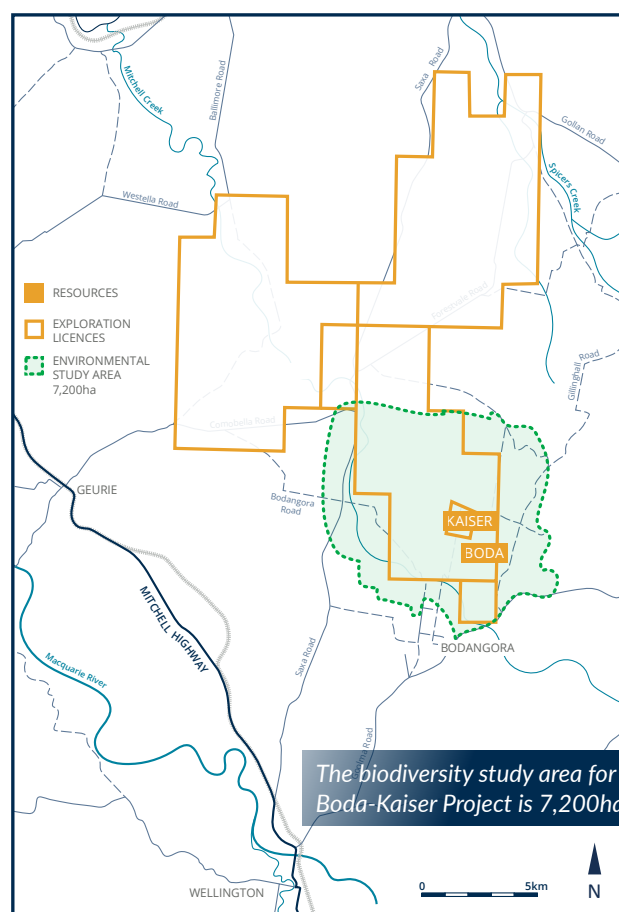
Biodiversity Surveys for the Boda-Kaiser Project

Why the increased activity?

Many landholders and members of the community have noticed a recent increase in the number of people and vehicles working in paddocks, travelling tracks or undertaking surveys at dawn, dusk or at night.

Many of these new faces are ecologists employed by Biodiversity Australia, which has been engaged by Mitchell Creek Mining (Alkane) to undertake the biodiversity surveys for the Boda-Kaiser Project.

These surveys are undertaken under the NSW Biodiversity Assessment Method (BAM), which provides a standardised approach to assessment of native vegetation, habitats and threatened species. That information is then used to make informed decisions about the design of the project and measures that can be taken to avoid, minimise, mitigate or offset impacts. That information can also be used to understand residual project-related impacts and whether those impacts are acceptable.





Biodiversity survey underway

The BAM process

The BAM process has five key steps.

Step 1 – Understanding the landscape

The first stage of a biodiversity assessment begins long before ecologists arrive on site. The ecology team reviews existing information including aerial imagery, vegetation mapping, soil and landscape data, and records from past biodiversity surveys and observations. Desktop investigations help identify the habitats and species that may occur in the area and guide the design of field surveys.

Step 2 – Identifying Plant Community Types (PCTs)

One of the most important steps in the BAM process is identifying Plant Community Types (PCTs). PCTs are the standard classification used across New South Wales to describe distinct communities of various native plant species. They form the foundation of evaluation of vegetation condition, habitat values and potential impacts.

To determine the correct PCTs, ecologists undertake detailed vegetation surveys, recording canopy trees, shrubs, grasses, groundcovers and environmental characteristics.

This step has been largely completed for the Boda-Kaiser Project. Biodiversity Australia has identified eight PCTs within the Boda-Kaiser Survey Area, as well as areas of non-native vegetation and Category 1 Land. Category 1 land is exempt from restrictions on clearing of native vegetation because it is used for farming purposes and has been cropped or pasture improved.

Step 3 – Assessing habitat quality

Once PCTs have been identified, ecologists assess the condition of the vegetation and the habitat it provides for native wildlife.

Measurements may include tree size, canopy cover, the number of hollow-bearing trees, fallen timber, native plant diversity and evidence of disturbance. These indicators help determine the biodiversity value of the land and the suitability of habitat for threatened species.

For the Boda-Kaiser Project, this step commenced in Autumn. The program has been paused over the colder months and will recommence in Spring.

Step 4 – Identifying threatened species that may occur

The BAM requires ecologists to develop a full list of threatened plants and animals that are known, predicted or considered likely to occur within the assessment area. This list is then reviewed and species that are obviously unlikely to occur are excluded. Survey effort is then focused on those species that have suitable habitat present and a realistic likelihood of occurring in the area. This targeted approach ensures that surveys are both scientifically rigorous and efficient.

This step is largely complete for the Boda-Kaiser Project, with 27 fauna species and 24 flora species requiring targeted surveys.



Farmland in the Boda-Kaiser survey area

Step 5 – Targeted threatened species surveys

The BAM has very specific guidelines in relation to how and when targeted surveys for threatened species must be undertaken. Different survey methods and timings are used depending on the ecology of the target species.

For example:

- Threatened plants may only be identifiable when flowering or fruiting.
- Woodland birds, such as the Glossy Black Cockatoo, are often most active shortly after sunrise or before sunset at certain times of the year.
- Some birds, such as the Superb Parrot, are widely distributed and forage in different regions but are particularly vulnerable because of restricted breeding habitat. These species can only be surveyed during their breeding period.
- Some threatened frogs, such as Sloane's Froglet and Southern Bell Frog, are detectable in Winter and Spring and only after rainfall events. This species requires many hours of searching, as well as acoustic recordings to capture the distinctive calls of each species.
- Microbats also require specialised acoustic recording equipment to capture their ultrasonic calls.

Survey techniques may include vegetation searches, bird observation, call playback, spotlighting, acoustic recording, camera trapping and habitat inspections.

Why are repeat visits necessary?

A common question from landholders is why ecologists often return to the same area multiple times.

The simple answer is that biodiversity changes over time. Species are not always visible during an isolated visit. Seasonal conditions, weather, temperature, rainfall, breeding cycles and flowering periods all influence when plants and animals can be detected.

For example, a threatened orchid may only be visible for a short flowering period, while some frog species may only call after suitable rainfall. A single survey would risk missing species that are present. Repeated visits throughout the identified survey period improve confidence that the biodiversity values of an area have been accurately documented.

Why is night-time work required?

Many native Australian animals are nocturnal. Species such as owls, gliders, possums, bats and many frogs are far more likely to be detected during evening and night-time surveys than during the day.

As a result, ecologists may conduct spotlighting surveys, acoustic recordings or call playback surveys at night to identify species that would otherwise remain undetected. While this can sometimes create curiosity or concern among nearby residents, it is a critical and recognised component of biodiversity assessments.

Why are weekend surveys sometimes needed?

Biodiversity surveys must often be undertaken during specific weather conditions or seasonal windows. Opportunities to survey may be limited by rainfall, temperature, wind conditions, crop operations, stock management activities or access arrangements.

Because these environmental conditions do not always occur during a standard working week, ecologists may undertake surveys on weekends. This flexibility helps ensure surveys are conducted when target species are most likely to be active and detectable, improving the accuracy of assessment outcomes.

Working respectfully with landholders

The BAM provides a robust and comprehensive methodology to understand local biodiversity values and ensure that important environmental decisions are based on robust scientific evidence.

However, we also understand that biodiversity surveys are undertaken on working farms and private properties, and that in many cases the landholders both live and work on those properties. We are mindful that ecologists and others accessing and moving around properties can be intrusive and disruptive.

On behalf of Alkane, Biodiversity Australia works with landholders and others to minimise impacts on privacy and agricultural operations and absolutely respects landholder's instructions in relation to where, when and how properties are accessed. The team tries to avoid working near houses at night, leaves vehicles on tracks and walks when the ground is soft or doesn't come out at all if vehicles would damage roads and tracks.

Of course, if the survey activities are having unexpected impacts or if landholders or community members have questions or queries, please do not hesitate to contact Mike Sutherland (see contact box below) and we will attempt to answer your question or query.



Biodiversity Australia ecologists recording plant species at Bodangora. (February 2026)

How to find out more

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