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ECOSYSTEM SERVICES

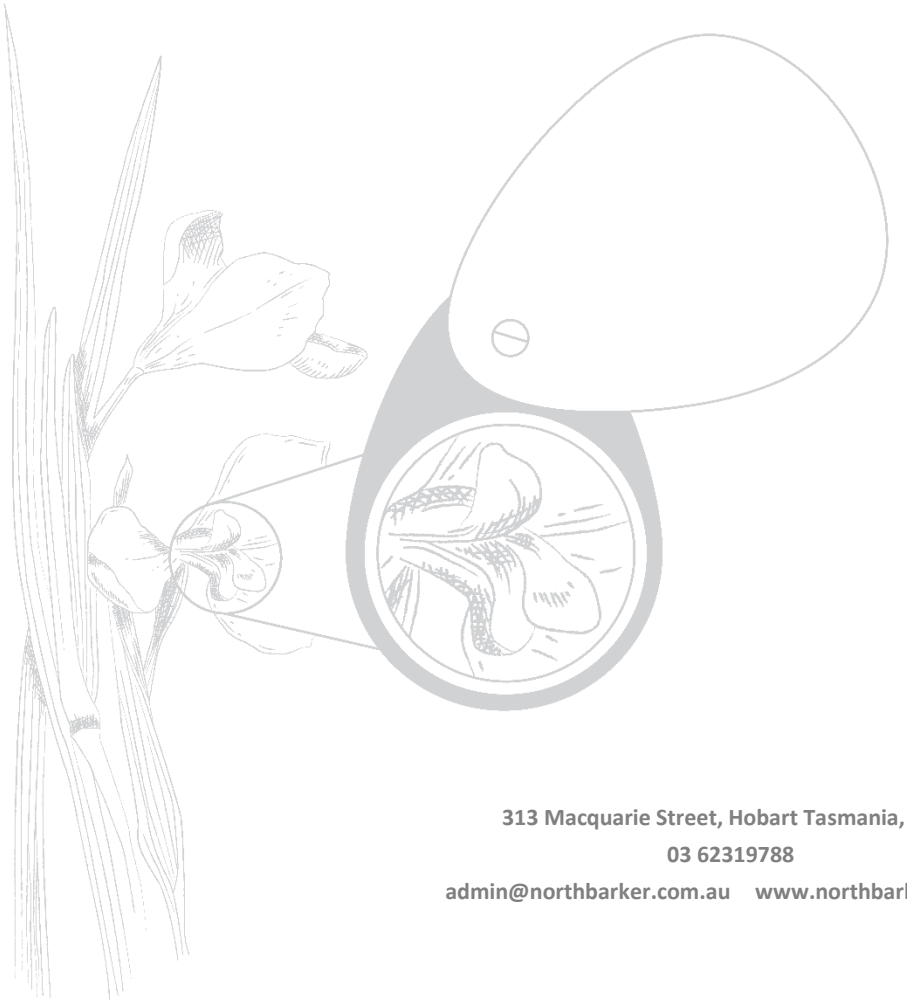
Roadkill Mitigation Strategy

with particular reference to
potential Tasmanian devils, eastern quolls, and spotted-tail quolls

Northern Midlands Irrigation Scheme

28th November 2025

For Tasmanian Irrigation



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1. Background

The '*Survey guidelines and management advice for development proposals that may impact on the Tasmanian Devil 2015'* (the Survey Guidelines[1]) outlines a process for assessing the potential impacts of developments requiring road usage on Tasmanian devils. This process focuses on identifying and mitigating impacts on devils, but the mitigation measures are also suitable for reducing road mortalities for other native fauna, including quolls. The process involves completing a traffic impact assessment, then, if Tasmanian devil roadkill mortalities are expected to increase by more than 10 % (based on equivalent predicted rise in night-time traffic for existing roads, and general increase in traffic on new roads), a roadkill assessment and roadkill mitigation plan must be completed. Mitigation measures for the current project therefore will focus on existing roads expected to surpass the 10 % night-time threshold based on being identified as having an estimated > 10 % traffic increase during the construction of the proposed development (particularly based on predictions much higher than 10 % increase during peak hours, which are the most likely to overlap with the definition of night-time in the Survey Guidelines).

Traffic data (baseline and predicted) has been assessed for the major roads proposed to be used during the duration of the project. The roads proposed to be utilised during construction are as follows:

- Cressy Road (Dam construction and pipeline installation)
- Poatina Road (Dam construction and pipeline installation)
- Powranna Road (Dam construction and pipeline installation)
- Mount Joy Road (Pipeline construction)
- Barton Road (Pipeline construction)
- Valleyfield Road (Pipeline construction)
- Macquarie Road between Valleyfield Road and Midland Highway (Pipeline construction)
- Macquarie Road between Valleyfield Road and Poatina Road (Pipeline construction)
- Ashby Road (Pipeline construction)

Given the relatively low existing traffic volumes on all of these roads, it is expected that in most cases, during construction, roads will see increases in traffic volumes around the dawn and dusk periods greater than 10 % and thus warrant mitigation. Baseline roadkill data has been utilised to identify high-risk roads in the project area without necessarily drawing conclusions or providing a basis to measure specific increases in roadkill frequency. Nonetheless, due to the predicted increase in traffic alone, the following mitigation measures will be implemented across the project. With these mitigation measures in place, we anticipate project-specific roadkill mortalities can be minimised, with regular monitoring and periodic data review in place to trigger contingency measures if needed.

[1] Environment Strategic Business Unit (2023)

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2. Roadkill Mitigation Strategy

Roadkill

During the construction phase of the action, the civil contractor must comply with roadkill mitigation measures as detailed in this document.

Roadkill mitigation measures include:

a) Reduction of speed across all project roads for project vehicles.
b) Centralising transport of key infrastructure to core roads.
c) Restricting use of roads outside of daylight hours as much as is practicable.
d) Project vehicles will be fitted with a basic, high-frequency animal repellent device.
e) Specific mitigation for special purpose vehicles, including travel convoys, escort vehicles, and further speed reduction.
f) Roadkill monitoring. Collision data must be reviewed at a minimum of every 6 months. Data must be submitted to the Department of Natural Resources and Environment Tasmania (NRET) and the Department of Climate Change, Energy, the Environment and Water (DCCEEW).

Traffic times

As per the Survey Guidelines[2], the definition of night-time to apply to all subsequent mitigation measures includes an hour before dusk and an hour after dawn – noting it will be a requirement of the contractor to define the variation in this period in relation to the various requirements on a week-by-week basis as part of their construction environment management practices.

Heavy rigid vehicles or larger will be limited to daylight hours as much as is practicable – special circumstances may require transport outside of daylight hours only in accordance with the conditions defined in the following subclauses:

- Special purpose heavy vehicles moving large plant and equipment may operate outside the above times when it is a road traffic requirement to minimise impact on other traffic, and/or comply with any other road authority permits – in such cases these vehicles will have a lead escort vehicle and be limited to a maximum speed of 60 km/h whilst on project roads.
- In the event that general cartage heavy vehicles are prevented from operating during daylight hours, such as due to weather events, these vehicles will be limited to a maximum speed of 60 km/h during night-times on all project roads – in such cases, these vehicles will travel in a convoy of a minimum of 2 vehicles, with convoys to be separated by at least 15 minutes – by travelling in a convoy, the frequency of individual heavy vehicles will be reduced, thus reducing roadkill opportunities.

[2] Environment Strategic Business Unit (2023)

Speed limits

Road speed limits for project vehicles (to be mandated by the responsible Contractor and their requirement to enforce) will be set at a **maximum of 80 km/h during daylight hours** and at **60 km/h during night time** across the specified project roads (Figure 2), precluding situations where the speed limits may be less than these amounts under existing conditions and/or under temporary conditions applied for other road traffic management.

In addition, areas identified as adjacent to optimal potential denning habitat (based on devil habitat modelling in Figure 1) and thus seen as the most likely areas to support fauna in general, will be further limited to **60 km/h at all times** for project vehicles. These identified areas are as follows (Figure 2):

- Barton Road (Midland Highway to Mt Joy Road)
- Powranna Road (Midland Highway to Mt Joy Road)
- Macquarie Road (Glen Connell Road to Barton Road)
- Macquarie Road (Quarry Road to Delmont Road)
- Valleyfield Road (Macquarie Road to 200 m beyond balance tank access)

These limits will be advertised using semi-permanent project specific signage and enforced under contract requirements.

Additional measures

Project vehicles will be fitted with a basic, high-frequency **animal repellent device** (which emits an ultra-sonic sound wave at speeds above 50 km/h). The installation and operation of these devices will be audited periodically as part of the Contractors construction environmental management requirements (to be linked to contract commitments).

Monitoring

During the construction phase, all internal roads within the current works or commute routes shall be **monitored daily** for roadkill (with documentation recording inspection was completed along with noting when, where and species of any roadkill). The same shall apply to selected arterial roads that will be subject to increased use as project staff commute to the site from places of accommodation. Inspections will not be required for State managed roads where roadkill is currently monitored by the Department of State Growth, although all project-related mortalities must be documented.

On all internal local roads, and where safe to do so on State Highways, **mortalities must be removed from the road** surface immediately upon location (to limit likelihood of predators being attracted to the carcass). Roadkill will be noted as a project vehicle collision or if it is found incidentally (and not already reported) assumed to be the result of collision from a non-project vehicle.

The project roadkill data will be **periodically independently reviewed** (minimum every 6 months through construction), with scope to assess collision rates and determine if site access measures will require reassessment and further mitigation implemented where applicable.

As further conditions of TI's Environmental Protection Requirements (contractual obligations for contractors):

- Wildlife hit by project vehicles must be recorded, including details of when, where, and species if identifiable. These records will be **reported to TI** along with the monthly report. Mortalities must also be reported to NRE directly, or through the **Roadkill Reporter app**. Roadkill attributed to non-project vehicles will be tallied separately. Data collected throughout the construction phase of the project be submitted to DCCEEW upon the completion of works.
- No animals are to be deliberately killed with vehicles.
- If any injured wildlife is found, WIRES Wildlife Rescue (1300 094 737) will be contacted immediately, and arrangements made for transferring injured wildlife to specialist carers at an animal hospital, vet, or refuge. If rehabilitation is not possible, animals are to be dealt with humanely in accordance with the *Best Practice Guidelines for Wildlife Rehabilitation*[3] set out by NRE.

3. References

Environment Strategic Business Unit (2023) Survey Guidelines and Management Advice for Development Proposals that may impact the Tasmanian Devil (Sarcophilus harrisii). Department of Natural Resources and Environment, Tasmania.

Department of Primary Industries, Parks, Water, and Environment (2021). *Best Practice Guidelines for Wildlife Rehabilitation Version 2*. Department of Primary Industries, Parks, Water and Environment, Hobart, Tasmania.

[3] Department of Primary Industries, Parks, Water, and Environment (2021)

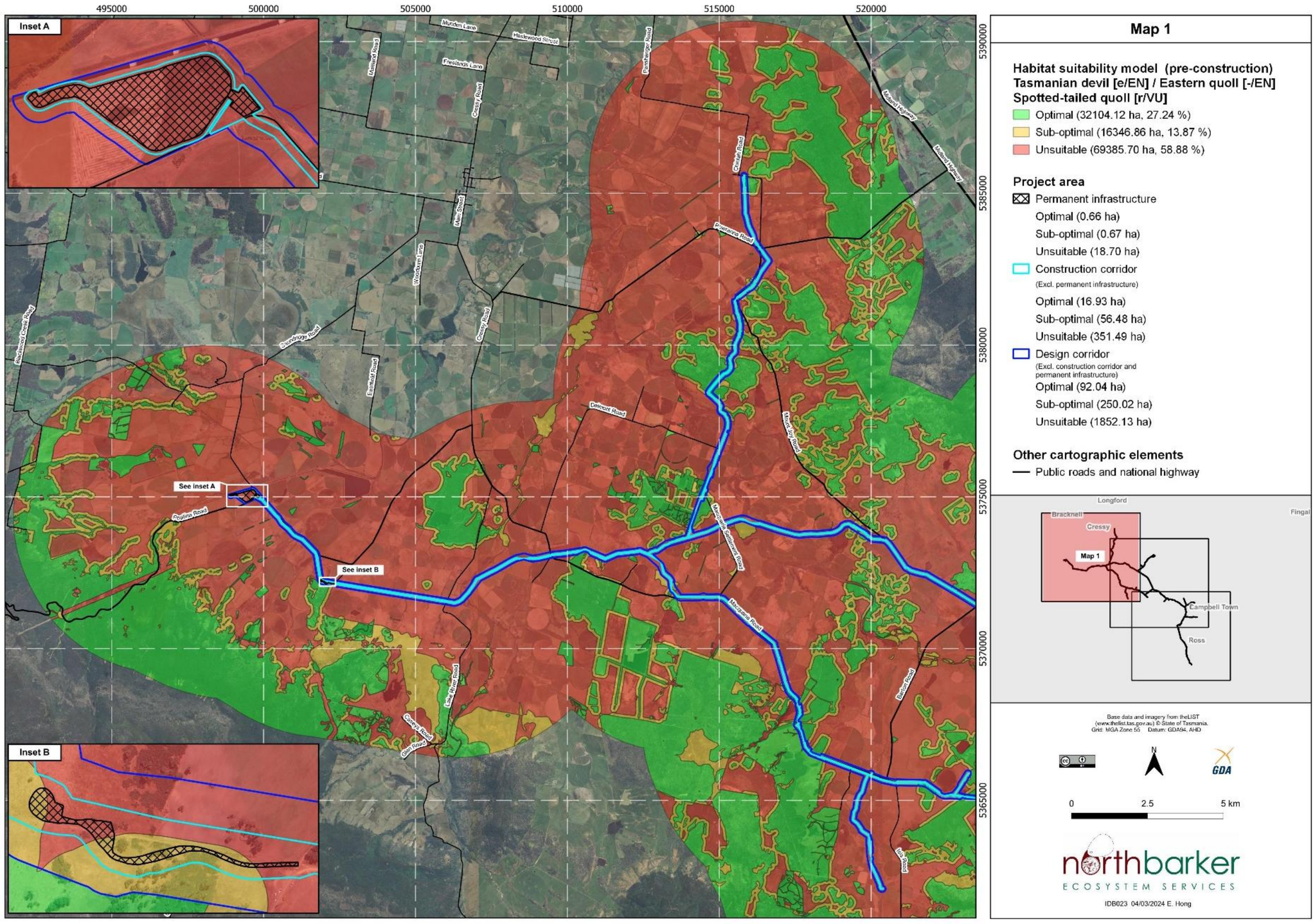


Figure 1a: Devil (and quoll) denning habitat suitability model pre-construction (noting all denning classes are considered potentially suitable foraging habitat)

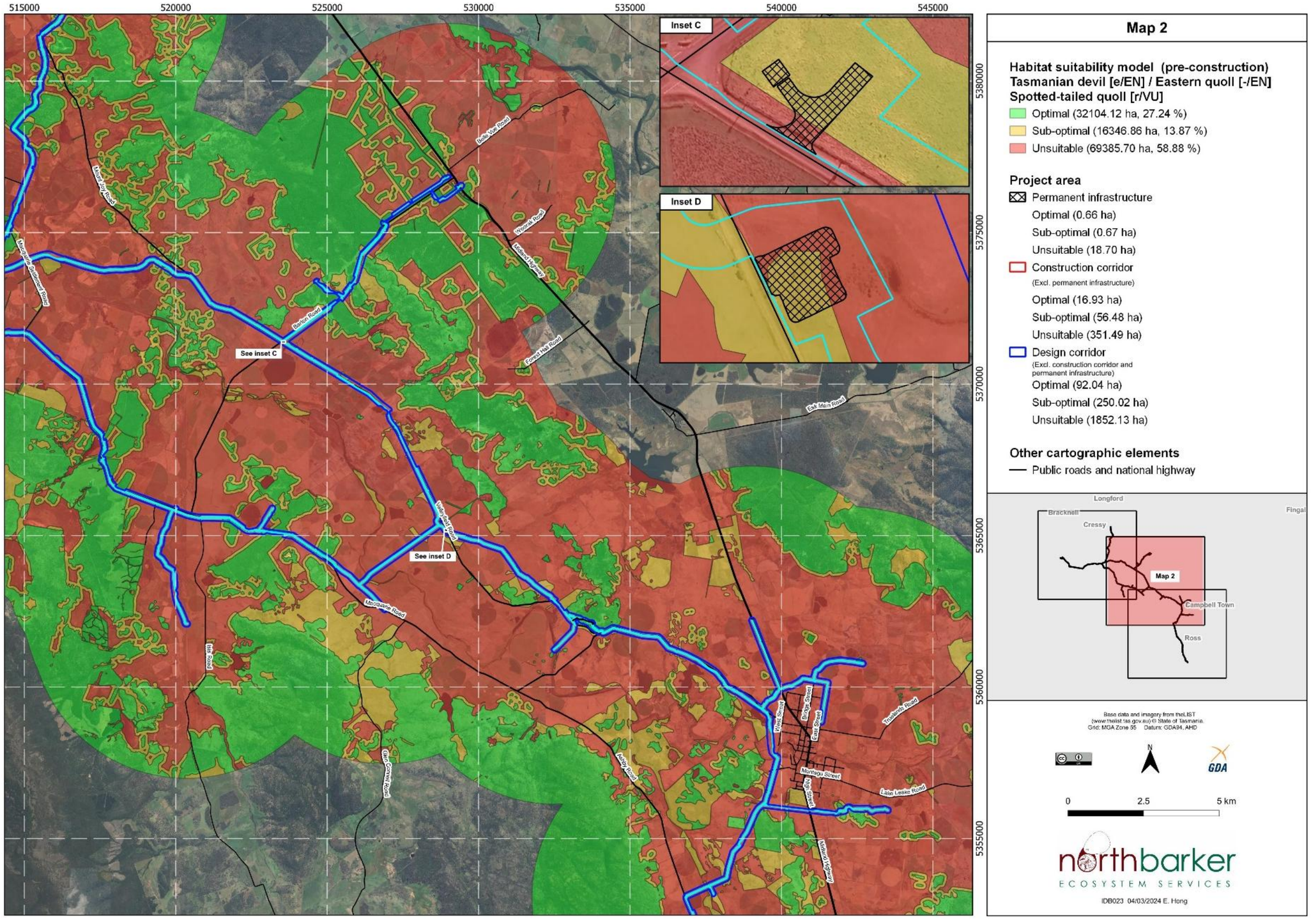
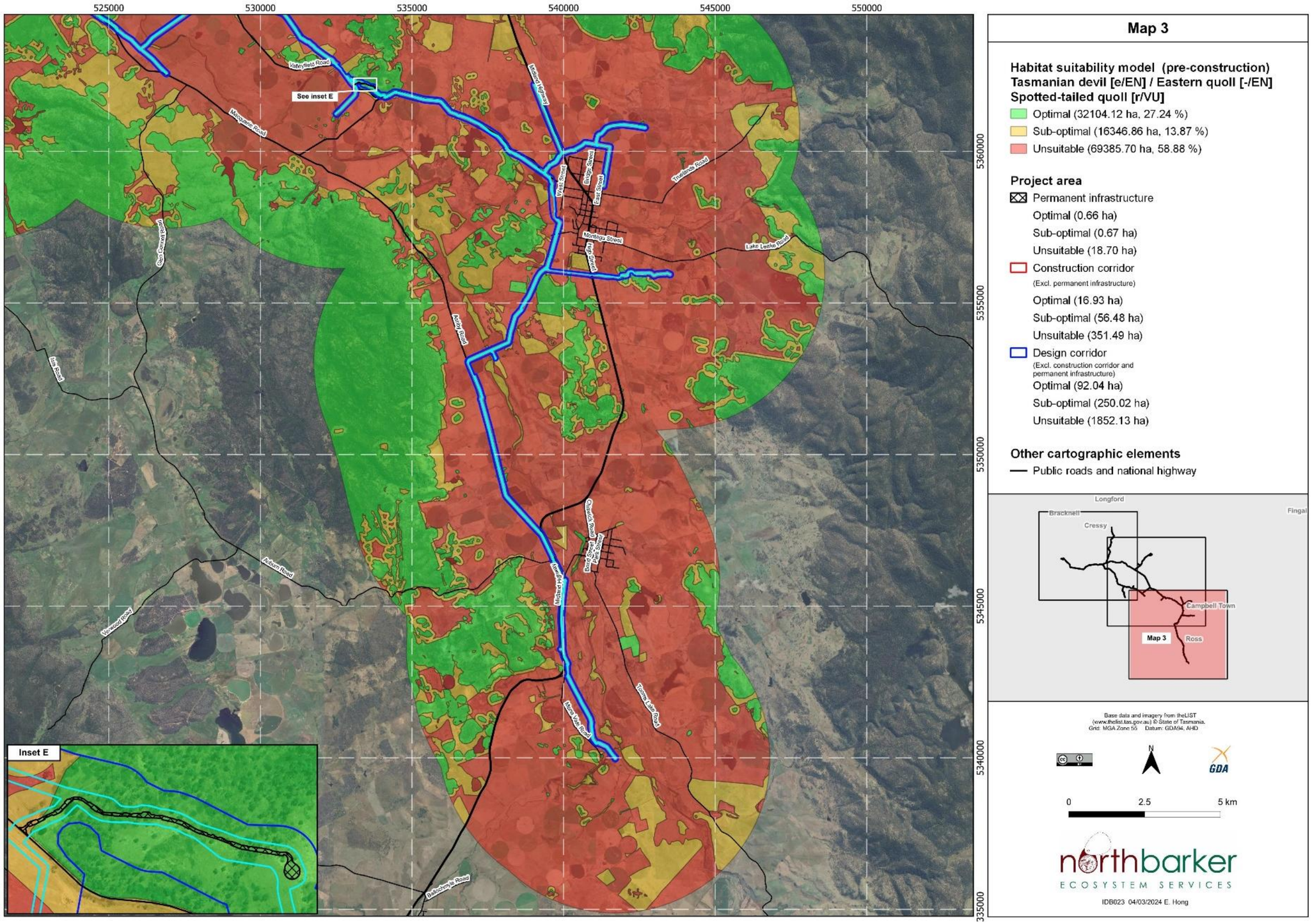


Figure 1b: Devil (and quoll) denning habitat suitability model pre-construction (noting all denning classes are considered potentially suitable foraging habitat)



Map 3

Habitat suitability model (pre-construction)
Tasmanian devil [e/EN] / Eastern quoll [-/EN]
Spotted-tailed quoll [r/VU]

- Optimal (32104.12 ha, 27.24 %)
- Sub-optimal (16346.86 ha, 13.87 %)
- Unsuitable (69385.70 ha, 58.88 %)

Project area

- Permanent infrastructure
  - Optimal (0.66 ha)
  - Sub-optimal (0.67 ha)
  - Unsuitable (18.70 ha)
- Construction corridor
  (Excl. permanent infrastructure)
  - Optimal (16.93 ha)
  - Sub-optimal (56.48 ha)
  - Unsuitable (351.49 ha)
- Design corridor
  (Excl. construction corridor and permanent infrastructure)
  - Optimal (92.04 ha)
  - Sub-optimal (250.02 ha)
  - Unsuitable (1852.13 ha)

Other cartographic elements

- Public roads and national highway

Figure 1c: Devil (and quoll) denning habitat suitability model pre-construction (noting all denning classes are considered potentially suitable foraging habitat)

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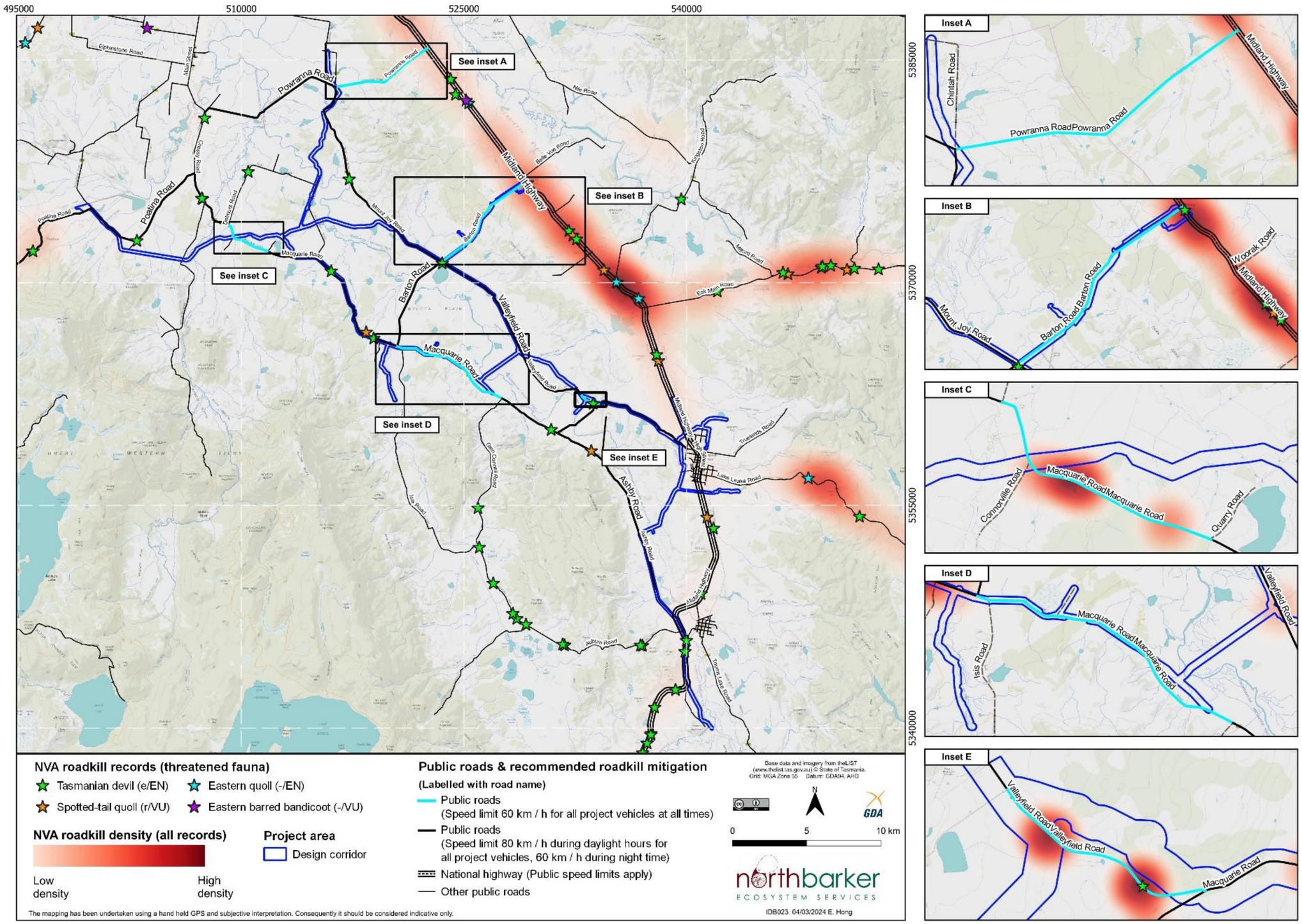

Figure 2: Distribution and density of roadkill records in the project area