

Little Penguin Management Report for storm drain works in Central Coast Council



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1 Objectives.

This document provides a survey and report on the presence of Little Penguins at proposed storm drain locations as requested by Central Coast Council.

Recommendation to minimise interactions with Little Penguins are also provided.

2 Conservation status of Little Penguins

The following listings give an overview of the legislative status of Little Penguins at international to state levels.

2.1 International

Little Penguins are listed as being of Least Concern on the IUCN Red List of Threatened Species (IUCN 2022). See <https://www.iucnredlist.org/species/22697805/202126091#assessment-information>

2.2 Commonwealth of Australia

Little Penguins are not listed as a threatened species under the *Environment Protection and Biodiversity Conservation Act 1999* but are listed on the Marine Appendix to the Act. See

<https://www.dcceew.gov.au/environment/epbc>

2.3 Tasmania

Little Penguins are listed in Schedule 1 (Protected Wildlife) of the *Nature Conservation (Wildlife) Regulations 2021* under the *Nature Conservation Act 2002*. In 2019, they were listed as Sensitive Wildlife within declared Sensitive Areas under the *Dog Control (Sensitive Wildlife and Areas) Order 2019*, Figure 1. Further details are at <https://nre.tas.gov.au/wildlife-management/marine-conservation-program/little-penguins-in-tasmania/monitoring-and-protection/dog-attacks-and-the-dog-control-act>



3 Little Penguins in Tasmania

3.1 Ecology of Little Penguins in Tasmania

The Little Penguin is a coastal nesting seabird found around much of the Tasmanian and Bass Strait islands' foreshores (Marchant and Higgins 1990). Little Penguins require suitable habitat for nesting during their breeding and moulting seasons.

In Tasmania, Little Penguins are present in coastal areas up to 1km from the shore, for example in Stanley and Bicheno (Marker *et al* 2024) where they nest in various natural habitats, including in shallow and deep burrows, rock crevices, and underneath any sort of vegetative cover that forms a burrow structure. They also nest in and under anthropogenic structures such as concrete culverts, coastal buildings and domestic gardens, or any stationary items, including artificial igloos and nest-boxes (Weerheim *et al.* 2003, Bourne *et al* 2004, Marker 2016, Woehler *et al.* 2021). In the north west, the distribution of Little Penguin habitat is constrained to the coastal strip due to the proximity of transport infrastructure (roads and railway line).

Vegetation of all descriptions (native and introduced) can be used by penguins during the breeding and moulting seasons, with birds typically returning to the same burrow from year to year. Careful management is needed if there is a requirement to remove vegetation, old logs, weeds and refuse from coastal areas, as penguin nests/burrows and nesting material may be inadvertently damaged or destroyed. Recent surveys and studies have shown that penguins may now be ashore at any time of the year in Tasmania (PF Marker unpubl. data, Woehler *et al.* 2021, Marker *et al* 2024).

Vegetation may have different effects on burrow temperature, but generally it acts as insulation and protects the birds from heat stress (Ropert-Coudert *et al.* 2004, Marker 2016), particularly during higher temperatures. Little Penguins readily adopt artificial burrows as alternative and supplementary breeding and moulting sites (Marker 2016, Woehler *et al.* 2021).

3.2 Annual life cycle in Tasmania

The annual cycle of the Little Penguin is summarised in Figure 2. It should be noted that the breeding season of Little Penguins is asynchronous, with birds beginning to breed at various times over several months, but the breeding season **usually** peaks over the months of November, December and January.

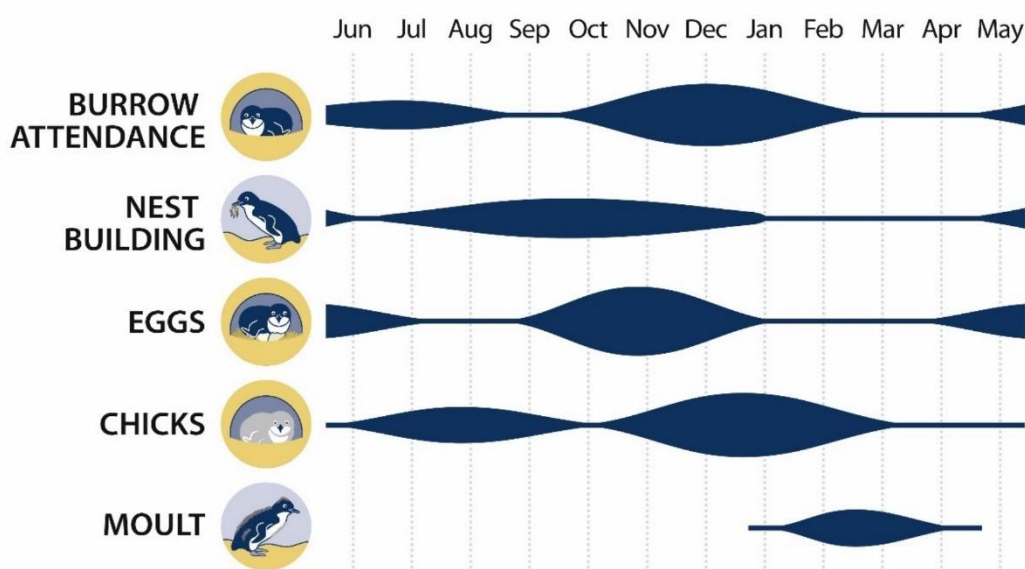


Figure 2: General annual life cycle of Little Penguins showing continuous presence of penguins ashore throughout the year. This diagram has been adjusted from a Phillip Island diagram highlighting that the breeding cycle may commence earlier in the year in addition to during the summer months. Figure from Marker *et al.* (2024)

3.3 Timing of works in Little Penguin habitat

Works in areas containing penguins are best undertaken outside the breeding and moulting seasons—that is, generally from May to August. However, as there is increasing variability in timing of Little Penguins breeding in Tasmania, it is critical to inspect the site carefully before any works program begins. During the non-breeding season, the colony may have as many as 10% of the birds present at any time. Winter breeding is also becoming a more frequent occurrence. For instance, chicks were recorded in July 2019 along the north-west coast, indicating eggs had been laid as early as late May 2019 (PF Marker unpubl. data); similarly, eggs were laid in June 2022 at Low Head (EJ Woehler, unpubl. data).

Current monitoring efforts around the state are recording Little Penguins ashore from May to August more frequently than in the past, so a careful approach is now required for working in penguin habitat at any time of the year. From May to August, it may be possible to work in small areas after inspections to ensure penguins are absent. Works during the main breeding and moulting seasons (October to March) should be avoided as much as possible to minimise disturbance to penguins.

4 Indicators of Little Penguin presence

The presence of Little Penguins can be identified by indicators, comprising:

- penguin footprints in the sand,
- penguin splashes or guano (white faecal streaks 3-5 cm long) on rocky areas and near the entrances of burrows,
- burrows in the substrate,
- penguin feathers visible at entrances to burrows, especially during the moult stage,
- well-worn runways in the vegetation, and
- vocalisations (especially at night).

5 Survey of proposed work zone site

The storm drain work is located entirely on the beach at Penguin Point beach in front of the Apex caravan Park, West Ulverstone.

The survey was undertaken on 21 August 2024 and 8 January 2025 to assess the presence of penguins. All data were mapped in real time with a hand-held 10-channel Garmin GPSMAP 64sx. The work proposed is to replace a current storm drain under the beach. No penguin burrows were located in the identified works zone, as the works are restricted entirely to the beach area.

Penguins transit to their colony located behind the works zone in the vegetation (Figure 3) crossing the beach (Figure 4), after dark or before dawn. Fewer than 5 penguin tracks were observed in the sand within a 2m corridor on either side of the proposed drain works on the beach. A few more tracks were observed from the survey carried out in January 2025. In particular penguin tracks were observed at a distance of up to 10m between the vehicle access track and the storm drain work site. These surveys indicate that the area is an active penguin zone.

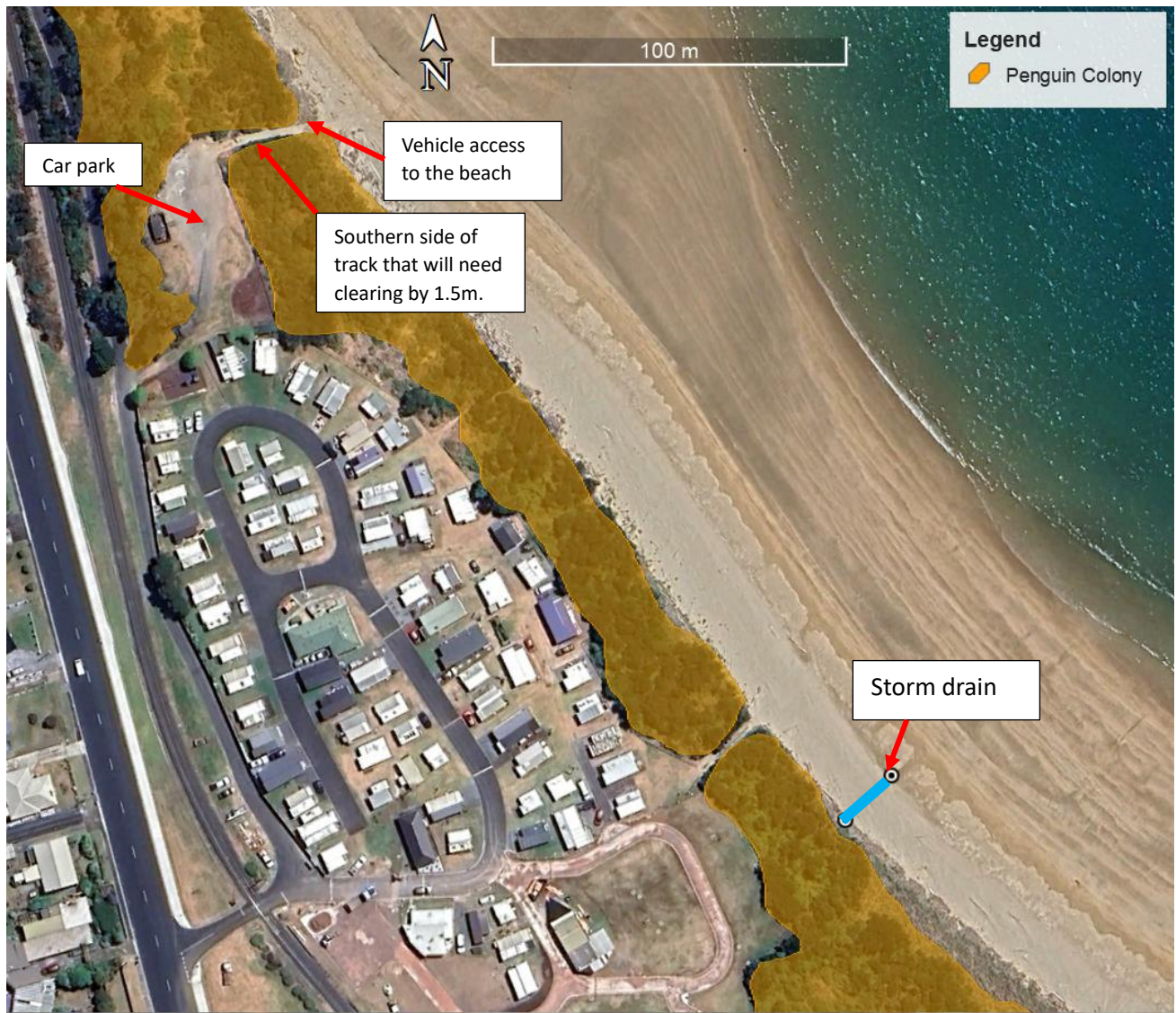


Figure 3: Map showing the presence of Little Penguin colony, access to the beach for work vehicles and the storm drain (blue).



Figure 4: Looking inland from the old storm drain that will be replaced to the blue pole that shows the start of the proposed works.



Figure 5: Map provided by CCC showing the cyclone fence enclosures; a 10m x 10m storage compound for any materials to be used daily, an 8m area either side of the pipeline to the water line (yellow). The enclosures are not drawn to scale

6 Recommended protocols

Whilst works are to be undertaken outside the penguin colony on the beach, there should be no issue with the completion of the works over the coming months, especially as we move into the moulting season. However, it must be stressed that works must cease by sunset to avoid penguin activity on the beach after sunset. As the works area is outside the penguin colony and restricted to the beach area, the following recommendations are made to avoid penguins being trapped by any works undertaken at Penguin Point.

6.1 Work Zone

Apart from the work zone on the beach, there is also the access for vehicles to the beach that will need to be considered in these protocols.

Access to the beach

Access to the beach will be via the vehicle access track (Figure 3 and 6). The width of this will need to be widened to allow access by the excavator (3.2m) that is needed to undertake the work on the beach. Vegetation to be removed will not exceed 1.5m at the narrowest part and will be focussed on the southern side of the track as this consists mostly of Coastal Wattle (not preferred penguin habitat). Whilst some penguin tracks and the odd scat was noted during the surveys, it was not possible to map any burrows that may need to be decommissioned along the vehicle track due to the density of the vegetation on both sides of the track.

As the works are now timed for after the breeding and the main moulting season, the probability of finding penguins present in burrows will be low. The NRE approved penguin biologist will be present, to search for

any burrows as the small amount of vegetation is removed to provide access for the excavator. The burrows will be logged, as they will be decommissioned during the works.

Any penguins found will be relocated to suitable vegetation within 2m nearby, as the habitat provides suitable vegetation cover for penguins. The vegetation area will be rehabilitated with vegetation after the works are completed using plants recommended in the *Guidelines for works in, and management of, Little Penguin habitat* (Marker et al 2024).

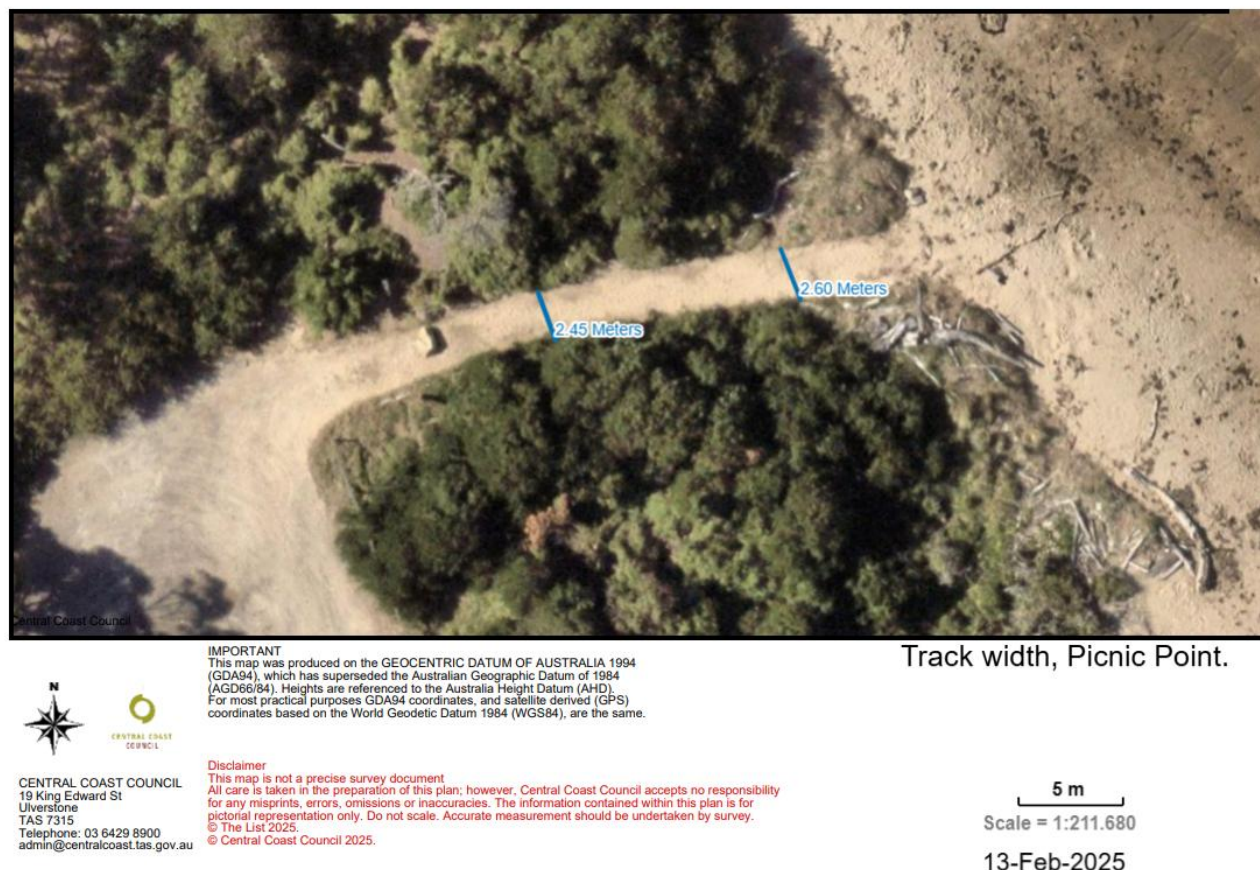


Figure 6: Map provided by CCC showing the width of the vehicle access too the beach, where widening will be required for the excavator to access the work zone.

Fence off beach area.

It is essential to avoid any excess material being placed outside the work corridors on vegetated areas. The recommended protocols for these zones are:

- The work storage area 10m x 10m, (green in Figure 5) indicates where materials will be stored, and a corridor of 8m on either side of the storm drain (yellow in Figure 5) shows the footprint of the storm drain.
- Once work is completed for the day and machinery is returned to the car park area, then the beach area will need to be fenced off with chicken wire fencing to prevent access to any part of the work zone by penguins.
- Chicken HD wire (cyclone HD netting with 4cm mesh) is to be used, as this prevents penguins getting caught in the wire compared to the light more flexible wire. The barrier mesh should be wide enough to allow approximately 100mm to be dug into the sand, or bent outwards and fixed in the ground with tent pegs or steel star pickets (or similar) to prevent penguins burrowing under the barrier, and

600mm above the ground. The barrier mesh will need to be staked at regular intervals (every 2m) to maintain some stiffness and prevent its collapse. The barrier mesh will prevent penguins accessing the work zone overnight.

- From the day the development footprint has been declared penguin-free by an approved penguin biologist, the fenced development footprint must be checked daily by a trained, authorised person before any on-site activities begin each day until the completion of the development activities to ensure that:
 - All fencing is intact;
 - No little penguins are caught in the fence;
 - No little penguins have breached the fence; and
 - All holes within the development footprint are covered (overnight) and no little penguins have fallen into any holes.
- This temporary fencing can be removed during the day as work is undertaken and will need to be replaced at night while construction activities are underway.

6.2 Storm drain opening

It is recommended that the storm drain will need a duck bill flap (Figure 7) fitted to the end of the drain to avoid penguins accessing the interior of the drains.



Figure 7: Duck bill flap over storm drain

6.3 Use of machinery

Penguins are opportunistic birds that will make use of any vacant cavity to rest or set up a burrow, so the following precautionary actions are recommended:

- Construction of storm drain will require the use of vehicles, machine tools and materials throughout the period. All vehicles and machinery must be stored overnight in the car park and not left on the beach (Figure 3).
- A daily pre-start checks to confirm the absence of penguins in and around all machinery and material left onsite in the car park area overnight must be completed by the trained, authorised person before any on-site activities begin each day.
- If penguin(s) are found around the machinery, then the NRE approved penguin biologist will need to be called to relocate them to neighbouring vegetation.
- All daily actions must be recorded in dealing with penguin management.

6.4 Injury and Mortality Management

In the event that there are Injuries or mortalities of little penguins as a result of the development activities must be reported to Conservation Assessments (ConservationAssessments@nre.tas.gov.au) within 24 hours of the event and a written incident report must be provided within 14 days of the incident occurring. If required, only approved and permitted wildlife rehabilitators can be used. Refer to the NRE Tas Injured and Orphaned Wildlife Guidelines where appropriate.

7 References

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- Woehler EJ, Glencross JS, Riley MA 2021. *Survey of Little Penguins Eudyptula minor at Low Head 2019 – 2021*. Report to Friends of the Low Head Penguin Colony, April 2021. BirdLife Tasmania Technical Report 2021 – 04, 13pp.