

DECEMBER 2012

Pacific Highway upgrade, Woolgoolga to Ballina

Coastal Emu

The proposed upgrade of the Pacific Highway between Woolgoolga and Ballina would upgrade about 155 kilometres of highway to dual carriageway. The upgrade starts approximately six kilometres north of Woolgoolga (north of Coffs Harbour) and ends approximately six kilometres south of Ballina.

An endangered Coastal Emu population uses habitat between Pillar Valley and Shark Creek in the project area. Construction of the highway in this location has potential to create a barrier for emus accessing wetland and floodplain habitat.

This fact sheet provides information on the investigations undertaken to date and how Roads and Maritime Services (RMS) will mitigate potential impacts and maintain access to habitat for the Coastal Emu.

As part of the Environmental Impact Statement (EIS) RMS has prepared a Biodiversity Connectivity Strategy that identifies a number of measures to manage potential impacts on the Coastal Emu population.

The proposed measures aim to ensure emu movements and connectivity is maintained within habitat corridors.

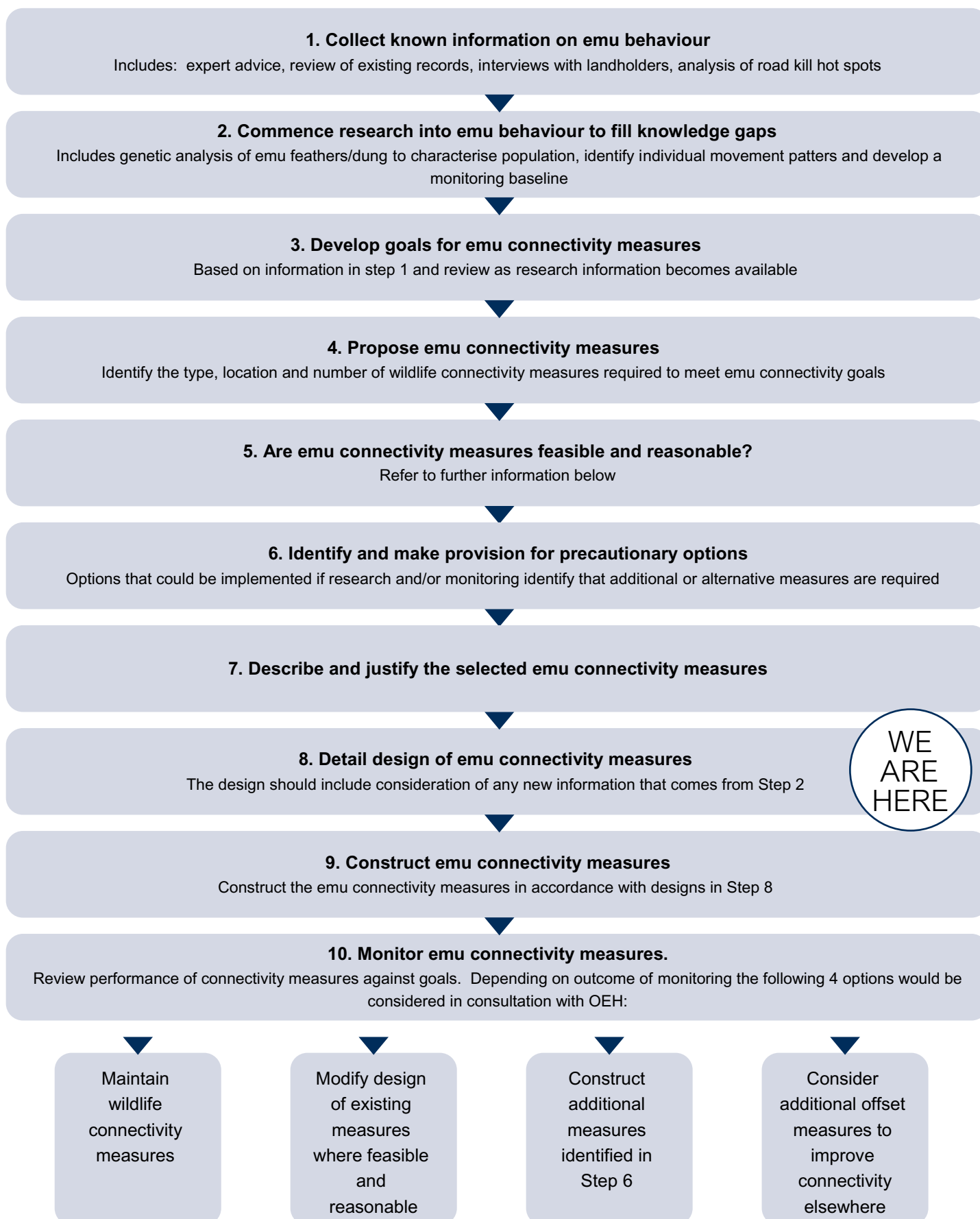


Emu enclosure to enable emu tracking study.



Coastal emu

The process for managing emu connectivity requirements is outlined below. For a more detailed description refer to the Biodiversity Connectivity Strategy.



Coastal emu connectivity measures

Some of the mitigation measures identified in the Biodiversity Connectivity Strategy include:

- 14 combined bridge and waterway structures within key emu movement corridors have been designed to focus on facilitating emu passage. Some flexibility will be maintained in the design to incorporate results from ongoing research into emu movements. The structures will:
 - Have a minimum height of 3.6 metres with some exceeding six metres.
 - Structures crossing waterways will have a minimum passageway of four metres from the bridge abutment to the edge of the waterway. This minimum passage way is exceeded in several bridges.
- Four bridge or arch structures for dedicated emu passage that will maintain a minimum height of 5.5 metres.
- A 450 metre bridge crossing is also proposed over Shark Creek. A combined drainage and emu underpass in this location will be reviewed in consultation with key stakeholders. This will include discussions on limiting access to cane farms on the western side of the highway.

- A dedicated overpass crossing has been designed between Pillar Valley Creek and Mitchell Road. This would only be built if post construction monitoring shows that the emus are not using the underpasses provided in this area.
- Possible road kill impacts on the new highway would be managed through the provision of purpose built exclusion fencing strategically located in areas between Eight Mile Lane in the south and McIntyres Lane in the north.

As a precautionary measure, fauna underpasses will be designed with a clearance from 3.6 to 5.5 metres to encourage emus to use the underpasses.

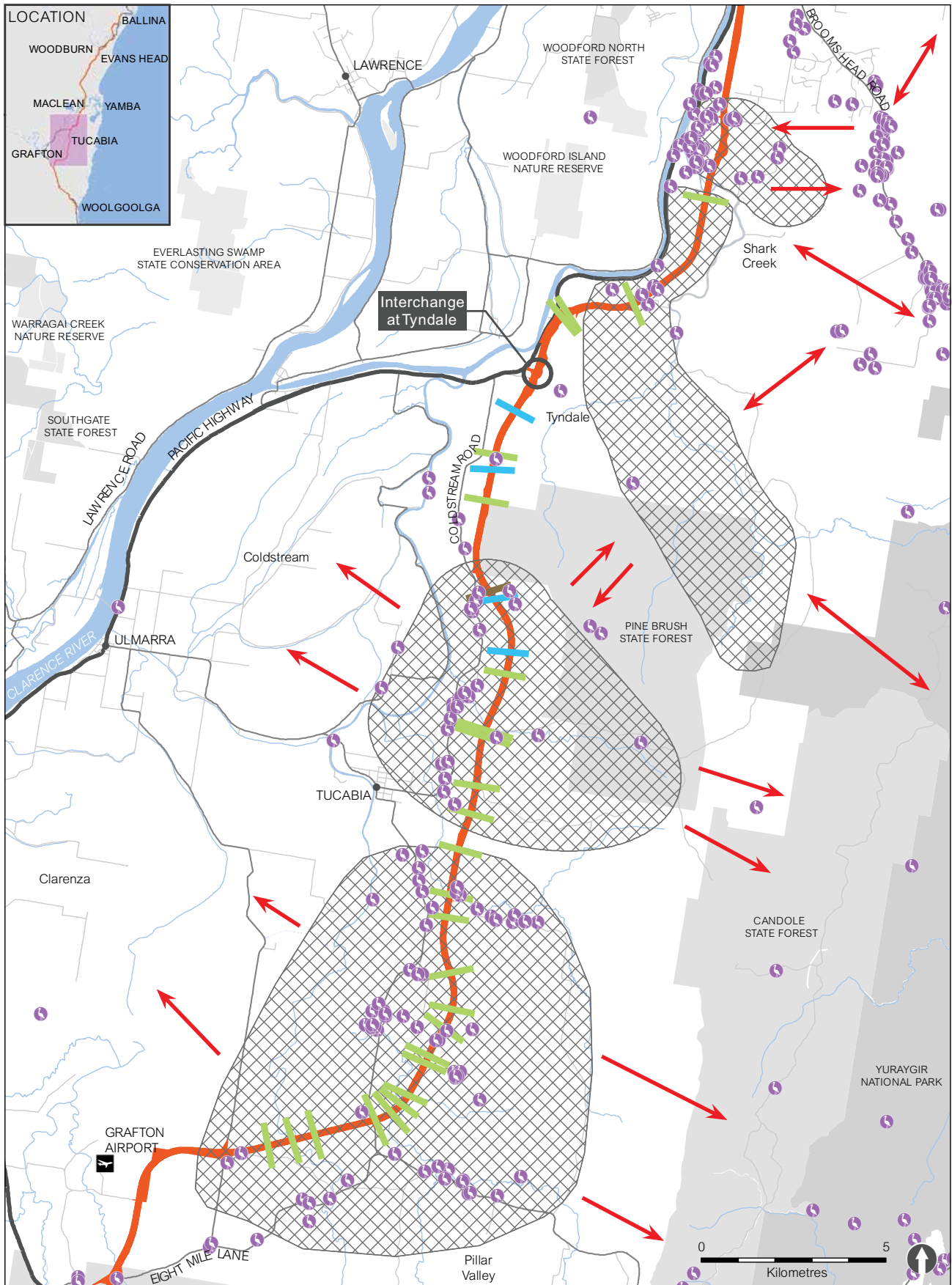
Vegetation and landscaping

Plantings under structures including the approaches to the crossing will be grasses or low ground covers. This is to leave the passageway clear. Ground cover crops such as soybean and oats or rye grass could be used where possible on disturbed ground around the approaches to the structure to attract emus to the crossing zone.



Emu tracking study.

Proposed emu distribution and proposed emu connectivity structures



- Woolgoolga to Ballina upgrade project
- Existing Pacific Highway
- ➔ Emu movements
- Emu Atlas data records (1980-2012 – most records are based on sightings along existing roads)
- Emu connectivity zone
- Dedicated emu structure
- Combined emu and drainage structure

Artist's impression – Bridge and arch structure showing emu underpasses

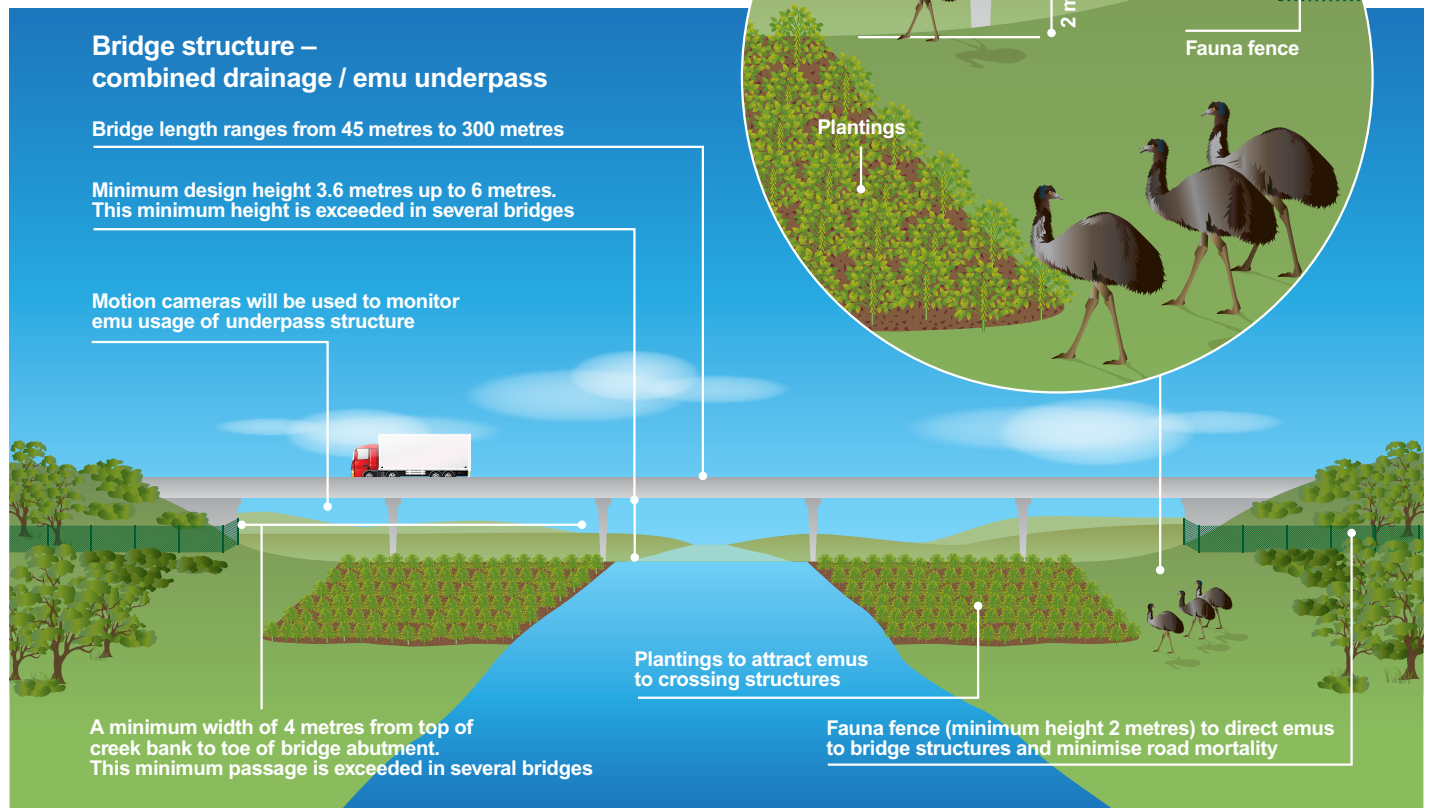


Figure is an indicative illustration of a typical bridge structure, not to scale and concept design only

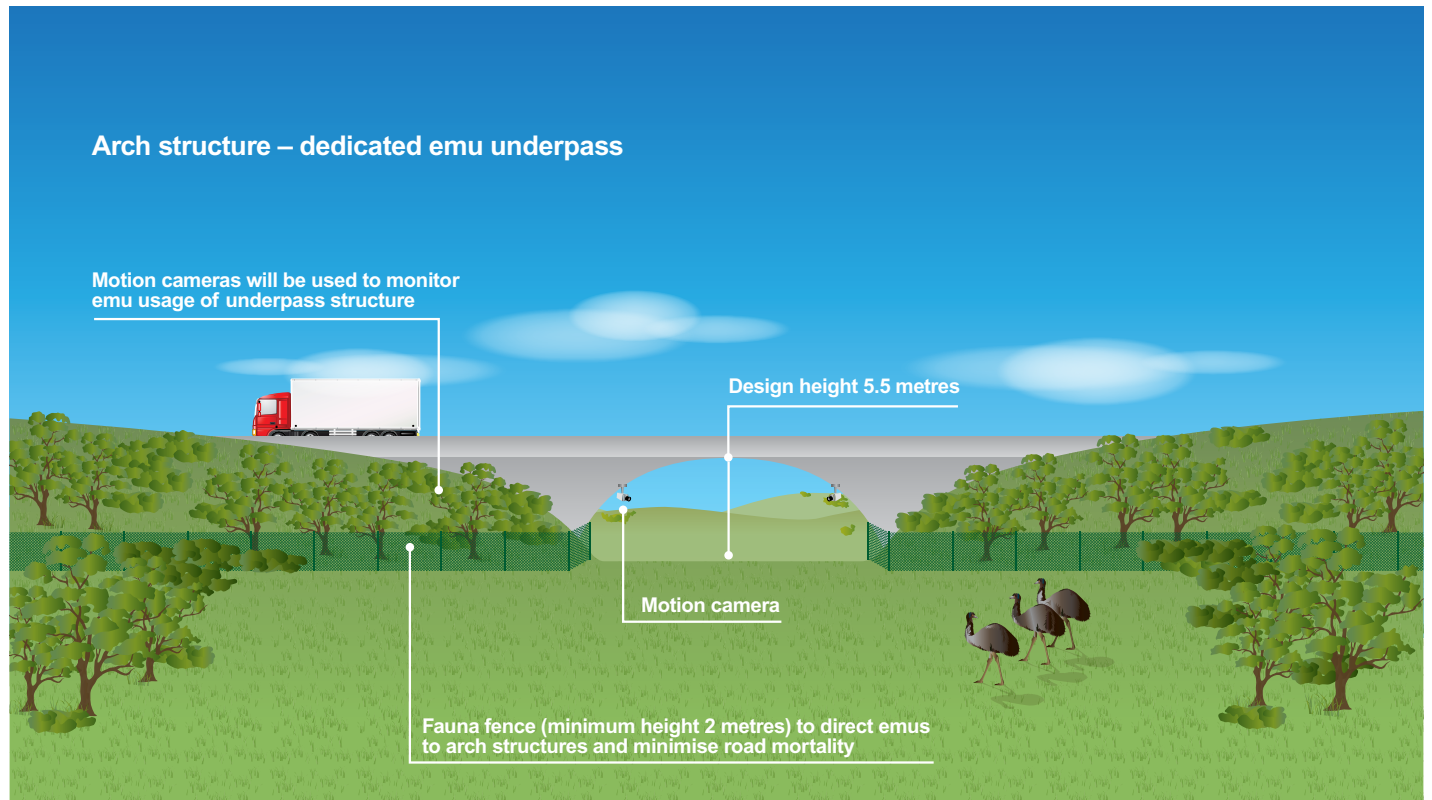


Figure is an indicative illustration of a typical arch structure, not to scale and concept design only

Early establishment of emu exclusion fencing

In conjunction with the proposed emu crossing points, emu exclusion fencing will be built on both sides of the project boundary, including suitable gaps in the fence to allow access to habitat. Early establishment of fencing will allow emus to become accustomed to using the gaps prior to construction of the project. Early monitoring of these sites will be conducted with techniques such as motion-sensor cameras and satellite tracking to provide baseline data prior to and during construction.

GPS tracking pilot study

A pilot project is being funded by RMS in conjunction with Taronga Western Plains Zoo, National Parks and a local wildlife carer to develop a technique for safe sedation and attachment of GPS satellite tracking devices on emus. This project is using hand-reared animals that are being released back into the wild population.

This pilot recently started and has two goals:

- To determine if tracking of emus can be successfully deployed for a project specific monitoring program.
- To track the released emus for up to 18 months to determine their movements, habitat movements and the success of the release of captive birds back into the wild. The data would be provided to the Office of Environment and Heritage to assist in recovery planning for this species.

Reports available

More detailed information is available in the Biodiversity Connectivity Strategy and on the project website.

Roads and Maritime Services

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All information in correspondence is collected for the sole purpose of assisting in the assessment of this proposal. The information received, including names and addresses of respondents, may be published in subsequent documents unless a clear indication is given in the correspondence that all or part of that information is not to be published. Otherwise RMS will only disclose your personal information, without your consent, if authorised by the law. Your personal information will be held by RMS, Pacific Highway Office, at 21 Prince Street, Grafton NSW 2460. You have the right to access and correct the information if you believe that it is incorrect.

Monitoring of emu usage of targeted underpass structures

The data from the satellite tracking pilot would be used to inform the development of an emu monitoring program. The purpose of the monitoring program is to gain information on the movements of emus in relation to the project boundary and to determine the effectiveness of bridge and underpass structures at providing emu passage and access to important habitats on the western side of the highway.

The monitoring program will include both before and after construction data and be supported by remote stationary camera surveillance under each of the proposed underpass structures.



Emu tracking device on leg – part of the pilot study.

For further information

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