



## Minister for Transport and Main Roads

Our ref: PET36731

Your ref: A552497

22 May 2020

Mr Neil Laurie  
The Clerk of the Parliament  
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Dear Mr Laurie

I refer to petition number 3208-19 lodged with the Legislative Assembly on 22 April 2020 about fauna friendly infrastructure.

The Department of Transport and Main Roads' (TMR) *Environmental Processes Manual* sets out the processes for assessing and managing the environmental impacts of transport infrastructure projects. During the planning phase of all its projects, TMR completes an environmental assessment to understand the potential risks to environmental values, including native fauna, to inform the project design and ensure compliance with TMR's obligations under state and federal legislation.

TMR also has a *Fauna Sensitive Road Design Manual* which is used to design, construct and maintain roads that better accommodate the needs of fauna, by reducing habitat or population fragmentation and the impact of road traffic. When considering the suitability of fauna friendly infrastructure as a possible mitigation measure, TMR considers a number of issues, including the design needs of the target species; existing landscape connectivity; current and future land uses adjacent to the project; physical design constraints, such as topography, geometry, accessibility and drainage; road safety, and funding availability for both construction and the ongoing maintenance commitment. TMR also considers the suitability of alternative mitigation measures such as signage, habitat restoration and reduced speed limits.

TMR regularly engages with key stakeholders, including individuals, local government and community interest groups to understand where there are particular high-risk locations for animal-vehicle collisions, along the existing road network, that need to be managed. TMR has representation on the Koala Advisory Council to work collaboratively on the South East Queensland Koala Strategy outcomes and transport impacts with other key stakeholders to address this key fauna species in South East Queensland. In North Queensland, TMR continues its work with an interagency and community team—the Cassowary Recovery Team—seeking innovative solutions to reduce cassowary road strikes on roads.

TMR seeks to minimise the impact on the natural environment on all its projects, through the following environmental initiatives.

- Construction of a 15-metre wide fauna passageway as part of the Pacific Motorway Varsity Lakes to Tugun upgrade to reconnect the important Burleigh to Springbrook bioregional wildlife corridor. The location of fauna exclusion fencing along the alignment is based on a review of 10 years of environmental data.

- Design of a Diverging Diamond Interchange on the Bruce Highway Upgrade – Caloundra Road to Sunshine Motorway to reduce the vegetation clearing impact on the former Beerwah State Forest by 29 hectares. As part of the project, over 66 hectares of land will be rehabilitated to offset clearing impacts, and the upgrade will include five dedicated fauna movement structures (including a fauna rope ladder) and four additional opportunistic fauna movement underpasses via large drainage culverts or bridge structures. Approximately 12,300 metres of fauna exclusion fencing will be installed along the project alignment in areas of critical habitat, including Beerwah State Forest and Mooloolah River National Park.
- Incorporating fauna-friendly infrastructure incorporated into upgrades along the Bruce Highway, including Cooroy to Curra Sections A, B and C and the Tinana Interchange. As part of the Bruce Highway (Cooroy to Curra – Section D) project, offset areas will be legally secured and managed to improve and protect habitat for the koala and black-breasted button-quail.
- Relocation of around 130 threatened ant plants and rare mangrove species from the Cairns Southern Access Corridor (Stage 4) project site to East Trinity Reserve in early 2019. The ant plant has a symbiotic relationship with the golden ant and the threatened Apollo jewel butterfly, with each species requiring the others to complete their life cycle.
- Installing glider poles installed on the Bruce Highway at East Creek, Frances Creek, Corduroy Creek and the Cardwell Range Crossing in northern Queensland, and underpasses for the safe movement of cassowaries at Arnott Creek and the Cardwell Range Crossing. TMR is constructing a dedicated cassowary land bridge linking tracts of world heritage-listed rainforest on the Smiths Gap section of the Bruce Highway near Mission Beach to protect this unique species and improve safety of motorists on Queensland roads.
- Contributing to numerous research projects, including a koala population research study near Mackay. TMR is putting the research recommendations into action by installing wildlife fencing at recommended locations along the Peak Downs Highway between Nebo and Eton to reduce conflicts with road users. TMR is also contributing funding to valuable research by Sunshine Coast University to understand the characteristics of land offsets that provide the best long-term outcome for koalas, and the role of wildlife vegetation corridors in maintaining genetic diversity. This research will be used to inform future land offset proposals.
- TMR is also undertaking a number of innovation and development projects in the field of fish passage design to enhance the body of knowledge and capability in facilitating effective fish passage while maintaining hydraulic efficiency of structures. Restriction of fish movement within catchments can impact on the reproductive lifecycle and fish community population and spatial distribution. Projects by TMR include a review of fish passage specifications and literature across Australia, New Zealand and internationally, laboratory analysis of the hydraulic performance of box culverts for fish passage, and a field trial of a proposed fish passage baffle designs to assess and optimise both hydraulic and fish passage performance.

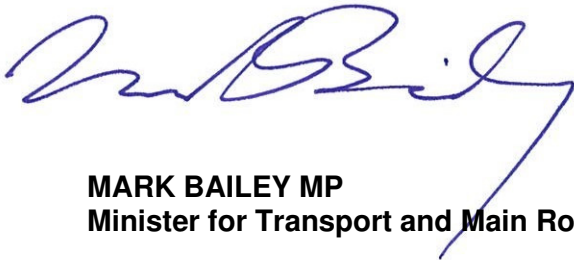
TMR has adopted a leadership position in reducing its environmental footprint and influencing those in the industry to achieve the same high standards. TMR has mandated infrastructure sustainability assessments on all projects over \$100 million, with a target required rating of excellent level of sustainability outcomes. The rating scheme that TMR applies is assessed by a third party independent organisation and includes assessment of flora and fauna outcomes, as well as many other environmental, social and economic sustainability indicators.

To reduce greenhouse gas emissions and limit resource consumption, TMR has introduced a number of engineering innovations into pavement design including:

- EME2 pavements to reduce the thickness of asphalt required and therefore reduce quantity of material used in road construction projects
- using recycled asphalt which has lower emission potential than fresh asphalt
- promoting the use of crumbed rubber, which is made from old car tyres, to reduce the amount of waste going to landfill and also provides a substitute for virgin materials.

The Palaszczuk Government is proud of its commitment to minimising the impact of the road network on populations of native fauna.

Yours sincerely

A handwritten signature in blue ink, appearing to read 'Mark Bailey', with a long, sweeping underline that extends to the right and then curves downwards.

**MARK BAILEY MP**  
**Minister for Transport and Main Roads**