Nexus is committed to minimising the environmental impact of the Toowoomba Second Range Crossing (TSRC). Working with government, neighbours and community, our dedicated cultural heritage and environment team ensure impacts are avoided, minimised and mitigated.

This includes:
- adhering to the project permit and approvals
- ensuring that all personnel undertake works in accordance with the Environmental Management Plan for Construction including sub plans such as:
  - flora
  - fauna
  - cultural heritage
  - weeds and pests
  - waterways and water quality
  - soils and geomorphology including contaminated land management
  - social amenity including noise, dust and vibration management
  - waste
- ensuring that all personnel undertake works in accordance with the project Erosion and Sediment Control Plan to protect water quality, riparian vegetation and aquatic habitat in nearby waterways.

Environmental impact management

Critical to minimising impacts on large scale projects such as the TSRC, all elements of design, construction and landscaping are developed with environmental sensitivity in mind. However, the TSRC’s close proximity to commercial, residential, rural, farming and woodland areas means that some impacts are unavoidable. These range from fragmenting of vegetation and increased vehicle and people movement to localised noise, dust and vibration during construction. Nexus is committed to minimising the impact of these changes in accordance with all required permits and approvals.

Environmental value along the TSRC

The TSRC runs between the cleared agricultural and residential lands of the Lockyer Valley in the east to eucalyptus forest, woodland and dry rainforest on the slopes of the Toowoomba Range escarpment, and out through residential developments and cleared agricultural land in the west.

Areas of intact habitat, such as in the eastern areas, provide greater support for biodiversity and connectivity along the corridor. However, the TSRC landscape has also been highly modified and disturbed by past clearing, logging, thinning and wildfire. Some sections of the corridor also suffer from heavy weed infestations such as Lantana camara.

The Collared delma

Prior to construction, the delma torquata a small legless lizard and a protected species in the area will be subject to a translocation pilot program. The program involves establishing a separate translocation area outside of any clearing and construction areas and intensive investigations along the TSRC to identify delma microhabitat.

Any delma that are translocated will receive ongoing monitoring with all learnings from the pilot adapted into future environmental management plans.
Flora and fauna

Due to high ecological value along the TSRC, careful management of flora and fauna impacts is required. Design of the corridor and associated construction activities takes into consideration flora and fauna surveys, vegetation mapping, weed identification and placement of ancillary infrastructure along existing access tracks and road reserves to minimise habitat disturbance. The TSRC has also been designed to include fauna barriers, underpasses, crossings, culverts and furniture where possible to preserve habitat integrity.

During construction, additional environmental measures include:
- fauna spotter catchers on-site before and during works
- daily pre-clearing monitoring
- staged clearing to create connectivity for relocation of fauna and to maintain habitat links
- relocating fauna, in particular the collared delma
- collecting seeds to be reused in landscaping and compensatory revegetation works
- placement of ancillary activities such as haulage routes, site offices, storage and stockpiling areas as far as possible from areas of remnant vegetation, waterways and good quality habitat
- creation of temporary fauna escape routes and fish passages
- vehicle washdowns
- appropriate disposal of class 1, 2 and 3 weeds including herbicide and mechanical techniques.

Environmental commitments

Nexus Infrastructure is committed to delivering the TSRC in a responsible and sustainable way by:
- minimising pollution of land, air and water
- using pollution control equipment and keeping it in proper working order
- ensuring minimal impact on the natural and cultural heritage environment
- notifying authorities in relation to Aboriginal cultural heritage and historical cultural heritage discovery
- minimising the occurrence of offensive noise
- keeping the community informed of project milestones, upcoming activities and timings
- complying with all regulatory permits and approvals
- continuously improving environmental performance.

Air, noise and vibration impacts

Air quality

Air quality along the TSRC may be impacted by any action or activity that generates dust or excess emissions, including vegetation clearing, earthworks, bridge works and concreting.

Specific mitigation strategies to maintain air quality include:
- undertaking dust monitoring
- careful selection of machinery and planning activities to ensure minimal construction impacts where possible
- covering truck loads when leaving site
- using street sweepers on local roads
- utilising water trucks and water sprays to suppress dust
- restricting high risk activities in extreme weather events (very strong wind, hot dry conditions).

Noise management

Constructing the TSRC will create localised noise impacts, most noticeable for adjacent residents. Nexus Infrastructure is committed to undertaking regular noise monitoring in sensitive areas across the TSRC and ensure the noisy works occur between standard daylight hours from 6:30am to 6:30pm.

Additional noise management strategies also include:
- using low noise emitting equipment where possible
- using noise dampeners
- limiting use and hours of noisy equipment
- ensuring proper equipment maintenance
- locating noisy equipment away from sensitive areas
- establishing natural and artificial enclosures and screenings to reduce noise transmission staging works to minimise noise.

Vibration management

Minor vibration impacts are expected while constructing the TSRC. Where possible bored piles will be used instead of driven piles and rock hammering will not occur outside of standard daylight hours. Appropriate selection of machinery and equipment will also minimise disturbance to community and the environment.

Blasting along the TSRC will be controlled to minimise impacts with field data used to determine the optimal blast conditions. The impacts of blasting will be further managed through staging and timing of blasts to suit conditions and vibration and blast modelling. Nexus will notify all potentially impacted residents prior to any blast activity and undertake regular monitoring in sensitive areas.