Mangalore to Bagdad Road Improvements
Stage 1

For most of the Midland Highway, the predominant crash type is loss of control, most of which are single vehicle crashes with some resulting in head-on crashes and fatalities. Nearly 60% of the fatalities on the highway have been due to head-on crashes.

Stage 1 (Bagdad) was designed to improve safety in the existing speed limit environment. This will improve safety for all road users while maintaining efficiency on Tasmania's National Highway.

The Project

This project included the upgrade of 3.1km of the Midland Highway through the Bagdad township, involving:
- Installation of a 3.0km median turn lane;
- Installation of a 2.1km central median containing flexible safety barrier;
- Widening of sealed shoulders to 2.0m;
- Access improvements; and
- Strengthening and widening of Horfield Creek Bridge.

Key features

Road widening was conducted on the first 2km of the project to accommodate a simple turn lane to ultimately improve safety for road users. There are a large number of property accesses (40+) throughout this section of highway.

Improved the urban environment in and around the hub of Bagdad, with new pedestrian crossings and stairs down to the service station, kerb and gutter, and truck pull-outs on both sides of the road.

Horfield Creek Bridge was widened and the existing structure was strengthened to accommodate a simple turn lane.

Pedestrian refuges in the centre of the road to improve pedestrian safety throughout Bagdad township.

Challenges

Underground services. Due to the age of the region, there were numerous redundant and live services that were not identified. This was overcome by using local knowledge of appropriate personnel (TasWater) to confirm where services not on the Dial Before You Dig plans were located. Damage was avoided by increasing awareness of all staff on site of the requirement to use spotters when digging at all times on the project.

Traffic volumes. With fluctuating volumes of traffic, it necessitated dynamic traffic management. This involved varying the use of traffic lights from automatic to manual when required, as well as using manual traffic controllers if the lights became ineffective. There were nine side roads throughout the worksite. This required careful staging of works to ensure disruption to side roads was minimised. Where work involving side roads occurred, VEC ensured appropriate traffic management was in place.

Road closure. Site constraints and contract requirements initially dictated a maximum length of 500m under gravel at any one time. This was rather restrictive given that the project was over 3km long.

As a result, our team reviewed the original staging of the project and modified it as such so traffic could be moved to one side of the road following widening work; lay a temporary seal; and then move the traffic to this side. The team then proceeded to widen the other side of the road; lay the final seal and then move traffic back. By doing this, VEC improved safety for public with no direct interaction with plant, equipment or personnel.

Communication. It was critical to ensure that all stakeholders were well informed of the roadworks. Numerous community updates (flyer) letter drops were distributed to 600+ homes in Managlore and Bagdad.

Innovation

Carbon strengthening on the Horfield Creek Bridge. Transverse and lateral carbon strengthening of the existing bridge deck was undertaken to ensure compliance with current load standard.

Excellence

The VEC team showed excellent focus on safety by pro-actively reporting Near Misses. As Horfield Creek was an environmentally sensitive waterway, the team showed their respect for the environment by rehabilitating the waterway and improving erosion protection through installation of rock scour protection in the in and outlets of the structure.