Warrego Highway Toowoomba Range flood reconstruction

December 2013

Works update

The holiday season is just around the corner and the eastbound lanes of the Warrego Highway on the Toowoomba Range will return to two-lane operation in time for the festive break.

The two eastbound lanes will be in operation from Wednesday 18 December 2013.

Having both lanes open will ensure a smooth run of traffic for everyone celebrating the holidays.

A temporary side road (pictured at right) for eastbound traffic opened on 5 December and will operate with two lanes from 18 December 2013. The existing down lanes above the side road will also be returned to two-lane operation at this time.

This side road will allow traffic to be diverted from the works area where the new 1.2km eastbound alignment is being constructed.

Motorists will use this side road until the new alignment is completed in May 2014, weather permitting.

Revegetation on the slopes

Revegetation has begun on sections of the road reserve on the Toowoomba Range, which had been cleared of vegetation and cut to a stable slope during works.

A compost blanket is being applied, containing the seeds of local native grasses, shrubs and trees and a special adhesive that ensures there is minimal loss of soil or erosion during downpours.

See the full revegetation story inside
Project on track at the halfway mark

Real progress has been made since work began on the Toowoomba Range in April 2013. The project reached the halfway mark in November with:

- earthworks 65% complete (240,000m³ to date)
- drainage 48% complete (444m)
- landscaping 10% complete (12,000m²).

Work continues on many fronts across the Toowoomba Range work sites, including the new 1.2km eastbound alignment (shown in orange below). Now that the side road is open (shown in black), work can continue near it to fill and level the site to construct the new alignment, which will be positioned on the southern side of the current eastbound (down) lanes.

Some minor clearing works will also be carried out on the batter above the eastbound alignment before it is covered in the compost blanket to begin the revegetation process.

Although the westbound alignment will not be altered, work will continue to flatten out the steep batters on the western side of the up lanes, above Stevenson Street.

Roster of works

Night works will continue on the Toowoomba Range in an effort to achieve construction deadlines. Crews are currently working the following rosters:

- **day shift**: Monday to Friday, 6am to 6pm (with some Saturday work)
- **night shift**: Sunday to Thursday, 6:30pm to 5:30am.

Holiday break

Work crews will down tools and shut the Toowoomba Range work site over the holiday break. The site will be shut down from **5pm Friday 20 December** (so staff can enjoy a well-earned break with their loved ones). Staff will be back on site from **6am on Tuesday 7 January 2014**.

The project team would like to wish everyone a safe holiday break and a wonderful New Year.
Revegetation treatment — compost blanket

Revegetation has begun on cleared sections of the road reserve on the Toowoomba Range with the application of a compost blanket. The compost blanket is being applied in stages over 120,000 square metres. This process involves:

**Site assessment**

Soil and other environmental tests were conducted. The compost blanket does not require topsoil or any geotextiles to be spread first, reducing the risk of erosion and sediment loss should rain events occur. The blanket is made up of all organic materials. When combined with an all-natural “tackifier” (adhesive) it improves the organic makeup of soils where it is applied.

**Compost blend**

The proprietary compost blend recycles green waste generated by households and industries. It eliminates the need for non-biodegradable reinforcements or netting.

**Seed selection**

Toowoomba environmental group Friends of the Escarpment Parks worked closely with Transport and Main Roads to develop a tailored seed blend, containing native species which are endemic to the local area. The seed selected for the Range includes a cover crop (Japanese millet), grasses (including kangaroo grass), shrubs (including hop bush) and small trees (including forest oak). All of these native species are naturally adapted to the local climate and are able to regenerate after fires. Some of them provide a food source for fauna species. The selected trees will not exceed 10m in height, reducing the risk of future slope instability.

**Application**

The compost blanket is sprayed on to the slopes and has 100% contact with the ground. This ensures that groundwater can only travel through the blanket, which traps silt and reduces erosion.

**Germination**

The compost blanket generates more than 90% germination rate of the cover crop (Japanese millet) after about 10 days. Intense watering is required for about three weeks after application, depending on weather conditions.

**Transition period**

The cover crop dies between 6 and 12 weeks after application and transforms from green shoots to what appears to be burnt or “dead” ground. This is a vital part of the process, with significant soil regeneration happening beneath the surface, increasing growth rates among the native species. According to the manufacturer, each native species has different growth cycles, but a healthy crop of seedlings appears within the first few months and a relatively thick covering of shrubs by the end of the first year. Research by Dr Paul Dargusch of the University of Queensland shows that this process can “achieve a rehabilitated forest after two years, whereas direct tree planting would take five years to achieve, based on exposed soil sites in Queensland”.

**Weed management**

Sites treated with the compost blanket remain effectively weed free and require little to no maintenance. The compost blanket chokes out weeds due to the high germination rate of the cover crop. During the phase when the cover crop dies off, the dead plants provide cover to prevent weed seeds from getting to the compost below. The process optimises growing conditions resulting in a healthy crop of natives that are able to establish themselves before weeds take control.
Changes made to the reversing alarms on the project vehicles and machinery happened as a result of listening to residents’ feedback.

After speaking to residents, who were having trouble sleeping due to the high-pitched noise of the reversing beepers, contractor Seymour Whyte began looking at other options. The contractor eventually chose to use reversing squawkers on all the vehicles and machines.

Squawkers use a different frequency and are low-pitched compared with beepers. They are fitted into the vehicle and only work when the flashing lights are on and the vehicle is reversing.

All machinery and vehicles used on site have had the squawkers fitted. As a national safety guideline, all vehicles on a construction site must have a reversing alarm.

The project team welcomes all feedback. If you have feedback please contact us. See details below.

Flood reconstruction across the regions

The Darling Downs and Lockyer Valley areas remain a hive of activity as we deliver 175km of works, investing $40 million per month – a massive reconstruction effort after the floods in 2010, 2011, 2012 and 2013. We have finished work on 460km, 60% of the program.

Warrego Highway

Marburg to Gatton

Pavement repairs are underway at Crowley Vale (east of the Forest Hill-Fernvale Road). Two sites are active in this area:

- westbound (heading to Toowoomba) between intersections with Curtin and Moroney Roads
- near Gatton exit, between intersections with Bachmann and Gatton-Esk Roads. Detour is in place at these works for motorists accessing University of Queensland.

Two works locations are operating at Hatton Vale:

- between intersections with Summerholm and Weir Road
- between intersections with Shaw and Heise Road.

Repairs are also underway on the Minden Range, with works on the westbound lanes between the intersections with Mountainview Drive and Waldron Road.

All Marburg to Gatton works are expected to be completed by early 2014, weather permitting.

Helidon to Withcott

Scour repair works are located beneath the Lockyer Creek Bridges (eastbound and westbound). Following work under the bridges, there will be work to strengthen and widen the eastbound bridge.

Jondaryan to Dalby

Reconstruction of 32km of the highway was fully opened to traffic and speed limits restored on 26 November 2013.

Funding

Eligible reconstruction works under Natural Disaster Relief and Recovery Arrangements (NDRRA) are funded 75% by the Australian Government and 25% by the Queensland Government.

For further information

Free call: 1800 063 397* (Monday-Friday)
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*Free call from anywhere in Australia, call charges apply for calls from mobile phones and payphones.