

Constructing the Tauranga Eastern Link

The Tauranga Eastern Link project is being built in two stages.

Stage one: Enabling works

The enabling works projects involved relocating watermains, making improvements to a pump station and extending both Truman Lane and Kaituna Road. Works commenced early 2010 and were completed in mid-2014. The value of these smaller projects was \$35 million*.

Stage two: Construction

Stage two of the project is construction of the actual highway, and this stage is valued at \$420 million*. The project is split into two sections.

Section one: Te Maunga to Domain Road

Upgrading existing 5.8km to four lanes of continuous highway with wire rope median barrier. The key features include:

- widening the existing state highway from Te Maunga to Domain Road
- improving the Te Maunga intersection
- new local roads (Oceandowns Way and Te Maunga Lane) for properties fronting State Highway 2
- two new interchanges - Mangatawa and Domain Road
- left-in/left-out intersections at Bruce and Kairua Roads.

Section two: Domain Road to Paengaroa junction (SH2/33) - tolled section

The construction of 15.5km of new highway with four lanes and wire rope median barrier. The key features include:

- Parton Road overbridge
- 186m four lane bridge over the Kaituna River
- bridges over Maketu Road and the East Coast Main Trunk railway line
- four-legged roundabout at Paengaora (SH2 and SH33).

Expected completion

Construction of the Tauranga Eastern Link is expected to take five to six years, depending on soil and weather conditions. All going well, it will be open to traffic late 2015.

Future planning

To manage the predicted growth of the region, likely future development (not included in the main construction) includes two new intersections at Papamoa East and Rangiuru Business Park.

* in 2010 dollars



Kaituna River bridge and Bell Road 2014

The Bay of Plenty's largest roading project

Construction of the Bay's largest project started late 2010.

Under the design and construct delivery model, the contractor decides when and how the construction is carried out. With three million cubic metres of earth to move and seven bridges to build it's a large scale project to plan and manage.

Challenging ground conditions

An estimated two thirds of the Tauranga Eastern Link is constructed on highly compressible peat which is up to six metres deep in some areas.

To ensure the completed highway doesn't keep sinking, and that we have a smooth and flat road surface to drive on, the peat needs to be compressed to a point where it can settle no further.

Compression is achieved by placing surcharge material, up to four metres high, on the soft ground and leaving it to settle.

At the end of the settlement process the surcharge material is removed and the compressed ground forms the foundation for the new Tauranga Eastern Link highway.

Bridges on the Tauranga Eastern Link



Mangatawa interchange

Mangatawa TEL underpass

Length: 35m Width: 26m Pile depth: 40m

Mangatawa Truman Lane overbridge

Length: 56m Width: 26m Pile depth: 40m

The Mangatawa interchange links Mangatawa with Sandhurst Drive. The TEL passes underneath it.



Domain Road interchange

Bridge A Length: 93m Width: 24m Pile depth: 30m

Bridge B Length: 20m Width: 24m Pile depth: 50m

The TEL travels over the Domain Road interchange allowing traffic to flow between Te Puke and Papamoa.



Parton Road overbridge

Length: 67m Width: 12m Pile depth: 44m

The overbridge lifts Parton Road over the TEL maintaining access for rural, commercial and residential traffic to and from Papamoa East.



Kaituna River bridge

Length: 186m Width: 27m Pile depth: 52m

The bridge takes the TEL over the Kaituna River and the underpass allows access from Bell Road to the boat ramp. It is the longest bridge on the project.



Maketu Road bridge

Length: 23m Width: 24m Pile depth: 30m

The bridge takes the TEL over Maketu Road. It is made up of concrete hollow beams with each beam weighing 30 tonnes.



East Coast Main Trunk (ECMT) rail bridge

Length: 16.5m Width: 85m Pile depth: 30m

The ECMT rail bridge is at the eastern end of the project. It is the widest bridge on the project.

What makes up the TEL pavement?

What is pavement? In general terms the pavement is the road that you drive on. It is made up of layers of material that increase in strength as they near the surface to move vehicle loading away from the weak materials, normally found at depth.

The length of the TEL is made up of two pavement types to accommodate the variable soil conditions that it is built on. These soil conditions range from sand to volcanic ash and organic peat.

The pavement structure diagram below outlines the typical makeup of the two pavements types. The Type A pavement is reasonably rigid and will be founded on stronger soils such as sand. The Type B pavement is reasonably flexible and will be founded on weaker soils such as peat.

Approximately two-thirds of the TEL will be Type A pavement, with the remaining one-third being Type B pavement.

The final surface of the full length of the TEL will be asphalt, which is designed to minimise noise and water spray.

| *PAVEMENT LAYERS | TYPE A | TYPE B |
|----------------------------|---|--|
| Surfacing | Asphaltic concrete | Asphaltic concrete on chipseal |
| Base layer | Heavy duty asphaltic concrete on chipseal | Aggregates strengthened with foamed bitumen and cement |
| Subbase layer | Aggregates strengthened with cement | Aggregates strengthened with cement |
| Subgrade improvement layer | Typically sand or pumice materials | Typically sand or pumice materials |
| Subgrade | Typically sand or ash materials | Typically ash or peat materials |



Asphaltic concrete being paved over chipseal (Type **A**)



Foamed bitumen stabilisation of the base layer (Type **B**)

For more information



website www.nzta.govt.nz/tel

email taurangaeasternlink@nzta.govt.nz

phone 0800 TEL INFO (0800 835 463)