

SH18 Hobsonville Deviation and SH16 Brigham Creek Extension



The birdcage supported the flyover as it was being constructed.

SH18/SH16: creating the flyover

As you drive past Westgate on your next trip to the shopping centre, you may notice the earth has been shaped to form the new motorway route leading north from the end of the Northwestern Motorway.

Only a few hundred metres along is a hive of activity on the biggest structure on the project - the SH18/SH16 Eastbound Flyover.

When the new Hobsonville motorway opens in 2012, the flyover will be the key link for motorists travelling from Waitakere to the North Shore. They will be able to travel from the end of the Northwestern Motorway to the new SH18 Hobsonville motorway via the flyover.

This will help to increase capacity and improve traffic flow in the area. Motorists will also be able to continue along SH16 to Brigham Creek Road on a new three kilometre extension.

The flyover is a fully in-situ double box girder bridge. This means that the bridge has been built in its entirety in the same place, including the two box girders which form the bridge deck. 'Box girders' or 'box beams' are used for bridges where the spans are too long for conventional pre-cast beams. The two girders forming the main part of the bridge are 85 metres long.

The box girders required a large amount of temporary support to be able to construct them 6 metres above ground level. The decision was made to erect traditional scaffolding, made up of 350 individual towers and decked out with beams and plywood. The temporary scaffolding has become locally known as the 'birdcage'.

The HEB Construction team have now taken down the 'birdcage' which has held the flyover in place for eight months while the beams and bridge deck were constructed. The finishing touches are now being added to the bridge.

"The high skew angle at the junction of SH18 and SH16 presented an added challenge for constructing this bridge," says David Loe, project manager for HEB Construction.

The retaining walls forming the motorway route under the bridge are another defining feature on the project. Around 20,000 keystone blocks have been placed to create a smooth face on the wall. A unique wave design features on the walls as part of the urban design on the project and will stand out for those travelling on SH16 underneath the flyover.

The team is looking forward to the chance to accelerate progress on the project's key link by continuing to build the new SH18 and SH16 motorway lanes over the winter months.

When the new motorway opens, the existing SH18 Hobsonville Road will become a local road managed by Waitakere City Council. A new link road will also provide access to the planned development directly opposite the Westgate shopping centre.






The new Brigham Creek Interchange with SH18 includes construction of three roundabouts along Brigham Creek Road.



Squadron Drive Bridge will carry local traffic over the motorway when it is completed.



The iconic yellow Clarks Lane footbridge nears completion as the gateway to Waitakere City.

-  Existing State Highway
-  New Motorway
-  New Bridge

Noise walls provide visual feature along motorway

As the path of the motorway is taking shape through Hobsonville, the project design team have been getting the urban design features ready - including the unique orange noise walls.

The noise walls form one of the strong visual elements of the project and will feature at Hobsonville Road near Westgate, Squadron Drive, Sinton Road, Trig Road and Brigham Creek Road/SH16.

The walls are erected alongside the motorway lanes in certain areas to reduce noise from the motorway on the surrounding businesses and residences. When the motorway opens to traffic, the noise levels are then monitored to make sure they are within the limits given by the NZTA and Waitakere City Council.

The project design team have worked closely with Waitakere City Council on an arts initiative to include artwork by local Waitakere artist Jeff Thomson. The walls will incorporate 'tyre tracks' formed with coloured jigsaw 'treads' added to the wall. This corrugated effect will also be mirrored on the walls of the Trig Road and Squadron Drive bridges.

The walls are between 2 and 4 metres high and are made of wood which will be painted a burnt orange colour. The first noise wall will be installed alongside Monterey Park this year and the remainder will follow just before the motorway opens. They will sit on top of landscaped earth mounds to enhance the natural shape of the existing landscape.

Meet the team: Derek Holmes Engineer's Representative Opus International

Derek Holmes is the Engineer's Representative on site for the Hobsonville project, effectively acting as NZTA's site agent. He has been with engineering consultants Opus International for 10 years. His last project for the NZTA was the SH20 Mt Roskill Extension completed in May 2009, extending State Highway 20 through Mt Roskill.

Derek works with the project team to make sure that the motorway is constructed to the original plan. This also means getting involved with managing any specific concerns as the motorway is being constructed and liaising with members of the public and landowners.

He says that urban design is a good way of ensuring key parts of the motorway become features as well as providing a purpose.

"Urban design has become a major component for the Hobsonville motorway and I'm really glad to be able to see these

designs throughout the project as they really do enhance the different environments, especially the artwork and native plantings," Derek says.

"The best part of my job is actually seeing the new motorway in place as part of the Western Ring Route, which will really benefit local and regional traffic flows.

We hope that in 2012 local residents will be able to see the improvement in their journeys, especially between Waitakere and the North Shore."



Noise walls are required to reduce noise to acceptable limits and they provide a canvas to also incorporate architectural design into the construction of motorways.

The installation of noise walls are part of a growing trend to incorporate design into the construction of motorways. The walls can feature or reflect aspects of the specific environment as well as providing a way to minimise noise on the surrounding properties. Plantings of native shrubs around the walls also help to maintain the natural environment. Similar timber noise walls with native bush designs are featured along the neighbouring SH18 Greenhithe Deviation motorway.



Printed on environmentally sustainable paper. Please recycle.

Contact details

For more information contact:

Phone: 0800 520 202

Email: hobsonville@heb.co.nz

www.nzta.govt.nz/projects/upperharbourmotorway

New Zealand Government