



NEWMARKET CONNECTION VIADUCT REPLACEMENT PROJECT NEWSLETTER

ISSUE 02 / OCTOBER 2009

High, wide and ever so handsome

As you can't help but notice, progress on Stage 1 of the Newmarket Connection Project - a new four lane southbound motorway bridge alongside the existing viaduct - is now well underway ...

Rising high above Newmarket, six sleek new concrete columns between Clovernook Rd and Mahuru St not only indicate the alignment of the new southbound viaduct, but emphasize the tight corridor in which the replacement project is taking place.

The close proximity between old and new is even more evident now the first bridge segments have been lifted into place. The very first segment was craned into place in early September. 42 further segments need to be lifted into place by crane before the project's show-stopping piece of construction equipment - a 700 tonne, 120 metre long Overhead Launching Gantry - is erected above the new bridge at the end of the year to take over this process.

See inside for more information on this truly impressive piece of construction machinery..

While work high above Broadway naturally captures the attention, there's more to the Newmarket Connection project than necessarily meets the eye. Realignment work at the Gillies Ave



ONE UP ... 467 TO GO The first, 73-tonne bridge segment was lifted into place on the night of September 8. A further 42 segments will be installed by crane by the end of the year, to create a platform for the main construction equipment - a 700 tonne, 120 metre long Overhead Launching Gantry.

off- and St Marks Rd on-ramps is ongoing, to ensure the new southbound bridge ties in correctly at both ends when completed in early 2011. Beyond the St Marks Rd on-ramp, work has begun to erect a noise wall alongside Mt Hobson Rd, while out at the project's PreCast Facility in East Tamaki, great progress is being made in the creation of the 468 bridge deck segments.

Stay informed

- > Register for updates
- > Follow progress on Twitter
- > Watch video footage of the first segment lift

What's big, blue and up for Christmas?

If you think the first few bridge segments provide an interesting addition to the Newmarket skyline, then I'm afraid you ain't seen nothing yet ...

Work is just beginning now on assembling the Overhead Launching Gantry, the specialist bridge-building equipment that will be used to install the majority of the new viaduct's 468 segments. To be erected north of Broadway, it will initially, and steadily, propel itself southwards,

lifting the new bridge segments into place as it moves.

This 120-metre long, 700 tonne marvel of modern engineering should be in place by Christmas, and will undoubtedly dominate the local skyline for the next few years.

The Gantry was successfully used on the viaduct structures of the Northern Gateway project north of Auckland, and will not only play a key role in constructing the new bridge, but also dismantling the old one.



CITY SLICKER Having been used successfully to construct the bridge structures in the rural surrounds of the Northern Gateway Toll Rd, the 120-metre long Overhead Launching Gantry will undoubtedly provide an exciting new dimension to the Newmarket skyline.



New speed limits in place over Newmarket

How to replace the busiest stretch of motorway in the country, which just so happens to be as high as 20 metres in the air, in such a tight urban corridor, without bringing Auckland to a grinding halt, is quite the conundrum. The solution requires not only an innovative construction programme but the support and cooperation of the city's motorists ...

If you've driven across the Newmarket Viaduct recently, in either direction, you will have noticed that speed restrictions are now in place.

The new limits are 70 km/h for southbound traffic passing immediately adjacent to Stage 1 construction activity; and 80 km/h for northbound traffic that may be subject to visual distractions. The southbound speed limit extends as far as Greenlane to accommodate further construction work between Market Road and Greenlane.

The speed restrictions have been put in place to coincide with a slight narrowing of

the lanes, and are a vital component of the staged approach to construction and reconstruction that allows us to keep the motorway open throughout the four year Newmarket Connection project.

By narrowing the lanes and installing barriers to the left of the inside lane, we have created a buffer zone between motorway traffic and construction activity. Nevertheless to maximise safety for both road users and our construction team, all motorists are asked to respect these new conditions and drive with extra caution through what is now essentially a live construction zone.



SLOW DOWN OVER NEWMARKET. To enhance safety while keeping Auckland moving, new speed limits and barriers are now in place across the Newmarket Viaduct.



ALWAYS IN THE PICTURE A constant feature of the local landscape for the last forty years, the Newmarket Viaduct has constrained the suburb's growth to the south. While equally visible, the new structure has been designed to connect better with the surrounding area and encourage development more in keeping with the rest of Newmarket.

An urban design-integrated approach

From its bustling retail precincts to the more tranquil surrounds of Highwic House, Newmarket captures New Zealand's broad culture within a single suburb. Nevertheless, its growth to the south has been visibly constrained for some time ...

When the Newmarket Viaduct was completed in 1965, for all the benefits it provided for the wider Auckland region, it set a de facto boundary on the spirit and growth of Newmarket. The land beneath and around the viaduct has gradually accumulated an untidy mix of parking lots and vacant space, at odds with the surrounding environment.

Therefore when the NZTA began considering options for upgrading the viaduct, enhancing traffic flow was only part of the equation. The decision to build a new bridge takes into account the contribution a stronger, more urban design-integrated structure can make to the development of one of Auckland's most dynamic suburbs.



Not only will modern standards in seismic capacity and barrier protection allow for more progressive development beneath the new viaduct, the Newmarket

Connection project's extensive scope will provide better pedestrian access and allow this critical link in the State Highway network to connect more appropriately, and quietly, with its surrounding environment.

Urban design initiatives include a volcanic-themed walkway linking Gillies Ave with Broadway (see image, left), diverse landscaping, improved pedestrian environment beneath and around the viaduct, and a noise wall along Mt Hobson Road currently in progress.

Guest column

Urban design is now being recognised across the globe as a significant component of infrastructure projects. The greater emphasis it enjoys reflects an increased understanding that major infrastructure or transport projects have a wider influence on a city or the environment than simply the primary purpose of the project.

The urban design process takes an holistic view of a project, considering how it will influence the present and future environment. It involves identifying opportunities which are beyond yet intrinsically linked to the project scope, and addresses how these opportunities can be realised either as part of the project or through influencing future planning and development. It needs to consider the wider environmental issues such as landform, ecology, history, cultural values, built form, views and pedestrian and vehicle linkages, and identify development opportunities for the area in the context of the project and its surroundings.

As demonstrated by our approach to the Newmarket Connection project, urban design has to be an integral component of the design process from the outset, so that the outcome is the result of an integrated solution rather than an "add on."



CHRIS BENTLEY is the Urban Design team leader for NGA Newmarket - the Alliance delivering the Newmarket Connection: Viaduct Replacement Project.



Bigger steps to leave smaller footprints

Sustainability and environmental consciousness is a key commitment for the Newmarket Connection team both throughout the construction phase and as the end result.

Something as simple as changing the way our staff get to and from work not only helps future generations by reducing our overall carbon footprint, but enhances the community we work in. By canvassing all our staff, we have come up with personalised sustainable travel plans. Whether we train, cycle, ferry, walk, bus or car pool, our workforce have embraced the fact that we can protect the environment and save money at the same time!

Pictured above: the project's Design Manager, Jon Varndell, sets off home from Newmarket to Bucklands Beach.



EXTENDING THE CONNECTION Pictured from left to right: Auckland Mayor John Banks, List MP for Epsom Dr Cam Calder, NZTA board member Christine Caughey, NZTA Regional Director Wayne McDonald, Mayor of Manukau Len Brown and Transport Minister, Hon Steven Joyce celebrate the start of construction of a fourth lane and motorway noise wall between Market Road and Greenlane

Fourth lane extension to Greenlane

Stage 1 of the Newmarket Connection project has now been extended to include an additional 1.7km southbound lane and motorway noise wall from Market Road to Greenlane

The project, which will tie in with the new four lane southbound viaduct to ultimately provide four lanes from the city to Greenlane by the Rugby World Cup 2011, was officially opened by Transport Minister Stephen Joyce on Monday October 5.

Commencing this month, the additional works will be completed in four sections by February 2011. Local residents have already

received detailed correspondence of how the works will be completed, with support staff on hand to discuss any concerns or queries. This section of the Newmarket Connection project will be delivered for the NZTA by Downer EDI Works.

More information on the fourth lane extension is available here.

The Newmarket Connection Visitor Centre is open from Thursday to Saturday and by appointment.

We have a fully equipped meeting room available for hire throughout the week for just a gold coin charitable donation.

Printed on environmentally sustainable paper. Please recycle.

Stay informed

T 0508 CONNECT (266 6328)

E info@nganewmarket.co.nz

www.nzta.govt.nz/newmarketconnection