

## **5<sup>th</sup> International Safer Roads Conference Abstract Template**

### **The East West Link – A new type of state highway**

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#### **ABSTRACT**

**The presentation will focus on the development of this new state highway that improves safety for all modes of transport while providing opportunities for significant environmental enhancements. This not a motorway but a 4 lane arterial road, and needs to balance travel time efficiency with the need for public access across and along the corridor.**

**The East West Link (EWL) is a new 6.5km state highway between SH1 and SH20 on the northern edge of the Manukau Harbour. It also includes widening of SH1 between Mt Wellington Interchange and the Princes Street Interchange with a new lane in each direction, (refer attached sketch).**

**The EWL includes the naturalisation of the existing highly modified coastal edge, which provides opportunities for enhanced public access and water quality improvements for the wider catchment in addition to the new road, assisting to restore the mana of the Māngere Inlet. The project also provides the opportunity to eliminate or minimise pumping of leachate from the historic landfills along the coast to the treatment plant and provide treatment through the new wetlands.**

**Cycling and walking improvements include an extension of the Waikaraka shared path through to Sylvia Park.**

**The project is working towards Greenroads Certification with an initial assessment of the design features, management and mitigation measures that will contribute to the certification. The adoption of Greenroads provides a whole of life lens through which better social, environmental and economic outcomes can be driven, and a framework for capturing best practice and innovation.**

**The project has been lodged with the EPA in December and a Board of Inquiry hearing is expected around the middle of 2017.**

**The project is being delivered as a Planning Alliance, with the NZ Transport Agency, planning and design consultants and a legal firm.**

## **The Importance of the Area**

The Project area has played and continues to play a unique and important role within the Auckland and upper North Island economy. It is a key industrial, transport and logistics hub for Auckland and the upper North Island. The GDP and jobs generated by the area are significant and in 2012, the direct Project area (Onehunga, Penrose, Mt Wellington and Ōtāhuhu) accounted for approximately \$4.7 billion of output, or 7.5% of Auckland's total GDP. While this area has grown, it has not grown at the same rate as the whole Region, meaning a slight decline in the contribution this area makes to the region's activity. This is not unexpected given the rapid growth and extensive size of the wider area.

The area also represents a significant proportion of the city's employment and it is one of Auckland's principal manufacturing locations, accounting for 17.9% of Auckland's, and 5.9% of New Zealand's manufacturing jobs. It also acts as a major hub for transport and logistics for Auckland and the upper North Island with 19.7% of Auckland's and 9.1% of New Zealand's employment in transport and wholesaling. Although not labour intensive industries, manufacturing, transport and logistics activities are transport intensive industries. Transport requirements of these businesses will increase with the growth of internet based commerce and population.

The area is retaining its distinctive character as an industrial and transport oriented stronghold, as the more transport intensive activities are growing too. Distribution activity is compensating for a decline in manufacturing, reflecting the area's function as a specialised regional distribution centre.

An increasing level of specialisation within the transport and logistics sector can be observed from the growing concentration of road and rail freight activities around Westfield and Southdown.

Logistics companies are investing in local facilities to take advantage of the unique attributes of a road/rail integration connecting to New Zealand's two major ports (Ports of Auckland and Port of Tauranga) in proximity to central Auckland.

## **The Project Objectives**

The Project Objectives were developed initially as part of the Indicative Business Case following confirmation of the transport problems. They are listed below

- Improve travel times and travel time reliability between businesses in the Onehunga–Penrose industrial area and SH1 and SH20.
- Improve safety and accessibility for cycling and walking between Māngere Bridge, Onehunga and Sylvia Park and access into Otāhuhu East.
- Improve journey time reliability for buses between SH20 and Onehunga town centre.

A key point to note with the first objective is that while the EWL is a rung in the ladder between SH20 and SH1 that is not its primary objective. The key issue is to provide better access in and out of the industrial areas to the motorway networks.

The opportunities that this project provides to improve walking and cycling connections are recognised and the extension of the existing Waikaraka path through to Sylvia Park will greatly enhance the facilities for the active modes.

Improvements including more reliable journey times for public transport will be achieved by providing a separate bus lane for the southbound on ramp at SH20 and reducing congestion on the northbound off ramp from SH20.

### The Mangere inlet in the 1940's



To give some background the Mangere Inlet in the 1940's looked quite different to how it looks today. Since that time Auckland has used it for its dumping ground and the natural coastal edge has been engineered to the more straight edge it has today. The approximate area reclaimed through filling for landfills is 180Ha. The proposed reclamation is 18.4 Ha.

The existing Coastal edge, with a recreational reserve with the shared path that is well used by the public. The reclaimed area is being used for industry and distribution

### The EWL Alignment



The EWL alignment crosses a number of differing environments requiring the road to adapt to suit the various needs it has to meet.

- The western section of EWL is along the Mangere inlet foreshore requiring a slower speed environment to allow the public to access the coastal edge. There are traffic signals with pedestrian crossings. There are paths on either side of the road.
- The eastern section, where the alignment leaves the Mangere foreshore via a structure, the environment changes to that more like a motorway and then connects to SH1

Providing a state highway that meets all the competing requirements along the foreshore has been a challenge. I suspect the current design is a work in progress. I have listed a few of the key stakeholders we have consulted with to develop the current design:

- NZ Transport Agency Operations and safety team
- Auckland Council Parks and urban design teams
- Auckland Transport
- Panuku
- Mana Whenua
- Wider public including Bike Auckland, National Road Carriers, to name but a few.

Each of these stakeholders wants something different for the road and often they are in conflict with one another.

### **Transport Benefits**

By providing a new road corridor the number of heavy vehicles on the local roads in and around Onehunga will reduce, thus making it safer and less congested for all users.

The Project area is currently very congested throughout the day. The existing route between the Onehunga Penrose area to SH1 particularly south bound is very circuitous, requiring traffic to negotiate 7 or 8 sets of traffic signals. On completion of the EWL this will reduce to 2 or 3 sets of traffic signals.

For SH20 the existing route requires all traffic whether southbound or northbound to pass through the Neilson Street Onehunga Mall intersection, on completion of the EWL traffic numbers will reduce by around 24,000 VPD.

### **The Slower Speed Environment**

The Mangere Foreshore section of the EWL is approximately 3km long and generally straight. To establish a slower speed environment (possibly posted at 60kph) requires the inclusion of infrastructure so that motorists “feel” they are in a slower speed environment. Through the design development there was a real tension between trying to provide a strategic transport link with a specific focus on access for freight and the need to provide high quality access across the EWL and along the foreshore. The measures we have included are:

- Signalised intersections at regular spacing’s
- At grade pedestrian crossings
- Planted median
- Paths on each side of the road

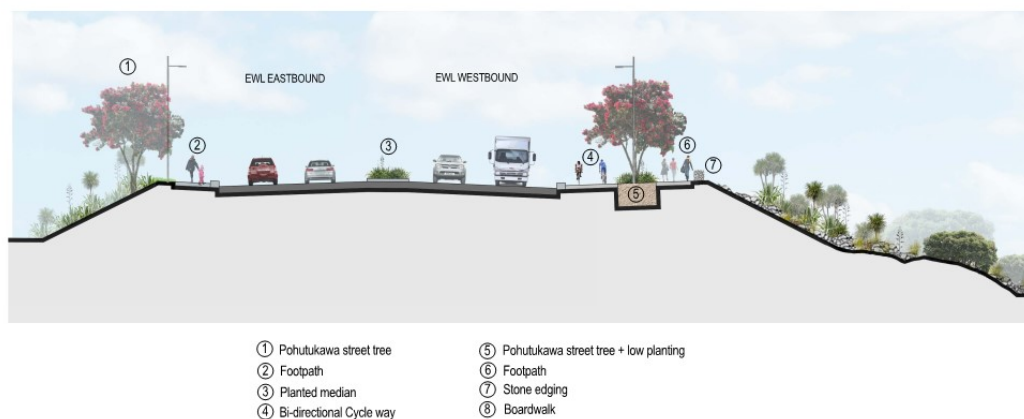
- Threshold treatments
- Shoulder width reductions

One area of safety concern has been the need to provide a safe facility for cyclists, particularly as this road will have a higher percentage of heavy vehicles, this is why a high quality commuter path separated from pedestrians has been provided along the southern edge.

Further opportunities

As part of constructing the EWL in this coastal location the opportunity to create a more natural coastal edge is provided. Within these new landforms area has been created to treat stormwater from the wider catchment, this was a key factor in gaining support from Mana Whenua, as reclamation is something they generally will not support. Another opportunity provided by the EWL embankment is the containment and possible treatment of leachate from the historic landfills.

### Typical Section of the Embankment



As discussed previously the requirement for the road to fulfil different roles has been a collaborative process.

The proposed typical section allows for the following:

- 4 lanes of traffic
- 3m planted median
- 3m bi-directional commuter cycle path on the coastal edge
- Pedestrian path separated from the commuter path by a landscaped area on the coastal edge
- Pedestrian path on the inland side
- A board walk in the coastal marine area

### The Eastern Section of the EWL

The Structure from the Mangere Inlet to Sylvia Park Road is 1.5km in length. A shared path will be constructed alongside the viaduct and the pass over Great South Road on a separate structure. This section of the EWL will have a motorway feel to it, with median and edge barriers. The traffic signals at Hugo Johnston Drive will require eastbound traffic to stop when the right turn phase is called however westbound traffic remains free flowing as there is no right turn out of Hugo Johnston Drive.