



EAST WEST LINK
APPLICATION SUMMARY

December 2016

Introduction

The NZ Transport Agency (“the Transport Agency”) has submitted applications to the Environmental Protection Authority for approvals to build, operate and maintain a new State highway and associated works between State Highway 20 (SH20) in Onehunga, and State Highway 1 (SH1) in Mt Wellington, and associated works on SH1 between Mt Wellington and the Ōtāhuhu Interchange at Princes Street. The project is called the East West Link Project (“EWL” or “the Project”).

In summary, the proposed works include:

- A. A new four lane arterial road between the existing SH20 Neilson Street Interchange in Onehunga and SH1 at Mt Wellington; and connection of the new arterial road to SH1 via two new ramps south of Mt Wellington Interchange;
- B. The widening of SH1 and an upgrade of the Princes Street Interchange;
- C. Reconfiguration of Neilson Street Interchange and surrounding roads including a trench on the southern side of the interchange with a local bridge connecting Onehunga Harbour Road to Onehunga Wharf;
- D. New commuter and recreational cycle paths along East West Link connecting into the local Onehunga, Penrose and Sylvia Park communities, and a new pedestrian and cycle connection across Ōtāhuhu Creek;
- E. New and improved local road connections including extensions to Galway Street, Captain Springs Road and Hugo Johnston Drive;
- F. A new grade separated intersection at Great South Road/Sylvia Park Road;
- G. & H. Reclamation of part of the Coastal Marine Area (CMA) along the northern foreshore of Māngere Inlet to construct parts of the East West Link Main Alignment, stormwater treatment areas, headlands to form a naturalised coastal edge, and recreational space.

These key components of the Project are shown in Figure 1.

The Transport Agency has lodged the following applications under the Resource Management Act 1991:

- Two notices of requirement to designate land for the Project; and
- Resource consents to undertake activities on land, in water, and in the coastal marine area, and to discharge contaminants to the environment. Resource consents are required for these activities under the Auckland Unitary Plan (Operative in Part).

The applications are supported by an Assessment of Effects on the Environment which incorporates:

- Volume 1 – Assessment of Effects on the Environment (report)
- Volume 2 – Drawing Set
- Volume 3 – Supporting Technical and Assessment Reports

This document summarises the key aspects of the application package.

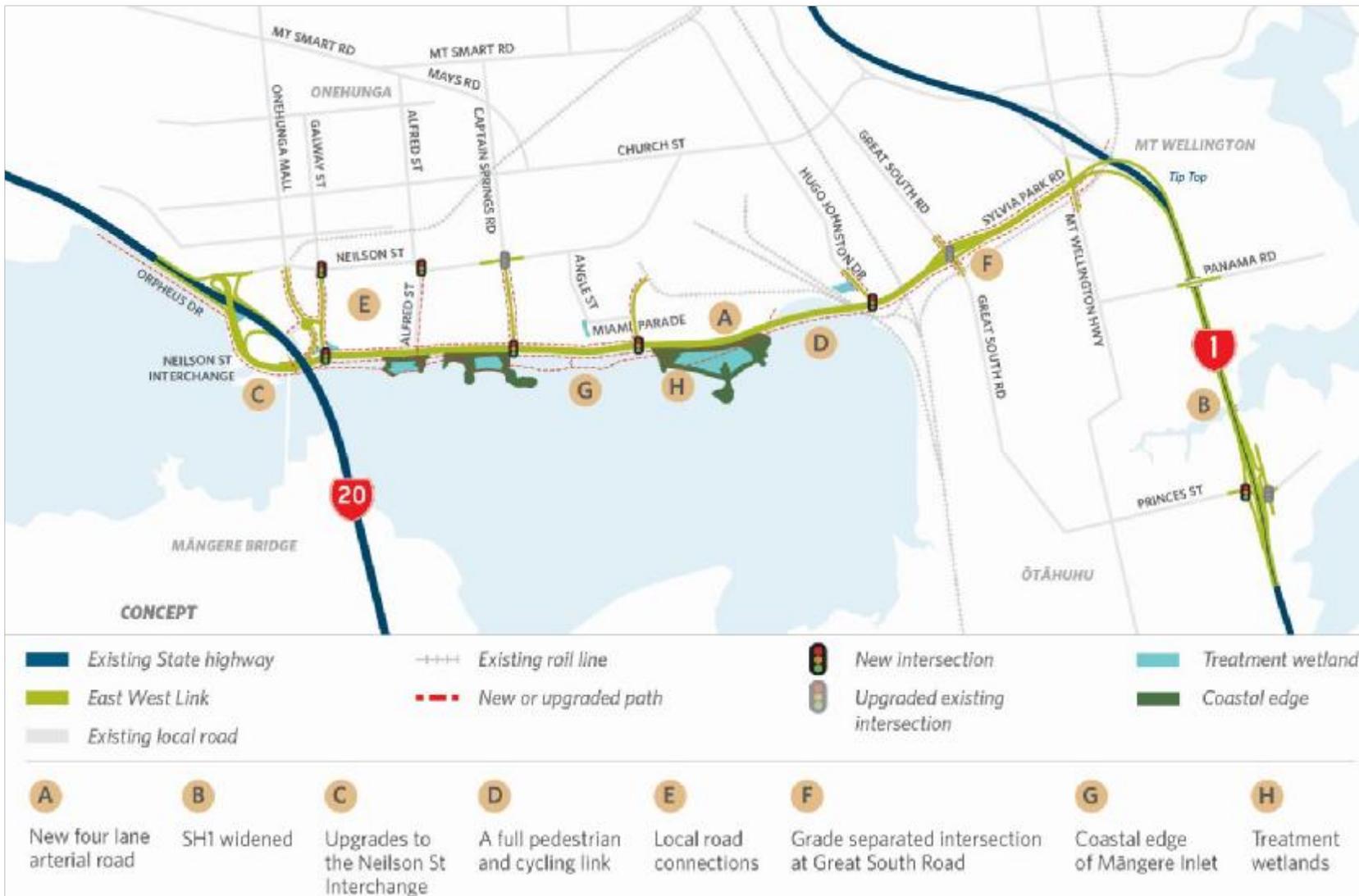


Figure 1: Key components of the project

Background to the Project

The EWL traverses the suburbs of Onehunga, Penrose, Mt Wellington, Te Papapa and Ōtāhuhu. This area is a major industrial and manufacturing centre, with a workforce of some 68,000 people contributing in the order of \$4.7 billion annually to Auckland's economy.

The area is also a significant hub for the transportation of freight to and from the upper North Island by rail and road.

The current transport connections into and through the area are either incomplete or highly congested. To support the planned growth (people and business) in Auckland, the Council has identified the East West Link as a priority transport project in the Auckland Plan.

Project Objectives

The NZ Transport Agency's objectives for the Project are:

1. To improve travel times and travel time reliability between businesses in the Onehunga–Penrose industrial area and SH1 and SH20;
2. To improve safety and accessibility for cycling and walking between Māngere Bridge, Onehunga and Sylvia Park, and accessing Ōtāhuhu East; and
3. To improve journey time reliability for buses between SH20 and Onehunga Town Centre.

The outcomes to be delivered by the Project

Once completed the proposed works will provide the following positive outcomes:

- Significant benefits for the transport network including travel time reductions and improved travel time reliability, reduced traffic on local roads, improved accessibility, improved resilience of the transportation network and improved travel reliability for buses.
- Improved pedestrian and cycle connectivity and safety.
- Supporting improved business efficiency and growth through reduced congestion, notably for transport and logistics businesses.
- Landscape restoration and enhanced public access to the coast around the northern shoreline of the Māngere Inlet.
- Improved water quality of discharges to the Māngere Inlet and from a section of SH1 to the Waitemata Harbour.

Description of the Project

Neilson Street Interchange

The existing Neilson Street Interchange at SH20 will be altered to connect to and from the EWL and to provide connections to the surrounding local roads from SH20 and the EWL. SH20 will remain on the current alignment. The EWL will be located parallel to the existing Onehunga Harbour Road at the Onehunga Wharf. Through this area, the road will be trenched below ground level. A new bridge over the EWL in this location will provide access along Onehunga Harbour Road and across the trench to the Onehunga Wharf as shown in Figure 2.

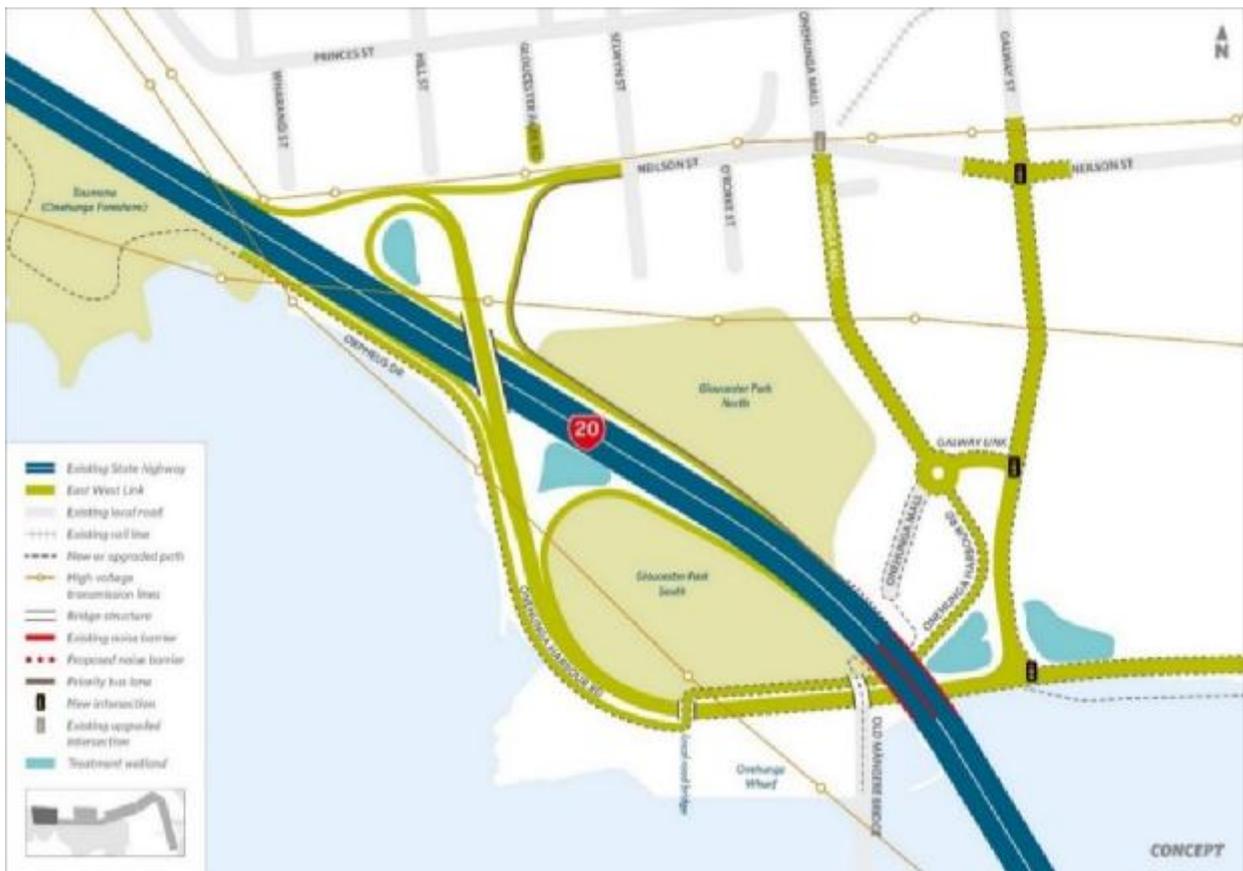


Figure 2: Neilson Street interchange indicative layout

Māngere Inlet and Local Road Connections

The EWL will be constructed along the northern shoreline of the Māngere Inlet, partly on land and partly in the coastal marine area. The Project will involve approximately 18.4ha of permanent filling of the coastal marine area in the Māngere Inlet to create dry land (reclamation) for the new transport corridor and three new landforms designed to create a more natural coastal edge. The landforms include wetlands to treat stormwater, public open space and walking and cycling paths. Construction of the project will also provide a ‘bund’ between the historic landfill and harbour; improving the management of discharges of contaminated water from historic landfilling to coastal water.

Local roads will be altered and new roads constructed to improve vehicle, pedestrian and cycle connections between Onehunga, Penrose, Ōtāhuhu, the EWL, Onehunga and Sylvia Park town centres and to and along the foreshore.

Anns Creek and Great South Road Intersection

The EWL will be constructed on a bridge passing over Anns Creek and the existing rail (e.g. the North Auckland Line). The bridge will minimise impacts on lava flows and ecological values. Separated pedestrian and cycle paths are proposed.

A new grade separated intersection will be constructed at the intersection of Great South Road, Sylvia Park and the EWL. The EWL Main Alignment will pass over Great South Road.

Sylvia Park Road and Mt Wellington ramps

From Great South Road, the EWL extends along Sylvia Park Road and then connects to SH1 via new ramps to and from Sylvia Park Road. Sylvia Park Road will be upgraded to two lanes each way. Separated pedestrian and cycle paths are proposed, linking towards Sylvia Park town centre.

State Highway 1 widening and Princes Street Interchange

The Project involves the addition of one lane on either side of SH1, for a total of four lanes in each direction.

The Panama Road overbridge will be replaced, with wider traffic lanes and footpaths / shared paths provided. A new SH1 bridge will be constructed over Ōtāhuhu Creek replacing existing culverts. A new local walking and cycling connection will cross Ōtāhuhu Creek.

The Princes Street Interchange will be upgraded reducing the extent of existing queuing at the motorway onramp and congestion on the local road network. New lanes will be provided to improve local traffic movements and safety for road users (including pedestrians).



Figure 3: SH1 widening and Princes Street interchange indicative layout

Construction of the Project

Construction is planned to begin around late 2018, with completion expected by 2025. Construction will include:

- Enabling works including site investigations, building and structure demolition and removal, site establishment activities, protection and/or relocation of existing network utilities;
- Vegetation removal (both land and marine) and earthworks within the construction footprint. This includes approximately 15.5ha of land-based works and 25ha of coastal works;
- Works in streams, including the placement of culverts and permanent diversions of five streams throughout the Project area;
- 14 construction yards and site compounds. These sites will be used for temporary site buildings, offices and workshops, vehicle parking, equipment storage and material laydown areas;
- Dredging may be undertaken in the Māngere Inlet to obtain material to create the reclamation;
- Night time works will be required to minimise disruption to traffic.

The construction works will be managed through the implementation of project plans which will outline measures to appropriately manage the social, environmental and cultural effects of the Project.

Consideration of alternatives

An extensive option evaluation process was undertaken before the preferred alignment was selected. The first step was to identify, assess and prioritise problems within a wide study area. More than 40 components addressing the accessibility problems in the Onehunga-Penrose area were evaluated. This was narrowed to a shortlist of six potential corridors, combining various potential components. A new road connecting SH20 to SH1 along the foreshore and Sylvia Park Road was chosen as the preferred corridor.

A process to identify a preferred alignment within the preferred corridor followed that first assessment phase. The preferred alignment selection process involved a multi-disciplinary team analysing options against design, social, environmental, economic and cultural criteria. Extensive consultation with various parties who have an interest in the Project and landowners helped inform the process, and further refinements of alignment options and the preferred alignment occurred as a result.

The existing natural and built environment, social, and cultural values were taken into account at each stage of the process. Key project partners involved in consultation included Mana Whenua, Auckland Council and Auckland Transport.

Consultation and engagement

Consultation and engagement is ongoing with various parties who have an interest in the Project including property owners, Auckland Council, Auckland Transport, Mana Whenua, business and community representative groups and the community. Engagement is being undertaken in accordance with recognised good practice through a number of channels, including one-on-one meetings, workshops, hui (meeting), public open days, newsletters and online information.

Feedback has helped identify issues of importance to the community - in particular it has been key in the selection of the Project alignment along the foreshore. This option means the Project can achieve greater environmental outcomes through the treatment of stormwater runoff from the wider catchment, reflecting Mana Whenua aspirations to restore the mauri (life force) of the Māngere Inlet.

Description of the Environment

Built Environment

The Project is located in the Auckland suburbs of Onehunga, Penrose, Mt Wellington, Te Papapa and Ōtāhuhu.

The Project area includes SH20 to the west and SH1 to the east. Key arterial roads in the area include Neilson Street, Church Street, Sylvia Park Road, Great South Road and Mt Wellington Highway.

Walking and cycling facilities in the Project area vary in quality. Many do not connect to each other, have low amenity and in some cases have safety issues. For example, there is no pedestrian connection from Sylvia Park Road to Sylvia Park. There are higher quality facilities in some locations, such as the existing Waikaraka Cycleway along the northern foreshore of the Māngere Inlet.

The Project area is both a significant cultural landscape to Mana Whenua and has a long European history. Amongst others, heritage features include historic pa sites, historically important portages between the Manukau and Waitemata harbours, Urupā and cemeteries and built features such as the Aotea Sea Scouts Hall and the rock walls at Waikaraka Park.

Natural Environment

The Māngere Inlet is a shallow tidal mudflat which almost entirely empties at low tide. The Inlet has been extensively modified through reclamation, landfilling and development resulting in a straight shoreline, with a rock / hard edge. Galway Street Landfill, and Pikes Point East and West Landfills discharge contaminated groundwater that enters the Māngere Inlet.

The Māngere Inlet is an important wading site for threatened and at-risk bird species, national and international migratory species.

At the north eastern corner of the Māngere Inlet is Anns Creek. This contains an extensive area of mangroves over lava flows that extend from the land into the harbour. Anns Creek is the only identified area in Auckland where a specific ecotone of native plants are found on lava. It is therefore an area of high ecological value.

Ōtāhuhu Creek is a shallow tidal creek with muddy channels, dominated by mangroves. This Creek flows into the Waitemata Harbour. The area is not recognised for any specific ecological value.

Several geological features are located in the Project area including Te Hopūa a Rangi (Te Hopūa), a small volcanic crater at the western end of the Project area, and remnants of lava flows along the northern foreshore of the Māngere Inlet and within and surrounding Anns Creek. Also significant is Mutukāroa – Hamlins Hill, which is the largest non-volcanic hill on the Auckland Isthmus.

Assessment of effects on the environment

The actual and potential effects of the project have been identified as:

- **Traffic and transport** – The Project will deliver significant positive traffic and transport effects (i.e. benefits) for Auckland, namely:
 - Significant improvements in consistency and reliability of travel times for trips accessing the strategic network (i.e. SH1 and SH20) from the Onehunga-Penrose business area. With the Project in place, the access times become much more consistent and reliable across the day which will allow improved and more flexible journey and logistics planning for businesses;
 - Improvements to journey times to key locations over a wider area (e.g. to/from the Auckland International Airport and Highbrook);
 - Improved accessibility to businesses in the Onehunga-Penrose area by the provision of new and improved access roads;
 - Reduced traffic flows on local roads which improves amenity for residents.
 - Resilience in the local road network by taking pressure off the Neilson Street corridor, having alternative access points and providing a link between the two State Highways in case of an emergency event or closure;
 - Improved accessibility for pedestrians and cyclists between Māngere, Onehunga and Sylvia Park Town Centre via high quality, direct and dedicated facilities. Improved access to Ōtāhuhu East by safer walking and cycling facilities, reduced impact of motorway queues and a new pedestrian and cycle connection across Otahuhu Creek providing new accessibility to the adjacent Panama Rd community;
 - Safer walking and cycling facilities; and
 - Improved travel time reliability for buses accessing Onehunga Town Centre from SH20 and on other local bus routes.

These benefits are also important for local business activities, the movement of road-based freight and for local communities who will experience improved and more reliable journey times. Less traffic on local roads means safer, quieter streets for the people who live there. There will be a reduction in community severance in the Ōtāhuhu area as a result of a safer and shorter routes for pedestrians and cyclists.

- **Economic effects** – The Project will deliver significant benefits to the local and regional economies. During construction, these include employment opportunities for local contractors and the supply of construction materials. Once the Project is completed, it will enable faster and more reliable travel times and reduced congestion, resulting in economic efficiencies that support businesses for growth and less congestion for motorists.

The improved accessibility and travel time reliability will provide significant positive business operation effects, improving efficiency for business operations notably supply chain and distribution activities. These infrastructure improvements provided by the Project are identified in the Auckland Plan as a key enabler to improving GDP per capita in Auckland, and will support the core economic function of the EWL area.

- **Property, land use and business disruption effects** – Land required for the construction and operation of the Project includes land owned by Auckland Council, the Crown and land in private ownership. Owners will be fairly compensated where properties have to be purchased. The processes for managing land purchase and compensation are set out in the Public Works Act 1981.

The Project is a significant construction project. The Project design has minimised and/or avoided a number of potential business disruption effects, however there are potentially significant impacts to

businesses and existing land uses arising from construction activities. Measures will need to be implemented during construction to minimise or mitigate these potential impacts. Construction activities will require establishment of construction yards, haul routes, temporary road works (including closures) and traffic management through construction.

- **Network utilities** – Effects on network utility infrastructure are expected including impacts from temporarily or permanently relocating existing network utilities and from construction activities. Work has been undertaken with network utility operators to identify where relocation and/or protection of network utilities is required, and to develop appropriate measures to manage adverse effects during construction and operation of the Project.
- **Cultural values** – The Project traverses an area rich in Māori history. Mana Whenua have identified that, from the early 1840s to the present time, the development of Auckland has erased the visibility and legibility of their cultural landscape elements. As such, the exercise of kaitiakitanga and expression of the rich historical tapestry of the area has been limited.

Mana Whenua have been a key partner in the development of the Project, and this has enabled the inclusion of values and aspirations, and where practicable, the avoidance of adverse cultural effects through the project design. Where potential adverse effects are unable to be avoided, works will be managed and monitored to recognise the significant waahi tapu (sacred values) with specific protocols proposed for undertaking works in culturally significant areas. The Project will also help rehabilitate Ōtāhuhu Creek as a culturally important natural waterway.

- **Archaeology and built heritage** – The Project could adversely affect known and unknown archaeological sites. Methods to record, analyse and monitor these potential effects will be defined and implemented during construction. Construction in proximity to the Aotea Sea Scouts Hall and Waikaraka Park will change the surrounding context. Specific design and landscaping are methods included to manage effects.
- **Geological heritage** – The project largely avoids notable remnant lava flows. A small area of earthworks is required at Te Hopūa, however the works will be largely outside of the volcanic features therefore the effect on the form of Te Hopūa will be negligible. A positive effect overall on geological heritage is achieved through enabling greater appreciation and education about geological features using measures such as interpretive signage.
- **Trees** – A large number of trees will be removed to construct the Project. The majority are not significant species and extensive replanting is proposed as part of the landscape plans. Where trees are retained, protection measures will avoid and minimise effects on those trees.
- **Landscape and visual** – While the Project has potential to increase the visual dominance of transport infrastructure, and the severance of the urban area from the coast, and involves reclamation of Māngere Inlet, the Project also has potential to reverse adverse effects of historical development and positively contribute to restoration of the landscape. In particular, the EWL provides a catalyst to help restore and rehabilitate Māngere Inlet.

Significant benefits arise from addressing historic adverse effects of reclamation and landfilling, and heavy industrial development along the coastal edge of the Māngere Inlet. The Project will enhance amenity and accessibility to the coastal environment with new coastal landforms and enhanced walking and cycling access. New walking and cycling routes through and around the area improve connectivity to town centres and to and from residential areas. The Urban and Landscape Design Framework prepared for the Project provides principles to incorporate these outcomes in detailed design.

- **Noise and vibration** – There will be an increase in noise and vibration during construction with the use of heavy machinery, earthworks and related activities. A Construction Noise and Vibration Management Plan will be prepared to identify risks and establish measures to manage noise and vibration. Once built, there will be an overall reduction in noise levels for residents near SH1 with new acoustic barriers installed and, in some instances, building improvements such as acoustic insulation.

- **Air quality** – During construction, dust controls and good on-site practices will minimise effects. Once operating, there will be an improvement in air quality in some areas with traffic moving onto the new road. Near SH1 there will be a slight increase in vehicle-related discharges. These areas already experience high traffic volumes, and cumulatively there will be a negligible increase.
- **Construction traffic** – There will be temporary adverse effects on road users due to an increase in heavy construction vehicles, road and lane closures and the introduction of temporary speed limits. This may cause congestion and travel time delays for all road users and will affect property access. Management plans are proposed, along with regular communication to manage construction traffic effects.
- **Social effects** – During construction, adverse social effects will arise from traffic disruption, noise, dust and changes in access to properties. However, the operation of the Project will result in a number of positive social effects including removal of traffic on local roads, improved streetscape amenity, acoustic barriers adjoining residential properties and improved access to local community facilities and public open space. Adverse social effects from the operation of the Project include reduced amenity from new road connections, loss of some community services and potential loss of jobs due to acquisition of business land and residential housing.
- **Erosion and sediment control** – Erosion and sediment control measures will be implemented during construction based on best practice erosion and sediment controls to minimise discharge of sediment to the natural environment.
- **Groundwater** – The Project will have beneficial effects on groundwater quality. In particular it will assist in improving the quality of groundwater and leachate from existing landfills, discharging into the Māngere Inlet.
- **Ground settlement** – Construction of the Project requires cutting and filling of ground surfaces, and there may be ground settlement, typically in the range of 0 – 10mm. This will only result in negligible effects on structural integrity of adjacent buildings, services or infrastructure.
- **Contaminated land** – The Project area has a large number of known (and potentially unknown) contaminated areas from a wide range of historic and current hazardous activities and industries including extensive modification of the original coastline of the Māngere Inlet. Potential discharge effects from soil disturbance can be managed during the construction process. Once complete, there will be beneficial outcomes from the Project through capture of discharges from contaminated land, including leachate from a replacement leachate interception system at the Pikes Point Landfill, and treatment within the new stormwater wetlands.
- **Coastal Processes** – The Māngere Inlet and Ōtāhuhu Creek have both been extensively modified through progressive reclamation and coastal structures. The Project design has sought to minimise further reclamation near the narrowed Māngere Inlet entrance, and avoid reclaiming into the tidal channels to avoid changing the tidal flows and natural sediment movement. Dredging is a method proposed to gain material to use in the construction of the Project. Dredging has the potential to release sediment during both dredging and construction. The Project also removes existing culverts under SH1 at Ōtāhuhu Creek, restoring the tidal channel.
- **Ecology** – The Project will result in loss of threatened ecosystems and vegetation in Anns Creek and lava flow vegetation along the coastal edge of the Māngere Inlet, the permanent loss of intertidal mudflats, and loss of habitat that may be used by threatened bird species, and these are significant adverse effects. There will also be loss of habitat in Miami Stream and Anns Creek. Whilst the design has sought to avoid adverse ecological effects, where effects cannot be avoided, measures are proposed to mitigate effects on ecological values, including restoration planting and weed control, exclusion areas during construction and creation of new habitat.

The positive ecological effects from the Project include reducing contaminants entering the Māngere Inlet with benefits to marine organisms and birds, creation of green corridors that can enhance ecological linkages, restoration of saltmarsh habitat and habitat enhancement along the coastal edge and in Anns Creek, as well as habitat diversity within new stormwater wetlands.

- **Stormwater** – The quantity and quality of stormwater discharged from the Project will be managed to minimise adverse effects at the final discharge points in the Manukau Harbour, Māngere Inlet and the Tāmaki River. Stormwater from all new sealed areas of the Project and existing areas of SH1 within the Project area that are currently not treated, will be captured and treated. In addition, the Project provides the opportunity to capture and treat stormwater from the wider Onehunga and Penrose Catchment. This results in a significant improvement in the quality of stormwater discharging to the Māngere Inlet and from a section of SH1 to the Tāmaki River.

Management of Effects on the Environment

A range of measures will be implemented to manage the potential effects of the construction and operation of the project. These will include:

- Ongoing engagement with Mana Whenua, the community, Auckland Council and other agencies to develop key aspects of the design.
- Developing detailed design in a manner that avoids and minimises potential adverse effects on the environment and private property as far as practicable.
- Developing and implementing design and management plans prior to and during construction of the proposed work. Management plans include a Construction Environmental Management Plan and management plans for: ecology, archaeology and historic heritage, noise and vibration, air quality (including dust), traffic and transport, effects on network utilities, as well as specific provisions in key sensitive locations such as Anns Creek and the coastal environment.
- A Communications Plan to guide engagement with local communities prior to and throughout the construction process.
- An Urban and Landscape Design Framework with landscape and ecology components including principles and outcomes to guide the design of permanent works.

Proposed conditions that will apply to the works authorised by the designation and draft conditions that will apply to the resource consents are included in the applications.

Statutory Framework

The Project has been assessed against the relevant statutory planning documents. These documents seek to achieve agreed outcomes for communities and the environment and include the social, cultural, natural and built environment and economic outcomes.

Development of the Project has had regard to the relevant provisions. The Project will deliver on key policy directions related to transport, Mana Whenua, and land use function, and will not be contrary to other relevant strategic directions set out in the statutory planning documents. For example:

- The project will have significant transportation benefits, improving accessibility and connectivity, travel times and travel time reliability for residents and businesses. The transportation benefits will support economic growth for the region.
- There will be significant improvements in pedestrian and cycling facilities, including access to and around Onehunga, Sylvia Park and Ōtāhuhu.
- Construction disruption, including from noise, traffic, dust and restricted access, will be managed so that people can still live, work and play over the construction period.
- Specific measures will address negative effects on the natural environment, including rehabilitation works in the marine environment and at Anns Creek, and rehabilitation of the foreshore edge.

- Mana Whenua are a key partner and cultural values have been incorporated into the design, and an ongoing kaitiaki (guardianship) role in achieving the outcomes is enabled.
- The measures proposed to treat stormwater, manage construction and address leachate from historic landfills will safeguard the life-supporting capacity of air, soils, water and ecosystems.

The Project will have significant transportation and other benefits, and can be constructed, operated and maintained in a way that avoids, remedies or mitigates potential adverse effects. Accordingly the statutory assessment concludes that appropriate regard has been had to the relevant provisions and that the Project is consistent with Part 2 of the Resource Management Act 1991.