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Environmental Protection Authority
East West Link Proposal
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Infrastructure New Zealand submission on the East West Link proposal

Infrastructure New Zealand (formerly the New Zealand Council for Infrastructure Development) is the peak industry body for the infrastructure sector and promotes best practice in national infrastructure development through research, advocacy and public and private sector collaboration. Infrastructure New Zealand members come from diverse sectors across New Zealand and include infrastructure service providers, investors and operators.¹

We welcome this opportunity to submit on the East West Link proposal.

Key points and summary

We strongly support an immediate solution to chronic accessibility issues in the Onehunga-Penrose area.

We are concerned at the lack of strategic capacity provided for in the proposal.

We consider NZTA has reduced the strategic value of this project to limit consenting risk.

We ask that the EPA recognise the severe pressure that NZTA is under to deliver a solution which addresses transport issues in the area.

We ask that the EPA recognise that the consequences of consent failure for NZTA vastly exceed the consequences of project “gold plating”.

¹ This submission represents the views of Infrastructure New Zealand as a collective whole, and may not necessarily represent the views of individual member organisations.

Even with the East West Link in place, Auckland's congestion issues will remain chronic, necessitating further enhancements to network capacity.

The EPA should request NZTA provide a 20-30 year strategic plan for the network so that designations and resource consents for the East West Link can incorporate potential future network additions.

Informed by this process, we recommend that appropriate flexibility within the Notices of Requirement and resource consents is provided to enable NZTA to expand the project and network when required.

In particular, given the likelihood that that the future function of the East West Link may evolve from one of local service to regional strategic movement, corridors to the east of SH1, future expansion of the East-West Link from four to six lanes and full grade separation of the corridor should be provided for.

Access in, around and through Onehunga-Penrose is already a major problem

Transport problems in the Onehunga-Penrose area are severe.

Major corridors are at capacity, including at Church St and the Mt Wellington interchange.²

Once road capacity has been reached, travel times increase rapidly. For example, travel times between south Auckland and the CBD have increased by 30 per cent since 2013,³ a direct consequence of capacity constraints at Mt Wellington and several other pinch-points along the corridor.

Capacity constraints lead to very poor travel reliability. Up to 20 minute travel time variations into and out of Onehunga-Penrose are currently experienced.⁴

Demand for travel in Onehunga-Penrose will increase

The Onehunga-Penrose area (the area) is growing. Since 2000, employment in the wider Onehunga-Penrose-Mt Wellington-Otahuhu area has increased by one-quarter (an additional 13,000 jobs) and can be expected to continue to grow, in spite of chronic congestion.⁵

The result is increased demand for travel, meaning that without urgent action congestion will worsen in an already congested location.

Congestion in Onehunga-Penrose is uniquely costly

Further, unlike many other parts of the Auckland road network, corridors in and around the area support very high freight volumes (16-20 per cent of all traffic). In fact, significantly more heavy vehicles use the four lane Church St corridor on any given day than the eight lane Harbour bridge.⁶

² East West Link, Detailed Business Case vol. 1, p. 10.

³ ATAP, Evaluation report, 2016, p. 8.

⁴ Detailed Business Case, p.11.

⁵ NZTA, Report 3: Economic Assessment, p. ii.

⁶ NZTA, East West Connections Indicative Business Case, p. 9.

Supporting this volume of heavy freight is a significant light commercial operation. Quantifying the proportion of light commercial trips in the area is difficult, but it is reasonable to assume that the majority of trips into, out of and through Onehunga-Penrose are strictly commercial.

For business (commercial and heavy freight vehicles), time stalled in traffic is not just expensive from a time-cost perspective, it has a ripple effect on productivity across other sectors of industry. For example, a freight truck stuck in traffic while delivering materials to a building site will incur costs in the form of lost time, operating costs and wasted capital (the costs of which are, at a national average, captured in business case analysis).

But the delay is likely to also impede the productivity of the building site as other downstream construction activities cannot proceed until the materials arrive. These costs are not captured when estimating the costs of delay. In assessing the economic effects of congestion in Auckland, both the direct and indirect costs of congestion must be acknowledged.

What this means is that there are businesses which are less profitable, jobs which are not created and tax dollars not generated because businesses in the second largest employment zone in Auckland cannot be accessed efficiently.

Congestion in the area is constraining economic activity, adding costs to goods and services and is a major problem.

Furthermore, economic valuations typically do not capture wider “liveability” aspects including the social value of time and the value people attach to mobility and unimpeded access.

Arguably, it is these aspects that give rise to ever increasing frustration with congestion in Auckland. People are having to get up earlier and earlier or stay extended hours at work to avoid congestion or must forgo leisure activities or time with family and friends to work around it.

These issues underline the regional significance of the East West Link.

A solution must be found to current and future congestion in the Onehunga-Penrose area.

Alternative modes alone are not an option

Public transport, demand management and other measures which seek to avoid capacity improvements will not address congestion in the area.

Commercial trips, which make up a high proportion – almost certainly the majority – of traffic in the area, are not easily transferable to alternate modes.

Light commercial trips tend to be time sensitive with multiple destinations. Point-to-point public transport options, walking and cycling are not appropriate substitutes for the vast majority of light commercial trips.

Road freight in and around the Onehunga-Penrose area is not generally transferable to rail. Four-fifths of Auckland freight is destined for locations within Auckland.⁷ Rail's competitive advantage is in moving high volumes long distances where the cost of loading and unloading trains can be offset by rail's superior efficiency.

Rail cannot, therefore, be enhanced at reasonable cost to carry a significantly greater share of freight traffic in the area.

For non-commercial traffic movements into and out of the Onehunga-Penrose area, the underlying characteristics of industrial zones discourage public transport, walking and cycling.

Large land uses, such as major manufacturing facilities and warehousing, are difficult to service efficiently with public transport. Even where quality rapid transit services are provided (such as around the Te Papapa station, for example), long walking distances between public transport and a given destination increase travel times and reduce public transport's competitiveness with private vehicles.

Heavy industrial environments reduce the attractiveness of walking as a mode in general.

Heavy freight traffic exacerbates safety risks for cyclists.

In contrast, wide streets and the availability of parking support the attractiveness and competitiveness of private vehicles.

Rail, bus, walking and cycling, either alone or in combination, are not feasible replacements for many – almost certainly most – travel movements in the Onehunga-Penrose area.

Road capacity is inadequate

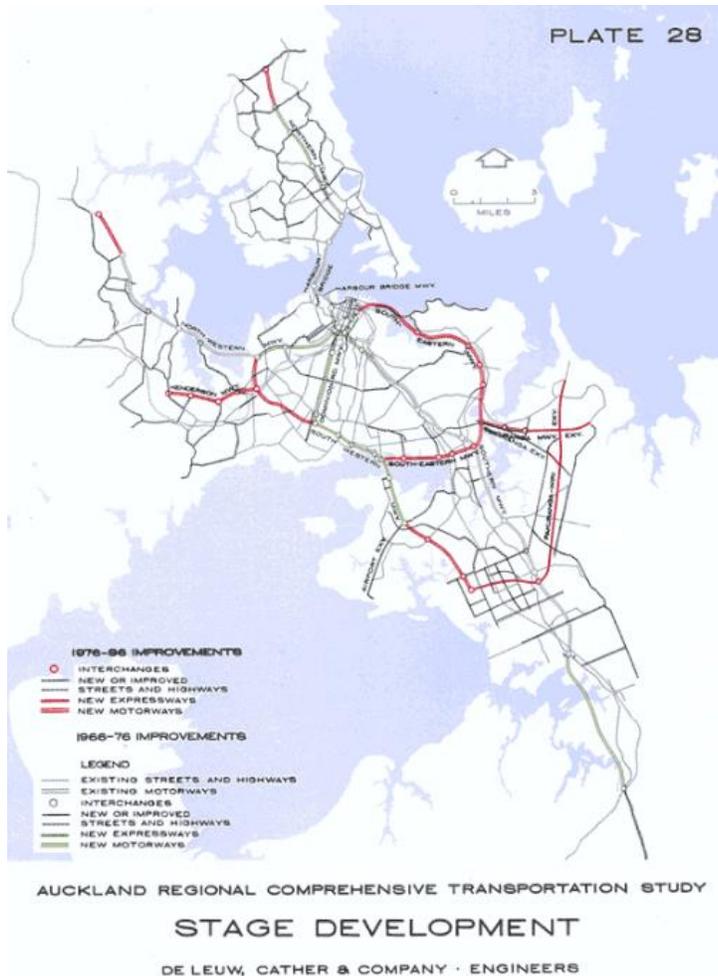
Congestion in and around the Onehunga-Penrose area is not the result of poor alternatives to private vehicles but of under-provision of road capacity.

Roads into and out of the Onehunga-Penrose area are inadequate.

Since the decision to develop an Auckland strategic (motorway) network was made, the expectation has always been that a new major connection would join state highways 1 and 20 around Onehunga (Figure 1).

⁷ Ministry of Transport, National Freight Demands Study, 2014, p. 6.

Figure 1: Highway Network vision from 1965 De Leuw-Cather study



Unfortunately, sustained underinvestment in the Auckland transport system has deferred this decision (which was originally intended for implementation by 1986) until the present day.

This has left traffic movements into, out of and through the area dependent upon the Church St-Neilson St corridor. This road was never designed to accommodate the demand seen today; incredibly, the Neilson St component of this corridor provides just one lane in each direction.

This simple lack of lane capacity to accommodate travel demand in Auckland's second largest economic zone is the reason for congestion in the area.⁸

Only by expanding road capacity can congestion issues be addressed.

⁸ Detailed Business Case, p. 10.

New road capacity is required

It is important to add that costs and problems resulting from lack of road capacity in the Onehunga-Penrose area are not limited to daily congestion.

Heavy dependency on the Church St-Neilson St corridor makes for a far less resilient transport system. There are very limited alternatives to this corridor in the event of incidents, increasing the vulnerability of the transport network and local businesses to any issues.

High traffic volumes increase risk taking and reduce safety.

Congested and stalled traffic concentrate vehicle emissions and reduce air quality.

In light of poor existing road capacity, limited scope for alternatives to offset road demand and wider impacts on transport and local activities, a new road corridor in the vicinity of the Onehunga-Penrose area is urgently required.

The Environmental Protection Authority (EPA) must ensure road capacity expansion in the Onehunga-Penrose area is allowed to proceed. The economic and social costs of further deferral are simply too high.

We retain concerns with the proposal

While we are unequivocal that additional road capacity in the Onehunga-Penrose area is required, we are less clear about the exact form that capacity should take.

We neither support nor oppose the proposal being considered by the EPA.

We are satisfied that it will, at a local level, have a sustained and positive impact on traffic movements into and out of the Onehunga-Penrose area.

We expect significant travel time savings and reliability benefits for freight in particular, but also for wider commercial and general traffic.

However, the major reason why we expect local transport performance will enjoy a material and sustained improvement in transport outcomes is because wider regional needs are not being met by the proposal.

The East West Link will provide a connection, but not a “strategic connection” between State Highways 1 and 20.

Project components including, but not limited to, at-grade intersections, lack of a full access interchange with SH1 and no connectivity further east restrict and disincentivise use of the East West Link as a regional transport asset.

The limited strategic impact of the Link is demonstrated by the lack of any congestion on the corridor at any period modelled to date. Even during the morning peak 30 years from today, the East West Link will operate well below potential capacity (see Figure 2).

Figure 2: Congestion in Auckland AM peak 2046⁹



(Figure 2 highlights points across the network where vehicle volume to capacity ratios (VCR) exceed 1.0 (black), 0.9 (red) and 0.8 (yellow). A black line (or VCR > 1.0) indicates demand for that section of corridor will exceed the capacity of that corridor between 7am and 9am. It is important to note that Figure 2 does not highlight the extent of congestion, it only highlights the capacity of sections of road. Actual “congestion”, as in the backlog of vehicles created by a capacity constraint, will extend over virtually the entire motorway network right throughout the morning peak and into the interpeak.)

⁹ Auckland Transport Alignment Project.

Figure 2 shows that the Auckland road network will be under extreme pressure by 2046, with all expressway and motorway corridors suffering one or more sections where peak demand will exceed capacity of the road.

The one exception to a comprehensively over-stressed strategic transport network, illustrated by Figure 2, is the East West corridor, which can be seen to the north of the Mangere inlet. The corridor is characterised by a lack of any measurable congestion while major corridors around it are over capacity.

This indicates that the East West link is not providing cross-city access and does not operate as part of the strategic network system, but as a standalone corridor for local access.

While it is encouraging to see that the East West link provides long term capacity, in alignment with its project objectives, it is also clear that up to \$1.85 billion is being committed to a road, walking and cycling initiative which elevates local aspirations above those of national and regional needs.

The East West Link proposal is now estimated to cost as much as the six-lane motorway tunnel and interchange connection at Waterview, which links the western ring-route, provides an alternative to SH1, rebalances the Auckland road system and delivers resilience for a vulnerable network.

The East West Link, in contrast, improves access for trips into and out of Onehunga-Penrose.

While we strongly agree that solutions to congestion in such a productive area are urgently required, we are challenged to agree that limited national resources will be optimally allocated under the current proposal.

The Auckland road network will need to be enhanced

Framing our concerns about the East West proposal is an Auckland road network which is already under extreme pressure.

In just the last two years, travel times along Auckland’s motorway network have increased by as much as 30 per cent.¹⁰

Within the timeframe of the construction of an East West corridor, access to employment across Auckland by car (by far the dominant mode for travel to work) will decline markedly. In 2013, 50 per cent of employment was within a 30 minute drive of an average resident, but by the mid-2020s this number will fall to just over 40 per cent.¹¹

Falling access to employment will necessitate road charges of up to 30 cents per kilometre travelled to “manage demand” to the point that the road network can operate effectively.¹²

¹⁰ ATAP, Evaluation report, 2016, p. 8.

¹¹ ATAP, Foundation report, p. 10.

¹² ATAP, Recommended Strategic Approach, 2016.

This level of charging represents approximately three times the amount of tax an average vehicle pays today. It is set at a level which is not influenced by the funding needs of the transport system, but the level at which the public's desire to travel by car is suppressed.

The option of either increasing mobility barriers to employment or establishing punitive pricing regimes to discourage private vehicle use is suboptimal. Both options place a handbrake on economic and social opportunity, favour residents with the resources to travel and locate near employment and will constrain economic development in New Zealand's largest and fastest growing city.

We therefore consider it highly likely that further investment in Auckland's strategic road network will be required and must now be planned and provided for.

How does the Proposal support future network improvement?

We are unclear how the East West Link proposal supports the future development of Auckland's strategic road network.

We understand from NZTA that the Proposal provides for a continuation of the East West Link further east across SH1, if and when that extension should be required.

However, we have not seen any plans for how this would be achieved nor is there provision in any published document for the future delivery of this extension.

We observe severe constraints within the built environment east of SH1, principally relating to the operation of the rail network and New Zealand's largest mall.

We are confident that these impediments could be technically overcome, but note the challenge this poses to future consenting processes and the associated cost of mitigation.

We draw attention to this very process of consenting the East West Link. As noted previously, the Link has been on planning documents for half a century, yet sizeable reclamation and property purchase will be required to complete the Proposal.

Furthermore, an evidently complex and expensive interchange is required with SH20 and only limited access is provided to and from SH1.

The solution is, moreover, likely to become the most expensive roading project in New Zealand's history.

How is it possible that an East West Link, conceived at the same time as the Western Ring Route, has resulted in a very expensive, complicated and slow response to chronic congestion in one of the most economically critical locations in New Zealand?

The answer is that provision was not made in earlier projects to allow for the ongoing growth and development of Auckland and its road network.

A permanent process of cost deferral and a perennial desire to appease local objectors has resulted in hundreds of millions of dollars of additional project cost and millions more in lost productivity as

increasingly complex, yet agreeable, solutions are devised to address problems which never should have arisen.

Our concern is that the Proposal put before the EPA continues a long and expensive tendency to relegate long term value below short term exigency.

A future multi-billion dollar engineering feat to address an avoidable issue must not be necessary outcome of the East West Link.

Provision must be made today for future expansion of the network and that means sufficient scope given to the resource consent process for the East West Link.

What is the next transport investment?

Unfortunately, we are unclear what scope should be provided for by the EPA.

It is not clear what NZTA's plan for future expansion of the network is, nor how the East West Link supports this plan.

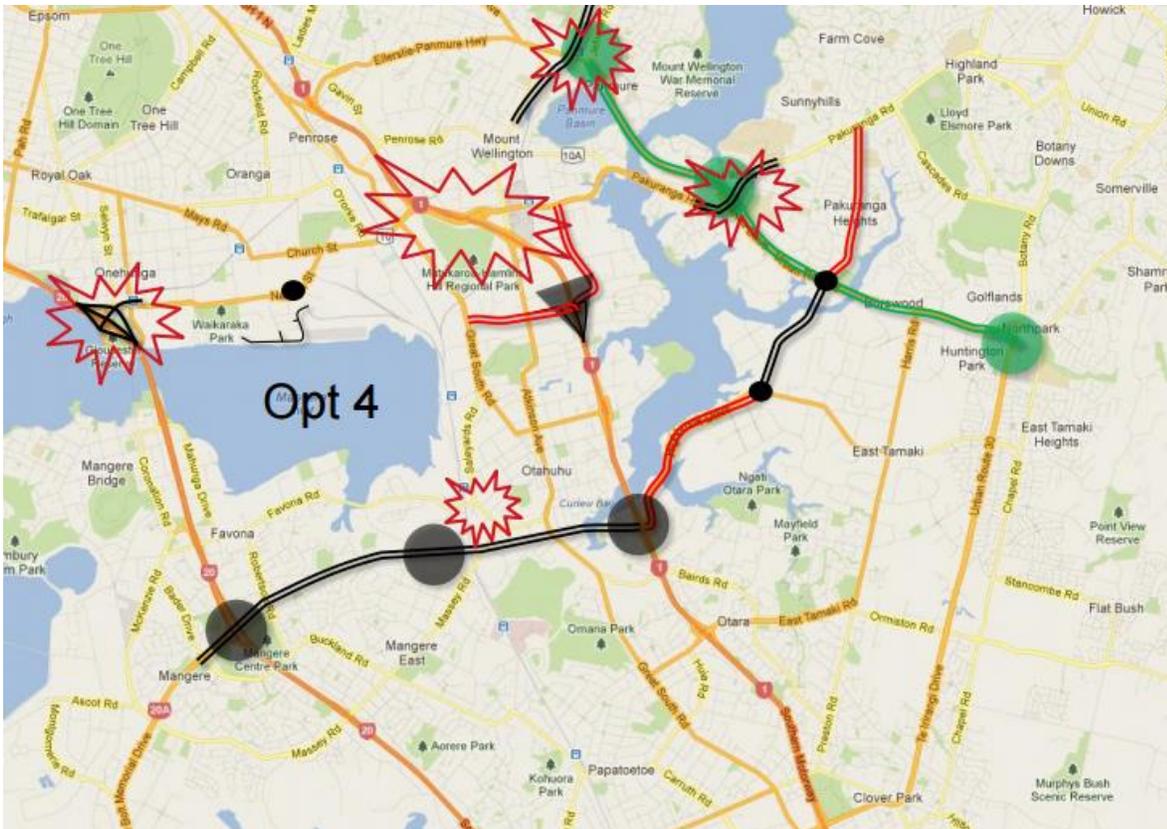
NZTA has no published network plan identifying future transport corridors or priorities beyond the short term (outside of future growth areas identified as "Future Urban" in the Auckland Unitary Plan).

A transport corridor remains protected and designated between Orakei and Glen Innes, potentially allowing an extension of the East West Link eastwards across SH1, in accordance with the 1965 Highway Network Vision (Figure 1).

However, no route between Glen Innes and beyond, for example to connect at SH1 around Mt Wellington, has been designated, or even identified. The area between the eastern termination of the East-West Link and Glen Innes has been significantly built out and strong local opposition will be generated should transport authorities indicate the possibility of a transport corridor.

Alternately, through the early phases of investigation into the East West Link, NZTA and Auckland Transport considered a separate east-west corridor to the south of the Manukau Harbour. This corridor was conceived to take the form of a motorway solution linking SH20A to SH1 at Highbrook Drive (Figure 3).

Figure 3: A potential southern connection¹³



However, immediate and acute public opposition emerged when it became known that transport authorities were considering this option and further public discussion of such a solution ended.

This option may remain NZTA's preferred choice for future strategic network capacity, but no such provision has been made under the recent Unitary Plan process.

The corridor is now zoned for medium density (mixed housing urban) housing. Land values have thus inflated in response to development potential, increasing the cost of any land purchase.

Construction can begin today on dense residential development which will increase the impact of a transport solution on surrounding communities and galvanise large opposition.

The likely response will be project failure or a tunnel, approximately doubling the cost of the project.

In either case, regional and national interests will be relegated below local demands, the project will be stymied and limited national resources wasted.

We can, should and must avoid these problems.

¹³ Auckland Transport, Presentation to the Auckland Council Transport Committee, June 2013.

New Zealand consenting processes disincentivise strategic planning

In our view, the reason that NZTA is not applying for wider consenting approval via the East West Link EPA process is because it is acutely aware of the risk of project consent failure.

If NZTA's application to construct the East West Link is cancelled, there is no medium term back up plan.

Congestion in the area will increase travel costs and times, disincentivise investment, reduce employment and undermine the competitiveness of the New Zealand economy for an indefinite period.

Political pressure on NZTA will be significant.

The immediate consequences of East West Link consent failure, under New Zealand's existing planning, investment and regulatory framework, are much more tangible than the consequences of constructing a sub-optimal project.

We consider that, under Australian consenting processes, for example, a materially different project would be sought, which placed greater emphasis on regional and national needs, long term network performance and the benefits of investment.

Under New Zealand's effects-based framework, and in light of a somewhat similar approval process failing previously (the Basin Reserve flyover), we consider that NZTA has reduced and constrained the East West Link proposal to the point where the project is now more expensive and less effective than otherwise would be the case.

We ask that the EPA sees through the restrictions placed on NZTA by an uncertain regulatory process and provide sufficient scope for the agency and contracting parties to deliver an East West solution which best meets the needs of all New Zealanders.

Recommendations to the EPA

The EPA should ask NZTA to provide a 30 year plan for Auckland's strategic network.

Where relevant, the EPA should provide for this plan in the notices of requirement and resource consents for the East West Link.

Corridors to the east of SH1, future expansion of the East-West Link from four to six lanes and full grade separation of the corridor should be provided for, if there is a reasonable chance that the future function of the East West Link may evolve from one of local service to regional strategic movement.

Both the EPA and NZTA will understand that any such plan would ultimately require the approval of various Governments and would therefore be provisional. The purpose, however, is to ensure that consenting decisions on the East West Link, and all future network enhancements, do not trade off the limited resources of future generations for the short term preferences of current interests.

We thank the EPA for this opportunity to submit.