Submission on an Infrastructure Strategy for New Zealand

17 June 2021

- New Zealand needs a bold yet achievable Infrastructure Strategy for existing and new infrastructure.
- A strong population and migration strategy must include a plan for the skills to fill the infrastructure gap.
- Existing funding tools are sufficient for some infrastructure types, but implementing the right pricing signals can be politically difficult.
- A specialised infrastructure unit managing nationally-significant projects has merit, while localised projects should be locally managed.
- Using capacity triggers for development must adequately consider externalities like congestion and emissions in directing where development occurs.
- Government's stated climate change ambitions will need to be balanced against infrastructure costs.
- National standards for asset management are needed.

Our answers to specific questions follow.

Question 1: What are your views on the proposed 2050 infrastructure vision for New Zealand?

Execution plan is key: The consultation document provides a headline view of the macro challenges and issues reasonably well. It should form a springboard for a more detailed execution plan, essential for the delivery of any strategy. We note the "options" outlined in section 8 provide the basis for an execution plan, but we would recommend framing these more definitively in the final Strategy once public feedback has been incorporated.

Focus appears to be on the 1% of new infrastructure: Figure 12 highlights that 99% of infrastructure is existing, with only 1% being built at any one time. The implication is that the 99% provides significant opportunities for optimisation. We note that the amount of effort devoted to this question under the title of "asset management" is relatively low. We comment further on this point under subsequent question responses.

Climate ambitions and reality: The discussion on climate change and carbon emissions is extensive. It would be useful to highlight the size of the challenge clearly, and the current inconsistencies and incompatibilities between aspirations and plans on one hand, and what agencies and local government can afford or legally deliver. How does the Strategy sit with the Climate Commission's estimates of the costs of transition, for instance?

Current funding for climate change initiatives at local and central government level are likely to have very limited impact on emissions. Accordingly, a clear steer on the relationship between infrastructure costs, government's stated aims and targets, and a dramatic decline in emissions seems to be a crucial component of an Infrastructure Strategy.

Question 2: What are your views on the decision-making principles we've chosen? Are there others that should be included?

Enabling Infrastructure: A decision-making principle which appears to have been omitted relates to "Enabling" Infrastructure. This is an important principle as is approaching the infrastructure question from a different angle. For instance, what are people prevented from doing now that new or alternatively used infrastructure could enable them to do?

Question 5: How could we better encourage low-carbon transport journeys, such as public transport, walking, cycling, and the use of electric vehicles including electric bikes and micro-mobility devices?

Making the case for EVs: There appears to be no real cost-benefit analysis in place to make the case for EVs, which may be helpful to encouraging uptake. Key questions include how the monetised social cost of global emissions are avoided by a switch and how they stack up against higher upfront costs and less convenience over refuelling/charging for users.

Ongoing transport network funding: From an ongoing infrastructure funding perspective, there appears to be little commentary around how existing fuel excise taxes and road user charges would be topped up as the proposed switch to EVs occurs. What mechanisms will need to be in place to pay for renewal of existing infrastructure or for infrastructure to support EV rollout more widely? See also Q29.

A step change rather than a better status quo: Switching to a more climate-compatible transport system will require huge changes in mindset and, given current pricing, substantial spending on non-combustion engines. This being the case, we should be thinking far more transformational than simply replacing road-clogging combustion vehicles with road-clogging EVs in our cities. The work should be done to show whether spending on genuine cross-town public transport (PT) in larger cities, and strongly incentivising its use, might be better than simply subsidising EV uptake. This could be incorporated into a wider economic case study for the decarbonisation of transport.

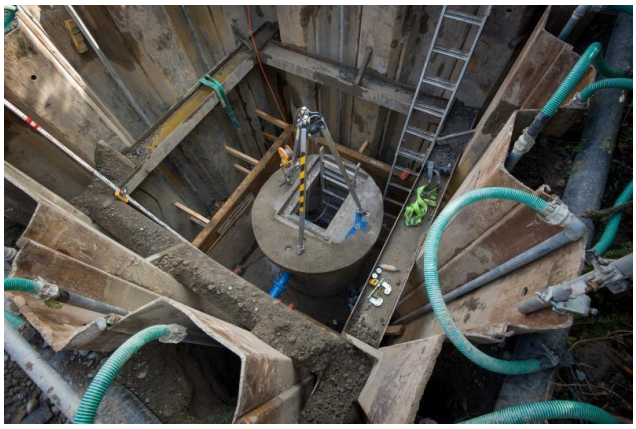
Question 7: What infrastructure issues could be included in the scope of a national energy strategy?

We see a number of areas to be addressed:

- a wider view on key renewables and consideration of the impending industry transformation
- a view on how transformation will occur at a sector level rather than just across infrastructure in general. e.g. how energy sector infrastructure will accommodate and integrate localised generation and storage
- new energy sources, such as hydrogen both for domestic use and export
- how PT and active modes can be used to switch people out of low occupancy vehicles altogether, and what type of cross-city infrastructure that will require.

Question 10: What steps could be taken to improve the collection and availability of data on existing infrastructure assets and improve data transparency in the infrastructure sector?

National data standards: New Zealand needs national data standards as a foundation before joined-up collection can take place. One or more government agencies with substantial assets should take accountability and become the client for their development. Waka Kotahi takes the lead for transport, but there is a need for other agencies to take a similar role for other sectors, such as water.



Question 14: Does New Zealand need a Population Strategy that sets out a preferred population growth path, to reduce demand uncertainty and improve infrastructure planning?

Yes. Historically, governments here have not responded to calls for a population strategy, which is a critical component to understand growth and then infrastructure needs.

Migration policy and targets: The recent change in immigration policy highlights that a longer-term strategy needs to consider this critical aspect of population planning.

Skills deficits, migration and infrastructure: Migration of skilled workers is fundamental to filling skills gaps in New Zealand (including for infrastructure provision), but New Zealand has long relied on large volumes of largely unskilled and semi-skilled workers for economic growth. This creates an infrastructure shortfall at local government level (even though local governments have no say in migration policy) where most immediate demand is felt for daily lifelines such as transport and three waters networks.

Question 18: For the 'Enabling Competitive Cities and Regions' Action Area and the Needs: What do you agree with? What do you disagree with? Are there any gaps?

Evidence base needed for decision-making: There is little evidence that simply rezoning more land will result in dramatically lower land prices. This is not to say that zoning should not be relaxed; the recent National Policy Statement on Urban Development will hopefully go a long way to closing some of the gaps in zoning rules close to jobs and PT. But as this study from Auckland Council's Chief Economist Unit showed, when Auckland zoned for four times more development than its previous zoning rules allowed (and four times its likely housing needs over the next 30 years), land prices fell a maximum of only 6.6%.

Statements about zoning need to be balanced: We know that, on aggregate, at present, land prices inside Auckland's urban boundary are not inflated relative to prices outside that boundary once the well-understood basics of location, and the less well-understood impact of infrastructure provision, are accounted for (see here). In fact, prices outside Auckland's boundary appear to be ***inflated*** once the costs of infrastructure are accounted for, likely because of the large infrastructure price subsidy given to developers there. What we do know, however, is the following:

- Zoning rules and urban boundaries ***can*** be restrictive.
- The fact that Auckland's urban boundary is not inflating land values today relative to areas outside the boundary does not mean all its zoning is in ***the right place***, or that the boundary will not be a constraint in future. This analysis shows there is a lot of scope for more upzoning closer to PT and jobs.

Asset management and infrastructure pricing: Asset management and knowledge of the state of assets, and the political challenge of increasing the charges for infrastructure to match the true cost of that infrastructure are among the big challenges to making cities successful. They should be covered.

Triggers must account for externalities and relative infrastructure costs: Triggers must take account of externalities including congestion and emission impacts of different types of development, and not just development capacity. This would shift triggers toward more intensive development over

expansive development types that typically carry much higher external costs.

That said, an ongoing challenge at local level is understanding the state of assets, which makes it difficult to demonstrate unequivocally that development in brownfield area A is cheaper than developing in greenfield area B.

Question 19: What cities or other areas might be appropriate for some form of congestion pricing and/or road tolling?

Expedited implementation for Auckland and Wellington: Congestion pricing has been a subject of policy consideration for several years. Given congestion is at or near critical levels, the options outlined in C3.1 focused on Auckland and Wellington should be expedited and consideration of other areas should be a second order priority.

Working from home and PT use: It should be noted that the COVID-19 accelerated work-from-home phenomenon has largely retreated to Mondays and Fridays. Transmission of COVID-19 on PT appears to have played a role in discouraging people from using it. PT use is still down over 30% in Auckland since before the pandemic, while car use is practically where it was pre-pandemic, meaning congestion is back at pre-pandemic levels. There is no case for not expediting a demand management system for Auckland.

Question 20: What is the best way to address potential equity impacts arising from congestion pricing?

Demand management, not revenue generation: Congestion pricing is not intended as a revenue-generating mechanism. It is a demand management system. Accordingly, pricing should be set at a level that covers the full cost of the management system.

Creating equity: Crucially, revenues should be hypothecated for use in providing alternative transport options so people do not have to use their cars. Second, revenues should be directed at areas currently underserved by PT/active modes. The urge to spread funded projects across a city equally must be resisted in lieu of focusing it where transport links are weakest. Some parts of our largest cities are poorly served relative to others.

Question 21: Is a 10-year lapse period for infrastructure corridor designations long enough? Is there a case for extending it to 30 years consistent with spatial planning?

Optimal land use and longer-term planning: Designation needs to balance two competing demands. On one hand, allowing land to be held under a designation for too long leads to inefficient land use. On the other, it discourages longer-term infrastructure and funding planning beyond a 10-year timeframe.

This may mean, in a greenfield location for example, designating land for future use as a school or widened road corridor 15 years before it may be developed. This will allow more reasonable funding plans and more timely delivery. However, powers to hold a designation longer can, perversely, also discourage timely infrastructure investment.

To better manage this designation process, infrastructure requirements over a much longer timeframe need to be determined, costed and funded.

Question 25: Does New Zealand have the right institutional settings for the provision of infrastructure?

Current reforms are indicative: The current reforms including of the RMA, water, health and education indicate that infrastructure provision is not working as well as it should.

Evaluating unsolicited bids: There is no official mechanism or process to consider private sector approaches or unsolicited bids that have the opportunity to bring innovative solutions to infrastructure challenges. Currently each unsolicited bid, if considered, is subject to ad hoc processes, disincentivising private sector investment in proposals. In Australia, a stage gate process encourages more early engagement with innovative approaches from the sector.

Question 26: How can local and central government better coordinate themselves to manage, plan and implement infrastructure?

Optimisation, not just amalgamation: Any reforms of the health, water, education and local government spheres must focus on optimising and transforming, rather than simply amalgamating the status quo into larger units. Otherwise, the risk is more bureaucracy and poorer outcomes.

Banding together to overcome skills gaps: One challenge at a local level is access to the right skills and coordination for infrastructure and strategic planning. There seems to be significant opportunity for a formalised relationship between local areas to share resources for a more joined up way of investing in infrastructure. That said, a national buying agency or similar for highly local projects will likely be a step too far in the other direction, discouraging innovation and locally-informed decision-making.

Question 29: Are existing infrastructure funding and financing arrangements suitable for responding to infrastructure provision challenges? If not, what options could be considered?

Local government receives less than 10% of all government tax revenues. Taken with strong population growth, this has contributed to at times overwhelming infrastructure challenges for high growth councils.

For some local government infrastructure, tools are largely sufficient for growth, but historic shortfalls are large: There is a lot of ongoing discussion of value capture taxes and other mechanisms being needed, but new tools are not necessary for councils to better fund their share of new infrastructure costs today. At present, councils have the legal mandate to charge general rates, development contributions (DCs) and targeted rates. These latter two mechanisms are conceptually sufficient to cover the local government share of development-stimulated infrastructure costs if used correctly. The challenge has been setting DCs much lower than the actual cost of the infrastructure, meaning infrastructure gets funded largely by general rates, leading to councils hitting debt ceilings.

This reluctance to charge more for DCs is often due to the incorrect belief that increasing DCs (or their equivalent in NPV terms, targeted rates) will lead to higher house prices. In reality, higher DCs and targeted rates push raw land values down to a value commensurate with their low level of infrastructure provision.

At the central government level, potentially no. There is an argument that population growth, primarily through historically loose migration settings, is a central government responsibility, and that general taxes should be used to fund each part of the country roughly in proportion to its population and share of population growth. That said, the provision of central government services, such as local schools, do improve land values. Using the same beneficiary pays argument as for local government-provided infrastructure, there is an alternate argument for a developer contribution to the central government-incurred infrastructure costs that benefit local development. The Infrastructure Funding and Financing approach with targeted levies as being piloted in Redhills, Auckland, may be one way to do this.

In hypothecated funding areas such as the National Land Transport Fund, the risk is bigger. For example, the government is encouraging a switch to EVs, but success on that would lead to significant erosion of transport funding based on the current mechanisms. As this funding is eroded, central government's co-contribution to local transport projects will be financially strained, reducing the extent of projects that can be locally developed and exacerbating the transport infrastructure shortfall.

Question 32: Are there benefits in centralising central government asset management functions? If so, which areas and organisations should this apply to?

National standards and governance: Asset management responsibilities should not be

disengaged from the accountable agency governance. However, there would be great merit in the establishment of a centralised asset governance unit that can address the data standard development issue (see also comments on Q10) and promote and monitor their use. Adoption will enable cross agency benchmarking and improvement. State Owned Enterprises should be also be subject for consistency and benchmarking.

Question 33: What could be done to improve the procurement and delivery of infrastructure projects?

From planning to execution: The Construction Accord was specifically established by Government and the construction industry in 2019 to address this along with wider construction efficiency and effectiveness issues. They have made significant progress in identifying and documenting areas requiring change to address these challenges. However, the next critical step relates to executing their plans and this should be the area of focus.

A meaningful pipeline of nationally significant projects: A big challenge for New Zealand is the lack of a conveyor belt of large-scale projects. This means we skill up (say for City Rail Link), then there is a gap before the next large project, leading to skill loss and demobilisation. By way of example, if Light Rail is ready to go when CRL finishes, and the second harbour crossing is ready to go when Light Rail finishes, we will be able to retain key mega project skills and learning, enabling us to deliver faster and better. Nationally, there does appear to be at least one of these projects every decade, providing the opportunity for sequential delivery. This would also de-risk the migration of these key skills following project completion.

This is not to say that each of these projects uses exactly the same skills – naturally an underground tunnel and an overland light rail project have major technical differences. But many of the project management, governance, procurement, finance and planning skills would be similar. We need to build institutional knowledge in managing large, nationally-significant projects to avoid repeating any mistakes on new projects.

Question 34: Do you see merit in having a central government agency procure and deliver infrastructure projects? If so, which types of projects should it cover?

A role for large, nationally significant projects: For large, complex and irregular projects where there is a strong regional and national interest argument, such as light rail, or a new Auckland Harbour Crossing, there would be significant productivity benefits. In doing so there would be merit in a small central unit that could retain IP and knowledge captured useful to transfer from project to project (see also comments about pipelines and skills crossover in Q33).

For local value projects, probably not: Outside of these larger projects, there are risks in delivery of fit-for-purpose infrastructure and in perceptions from having a centralised procurer of infrastructure. That said, at the localised level, incentivising smaller councils to work together on infrastructure procurement to ensure the right skills and capacity are involved may have merit.

Question 35: What could be done to improve the productivity of the construction sector and reduce the cost of delivering infrastructure?

Better risk-sharing: More needs to be done to shift away from confrontational buyer-seller relationships, and to sharing risk more appropriately. There have been some promising examples of alliance and early contractor involvement. Still, outcome focused procurement that encourages innovation and apportions risk based on who is best placed to manage it, not just from a cost perspective, still needs a lot of development.

See also our earlier comments on having a pipeline of significant projects (Q33) and the idea of local authorities banding together to bulk up the total value of projects, get the right skills across the procurement process, and to offer an attractive package size to more bidders (Q26).

Question 36: What components of the infrastructure system could have been improved to deliver effective stimulus spending during the Covid-19 pandemic?

More resource could have been applied to maintenance rather than new renewal/capex. It is far simpler to gear up and deliver using existing contract arrangements, which would have led to more work getting off the ground faster.