In Association with

SUBMISSION
THE DRAFT NEW ZEALAND RAIL PLAN

Engineering New Zealand (formerly IPENZ) is New Zealand's professional home for engineers. We are New Zealand's strongest and most influential voice on engineering issues, with more than 22,000 members who want to help shape the public policy agenda and engineer better lives for New Zealanders.

Thank you for the opportunity to provide comment on the draft New Zealand Rail Plan (released in late 2019). This submission was developed in conjunction with Engineering New Zealand's submission on the Government's Policy Statement on Land Transport (2021/22-30/31).

In forming this submission, Engineering New Zealand worked with the Railway Technical Society of Australasia (RTSA), a Trans-Tasman body with over 1500 members in the Australian and New Zealand rail sectors including over 200 in this country. The RTSA is both a technical society of Engineers Australia and a technical group of Engineering New Zealand. The objectives of the RTSA include promoting technical and management excellence in the railway industry; developing and disseminating railway technology and management knowledge; supporting the continuing professional development of members and promoting close relationships among participants in the railway industry.

WE SUPPORT THE INCLUSION OF RAIL IN THE GOVERNMENT'S POLICY STATEMENT

We recognise the inclusion of rail in the Government's Policy Statement on Land Transport (GPS – LT) is new and a signal of the Government's intent to prioritise investment in rail. We also recognise that rail's inclusion in the GPS-LT signals a wider commitment to the consideration of rail in supply chain management, as well as the role of rail in supporting a safer, more economic and sustainable multi-modal transport sector. We commend this approach and are interested to work with the Government as it further develops its position in the months and years ahead.

WE SUPPORT THE DIRECTION OF THE DRAFT PLAN BUT CONSIDER IT NEEDS TO BE STRONGER

We welcome the draft New Zealand Rail Plan's focus on continued investment in rail infrastructure and services, as well as service planning and improved funding mechanisms.

Railway infrastructure and rolling stock are costly assets with long lives (typically 50 to 100 years-plus for track, bridges and tunnels, and 30 to 40 years for locomotives, carriages and wagons). In addition, the planning and delivery of significant investment in new or upgraded rail assets typically takes 2 to 5 years to realise, with major construction works often having to be undertaken in specific "block of line" periods to both minimise disruption to passengers and freight customers, as well as enable the work to be undertaken safely. We therefore welcome the draft Plan's focus on long-term investment and planning.

This said, we consider there is opportunity to further expand and strengthen the draft Plan, as follows:

- Strengthen the vision of the Plan so that it includes clear goals, outcomes and targets for the New Zealand rail system over the life of the Plan;
- Provide further clarity on the roles and responsibilities of Local and Central Government, as well as KiwiRail;
- Set out requirements for long-term planning for the national rail network and services;
- Outline an investment prioritisation mechanism that ensures the right projects and investments are made over the course of the Plan; and
- Set clear objectives and mechanisms for the development of a capable, competent and well-equipped workforce to deliver on the Plan.

In this submission, we expand on some of the key points above. Members of both Engineering New Zealand and the RTSA have extensive experience and expertise in planning and implementing multi-year capital investment and asset renewal programmes in rail, as well as other sectors. We would welcome the opportunity to work with Government to develop these aspects of the draft plan.

CLARITY OF ROLES AND RESPONSIBILITIES FOR DELIVERY

There are several key players within the rail industry in New Zealand (notably KiwiRail, central and local Government). We believe the draft Plan needs to further expand upon the roles and responsibilities of these players in supporting the delivery of the Plan. For example, at present, KiwiRail acts as both the operator of a national commercial freight business and a passenger business. It is also the steward of rail infrastructure. These roles and functions have different drivers and time horizons so clarity within the Plan on the delivery of these roles, including the drivers for delivery, would support the operational effectiveness of the industry.

Regarding asset management, KiwiRail is funded both through public funding and commercial revenue. While both funding sources are prone to fluctuations, commercial revenue is more susceptible to short-term volatility, due to changing business outlooks for freight and tourism. These funding fluctuations can jeopardise appropriate, sustained investment in capital and asset renewals. They challenge KiwiRail's ability to consistently deliver on its stewardship function and put the wider industry into boom and bust cycles. These cycles have a significant impact on the sustainability of the rail sector, including developing and maintaining the workforce needed for a world class industry. They also drive increased costs to the industry (with steeper peaks and troughs to resource efficiency for) and reduce the confidence of companies working in the rail sector to invest in people and equipment. We will further expand on this issue in other parts of this submission.

Waka Kotahi (the New Zealand Transport Agency)

The draft Plan and the draft GPS - LT propose an extended role for Waka Kotahi. Further clarity on this is needed. At present, it is our understanding that Waka Kotahi has two main roles relating to rail:

1. Primary regulatory responsibility for rail safety in accordance with the Railways Act 2005; and
2. Evaluation of applications and provision of funding for rail infrastructure and services, primarily for public transport, through the established National Land Transport Fund process

Will Waka Kotahi's role be extended under the Plan to include a role in long-term rail investment planning decisions? While an extended role for Waka Kotahi may support synergies between state highway planning and multi-model transport investment decisions, clear delineation between the roles of Waka Kotahi, KiwiRail and regional councils (particularly in the major urban areas) in rail planning and investment is needed. If Waka Kotahi is to play a larger role within the rail industry, we look forward to an increase in the agency's rail support capability and expertise.

MULTI-DECADE PLANNING IS NEEDED

As above, we support the draft Plan's intent to begin a process of long-term planning. However, we consider that longer-term, multi-decade, route level rail development and asset management plans are needed. These plans would support shorter term capital investment and project planning decisions. We note that existing Auckland Transport and Greater Wellington Regional Council rail development plans fill this role to some extent for the urban passenger network, but similar plans for the key freight corridors throughout New Zealand are needed.

We consider KiwiRail should be the owner of long-term route level rail development and asset management plans. However, the New Zealand Rail Plan provides an opportunity to clarify that these are needed and to support the development, and buy-in, across parties (central and local Government agencies), for these plans.

These plans should consider issues such as:

- Current and forecast future network/route functions – for both freight and passenger services where appropriate
- Resilience and climate change adaptation
- Opportunities to utilise and maximise latent capacity within existing network corridors
- Alignment with relevant national and regional strategies (for example, regional development and port access)
- Desired levels of service for customers
- Improvements in safety for rail operations, personnel and the public – for example, at level crossings.
- Potential locations for intermodal terminals

Greater integration with Waka Kotahi could also provide benefits in long-term planning, as transport corridors shared between road and rail are viewed collectively. The consideration of investment for improvements in issues of safety, resilience and climate change adaptations could gain efficiencies when viewed across such a "corridor" approach. Furthermore, learnings across land transport would support improved outcomes, as was seen in the close collaboration between the New Zealand Transport Agency, KiwiRail and suppliers during the rebuilding of the state highway and railway network after the 2016 Kaikoura earthquakes.

RAIL INVESTMENT PIPELINE

In this submission we have outlined our concerns with the funding of rail infrastructure and the 'boom or bust' cycles this creates for the industry. To address the current situation, we consider there is a need for a sustainable, consistent rail investment pipeline, with at least a five-year investment horizon. This would provide confidence to both KiwiRail and other rail client organisations, as well as their suppliers. It would also support growing and developing the capability of the rail sector workforce in New Zealand, together with the procurement of the plant and equipment required to deliver a world-class rail network. Finally, it would support effective procurement and delivery processes, particularly for multi-year complex programmes.

TO DELIVER THE GOVERNMENT'S ASPIRATIONS FOR RAIL, WE NEED TO DEVELOP THE WORKFORCE

RTSA recently surveyed its members working in the New Zealand rail sector to understand where the industry is placed regarding future workforce needs. Within engineering companies, most respondents indicated that they generally have limited rail capability at present, with most planning on growing their workforce (on average, a 20 percent increase over the next 1- 2 years). However, a common theme noted was their lack of confidence for such workforce investment. This is mostly due to pipeline concerns and lack of consistent long-term planning within the industry. In addition, several respondents identified that visa restrictions can make it difficult and time consuming to bring overseas rail specialists to New Zealand for short-term work assignments.

When faced with the need for significant increases in workforce, recent projects have shown the willingness and ability of the New Zealand engineering profession to respond (examples include the Auckland City Rail Link, the Kaikoura Earthquake Recovery's rail component and the electrification of Auckland's metro network). However, without a sustained pipeline of further work, the capability resulting from these projects is likely to disappear either overseas or into other sectors.

Rail engineering is an international market, as is evidenced by the RTSA being a Trans Tasman body aligned with both Engineering New Zealand and Engineers Australia. Historically, fluctuations in pipeline work have been partly resourced by utilising the international market, particularly for specialised disciplines such as rolling stock and signal engineering, rather than growing the capacity of the industry in New Zealand. In Australia, the annual expenditure on major rail projects is forecast to grow from $A4 billion in 2018 to $A9 billion by the mid-2020s[1], with the Australian rail industry historically having suffered from similar issues to New Zealand, including an aging workforce, skills shortages and stop-start investment programmes[2]. This, together with the generally higher salaries on offer in Australia, puts New Zealand in a challenging position to compete for personnel, even 'home-grown' skilled individuals.

In order to efficiently and effectively support the development and management of New Zealand's rail network and services, an appropriately skilled and competent workforce is needed. Even without the major programme of investment outlined in the draft Plan, significant numbers of new people will be required to join the industry to replace staff who plan to retire during next decade. Addressing this is two-fold. As we have already stated, pipeline certainty is required. Also required is training. Several RTSA members

[1] BIS Oxford Economics Rail Industry Outlook 2019

[2] Australasian Railway Association Skills Capability Study November 2018

recommend the introduction of advanced qualifications to support engineers to upskill in rail. Currently there are no undergraduate or post-graduate rail engineering courses offered by New Zealand tertiary institutions, with limited opportunities for on-the-job training courses. The engineering profession can address education requirements if sustainable demand for such services can be appropriately ascertained by training providers. The RTSA is currently working with Engineers Australia's education arm to define the railway engineering competencies needed for a major Australian railway organisation's graduate development programme, and similar programmes could be developed in New Zealand.

An ongoing rail skill-based training programme, together with an appropriate competency assessment system, would reduce reliance on overseas expertise and further support a world-class rail industry. It would also provide opportunities for New Zealand engineers at all stages of their career, whether new graduates entering the workforce or experienced engineers currently working in other disciplines or looking to enter the industry after time overseas.

ADDITIONAL CONSIDERATIONS

As mentioned above, RTSA recently surveyed its members on several matters, including the main challenges facing the industry, opportunities for the Government, rail personnel and the draft New Zealand Rail Plan. Much of the feedback is woven into this submission. Further themes include:

- Rail infrastructure, particularly outside cities, needs considerable investment to maintain or improve functionality
- Urban centres require separation of freight and metro lines to improve functionality
- Further work is needed on rail standards, and the management of these standards, including potentially establishing a national rail standards body, similar to those in Australia and the UK
- Broadening the scope of the New Zealand Rail Plan to potentially cover topics such as light rail, consideration of private-public partnership opportunities, integration with port strategies and further information on rail investment in the South Island.

Members of the RSTA and Engineering New Zealand are available to speak to Waka Kotahi on the above considerations, or any other matters arising from this submission.

CONCLUSION

In conclusion, we appreciate the opportunity to provide comment on the draft New Zealand Rail Plan. We would value an opportunity to continue to be further involved in the plan as it is finalised. If we can be of additional support, please do not hesitate to contact Jodi Caughley, Policy and Projects Lead at Engineering New Zealand (**jodi.caughley@engineeringnz.org**) or Simon Wood, RTSA (**simon.wood@larswood.co.nz**).

Overall, we are pleased to see the draft New Zealand Rail Plan and consider it a step in the right direction. However, as outlined in this submission, there is a need to further strengthen the Plan, as well as the wider rail industry in New Zealand. We would welcome further work and transparency on the roles and responsibilities within the rail sector, long-term pipeline intentions and associated workforce development programmes, as well as multi-decade, route level rail development and asset management plans.