INTERNET SERVICE PROVIDERS ASSOCIATION OF NEW ZEALAND

# Feedback on the draft National Infrastructure Plan

# from

# The Internet Providers Association of New Zealand Inc (ISPANZ)

1st August 2025

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Thank you for the opportunity to comment on the draft National Infrastructure Plan. ISPANZ' members are internet service providers (ISPs). Our members build, maintain and rely on infrastructure in order to connect and serve their customers. Having an appropriate National Infrastructure Plan is a most important enabler that helps our members deliver high quality services across the length and breadth of the country.

This feedback will be focussed on telecommunications infrastructure.

## Background

As the country's telecommunications infrastructure has grown and diversified, and as the ownership of that infrastructure has changed, the legal and regulatory regimes have not always kept up. Disincentives to investment in

infrastructure are present and incentives for inefficient duplication exist. We agree with your statement in 1.2.2 of the plan that:

> "We also make it difficult to make best use of existing assets."

## Telecommunications Infrastructure

The types of infrastructure used by ISPs to connect end users include:

- Fibre. Much fibre is owned by four natural monopolies, the Local Fibre Companies (LFCs); Chorus, Enable, Northpower and Tuatahi First Fibre. These entities are regulated to provide open access to all service providers on an equal basis. However, many other service providers have their own fibre networks. LFCs overbuild fibre owned by other entities. ISPANZ believes that this is an area of inefficiency and waste in our national infrastructure.
- Copper. As fibre is deployed, the copper network is being progressively withdrawn.
- Wireless. Wireless masts are the obvious, visual, items of infrastructure, and access to new sites and to existing masts is important. ISPANZ would argue that the electromagnetic spectrum is so important that the spectrum used for telecommunications, and how it is divided and allocated, should be considered to be a piece of the national infrastructure.

Other types of infrastructure, vital to telecommunications provision, are often not treated as separate categories. These include:

- Ducting. One of the most expensive parts of building a telecommunications network is digging a hole in the ground and putting

a duct into it. Per metre an underground duct is much, much more expensive to build than the fibre that goes inside it. Ducts are multi-generational investments, and some thought is required to ensure that the best use is made of them.

- Sites that house equipment and provide access to physical networks. (Think exchanges and points of presence (POPs)) Space in these facilities, the power supplies to them and the ability to connect networks to them are vital aspects of telecommunications connectivity. Who builds, owns and controls these needs consideration.

There is a telecommunications connectivity issue that can drive inefficiency and duplication of infrastructure in telecommunications networks. Its effect on physical infrstructure is such that it should be considered part of telecommunications infrastructure, and considered in the final National Infrastructure Plan. This is:

- Peering. Peering is the passing of data between two different networks. Current arrangements force some ISPs to buy connectivity to Australia or the USA in order to 'peer' with other New Zealand based ISPs. This is an inefficiency and an unnecessary expense.

## Ownership

Ownership of essential telecommunications infrastructure is mixed. The Crown has an ownership interest in the regulated LFCs. The Crown also has direct ownership of State Owned Enterprises, such as Kordia, which operate telecommunications networks. This means that your Figure 1 needs to show a direct 'purple line' link from Central Government to Telecommunications.

Where LFC fibre does not reach end users, the private sector owns much of the vital infrastructure that connects end customers. The focus of the draft National Infrastructure Plan is on the public sector, but with telecommunications the interests of public and private entities are tightly intertwined. Careful consultation and planning will be required to ensure that the right mix of public and private initiatives produces the optimal infrastructure outcome for the country. This is not the case today because the regulatory regime, and the competitive/monopoly mix that it has created, drives unnecessary duplication.

## General Comments

### Affordable and Sustainable Funding

At present smaller network operators have difficulty accessing capital for connecting hard to reach customers. Some even mortgage their own homes to build this vital part of national infrastructure. Ways need to be found for smaller private sector operators to access the capital needed for extending New Zealand's national infrastructure.

### Clear the way for Infrastructure

ISPANZ agrees that legislation and regulation need to better support the building and maintenance of telecommunications infrastructure. We also agree that a skilled workforce is a necessary enabler for national infrastructure development.

### Start with Maintenance

We agree that maintenance must be a priority. When natural hazards destroy poorly maintained roads, ducts and poles providing telecommunications are often broken at the same time. Maintaining one asset helps protect others.

### Right-size new Investment

Unlike with other infrastructure, relatively small scale investments can reach a wide user base, and connecting these users is not the focus of much public sector investment. This is particularly so in more rural and remote parts of the country. Right-sizing new investments means that the plan must account for private sector telecommunications investment.

## 3. Sustainable Investment

Under your heading "3.1 Context" you state:

> "We have been fast to roll out fibre broadband, but our mobile broadband networks are comparatively underdeveloped."

For fixed, rather than mobile, communications there are many parts of the country that fibre will never reach. These rural locations support much of New Zealand's primary and tourism industries. They deserve connectivity of the same quality as those located within reach of fibre. If we are going to "build on what we've already got" then priority needs to be allocated to telecommunications infrastructure in rural areas. Your use of the term "fixed-line" in Figure 38 means that you are mentally disounting fixed wireless from the list of telecommunications infrastructure options.

In your thinking, evidenced by the wording in the above quotation and in Figure 38, you need to include telecommunications infrastructure other than just fibre and mobile. The infrastructure needs of Māori communities (pp 43 and 44 of your draft) are relevant here as many marae are located in rural and remote areas.

Building, operating and maintaining telecommunications infrastructure relies on the availability of a highly skilled workforce, so we appreciate and agree with your statement in 3.4 that the "infrastructure workforce must grow".

In "3.5 Planning needs to respond to uncertainty" you focus on the uncertainty of your forecasting. Planning also needs to focus on the uncertainty posed by significant weather and geological events. For telecommunications this means providing communications links in diverse and robust ways. Your draft plan comes back to this subject in Part 5.4 on page 105 of the draft plan and Box 17 on page 106.

## 4. Set Up Infrastructure for Success

We strongly agree with your statement in 4.1 that:

> "The operating environment must enable infrastructure providers to invest in the right things and deliver those investments efficiently."

We also agree that:

> "This means ensuring that infrastructure providers have the funding they need; that they face oversight that makes them accountable to users;

> that they can coordinate with other parties where needed; and that they work within a stable and predictable policy environment . . .”

This is not the environment that many telecommunications providers currently find themselves operating in. Whilst government funds the expansion of fibre networks by LFCs, it does little to help provide rural and remote connectivity. Also, where non-LFCs have invested in fibre to connect end users, they are often overbuilt by LFCs, duplicating infrastructure and wasting investment dollars.

## 5. Drive Excellence from the Core

This section of the draft plan discusses central government investment. We note that many smaller regional and rural telecommunications providers have a good knowledge of potential small infrastructure investments, but have no means of leveraging central government investment. These small infrastructure investments would meet all the criteria for a good infrastructure project detailed in your Box 14.

## 6. Raise the bar on Choices

Table 7 in the draft plan contains a number of telecommunications and telecommunications related projects:

- The NZDF’s horizontal infrastructure plam,
- The New Zealand Underground Asset Register,
- Chorus Limited’s expanding fibre broadband coverage,
- Kordia Group’s telecommunications network resilience.

We agree with these projects.

## 7. Embed Good Practice

As noted earlier, in Table 38 you need to amend the telco wording to include fixed wireless as an option. Mobile operators will tell you that they can provide this, but they are just one option. There is much fixed wireless connectivity infrastructure that has nothing to do with mobile networks.

## 7.5 Telecommunications

You start 7.5 by saying:

> "The telecommunications sector includes fixed-line telecommunications services (both voice and data services, provided by fibre broadband and a legacy copper telecommunications network), mobile telecommunications services (both voice and data services) and other services like satellite broadband."

You have again omitted fixed wireless from your list of options.

Under 'Governance and oversight' you need to note the important role played by MBIE in radio spectrum allocation and management.

We agree with your 'key issues and opportunities' in 7.5.8:

- Rural telecommunications access,
- Governance and regulation, and
- Transparency and information.

## Fibre

As we noted earlier; "LFCs overbuild fibre owned by other entities. ISPANZ believes that this is an area of inefficiency and waste in our national infrastructure." In a submission to MBIE in June 2024 we stated:

> "Many ISPANZ members have deployed and are deploying their own fibre. They are doing this at their own cost, without access to government funding. They are entitled to make a fair return on their investment.
>
> Different members have different policies over who can access their fibre and on what terms.
>
> At present, as ISPANZ members' fibre cannot be determined to be a specified fibre area, their existing fibre networks are being overbuilt by the LFCs. This is a ridiculous waste of the nation's resources."

To avoid this unnecessary duplication it is necessary to re-visit both the definition of a 'specified fibre area' and common standards that should apply to all fibre deployments.

## Copper

Little need be said about copper as national infrastructure as it is being phased out. However, it is an example of how what was a critical piece of national infrsatructure just a few decades ago has now become irrelevant.

## Wireless

In 1.1.2 of the draft plan it states (in part):

> "The term 'infrastructure' includes the networks that provide our . . . internet . . . "

Having access to appropriate radio spectrum is an essential part of every telecommunications network that includes wireless either for backhaul or to connect end users. Radio spectrum allocation should be included in the National Infrastructure Plan.

As noted a number of times above, your terminology and your thinking exclude fixed wireless. This needs to be corrected.

## Ducting

In 7.5.3 you state:

> "Measured depreciation rates are high, reflecting the high rate of technological obsolescence in the sector. Legacy assets tend to be replaced with new technologies rather than renewed on a like for-like basis."

Depreciation rates for ducting, the laying of which is a large part of the cost of a fibre network, should be very low.

As it is so expensive to deploy, and takes up valuable underground real estate, ducting is a natural infrastructure monopoly, and one with a very long life. Consideration should be given to requiring all ducting that is subsidised by public funding to be required to be open access and be able to be used by all telecommunications service providers. Such a requirement should be retrospective.

## Exchanges

Exchanges are natural infrastructure monopolies. Who builds, owns and controls these should be part of national infrastructure planning.

## Peering

“Peering is a voluntary interconnection of administratively separate Internet networks for the purpose of exchanging traffic between the "down-stream" users of each network. Peering is settlement-free, also known as "bill-and-keep" or "sender keeps all", meaning that neither party pays the other in association with the exchange of traffic; instead, each derives and retains revenue from its own customers.”[1]

As noted earlier, current arrangements force some ISPs to buy connectivity to Australia or the USA in order to ‘peer’ with other New Zealand based ISPs. This is an inefficiency and an unnecessary expense. It drives excess use of national and international connectivity infrastructure. A much more effective use of our infrastructure would be to require networks to allow peering at exchanges that they control. The technical ability to peer should be included in national infrastructure requirements for exchanges.

## Ownership

As the focus of the draft National Infrastructure Plan is on the public sector, it misses much end-customer connectivity. As was noted earlier, careful consultation and planning will be required to ensure that the right mix of public and private initiatives produces the optimal infrastructure outcome for the

[1] https://en.wikipedia.org/wiki/Peering

country. The example of over-building fibre networks is a prime example of this.

We noted earlier that; “right-sizing new investments means that the plan must account for private sector telecommunications investment”. At present, smaller network operators have difficulty accessing capital for connecting hard to reach customers. Some even mortgage their own homes to build this vital part of national infrastructure. Ways need to be found for smaller private sector operators to access the capital needed for extending New Zealand’s national infrastructure.

## Conclusions

Whilst government funds the expansion of fibre networks by LFCs, it does little to help provide rural and remote connectivity infrastructure. Ways need to be found for smaller private sector operators to access the capital needed for extending New Zealand’s national infrastructure. Small, local infrastructure investments are likely to meet all the criteria for a good infrastructure project detailed in your Box 14.

There are many parts of the country that fibre will never reach. Priority needs to be allocated to telecommunications infrastructure in rural areas. Throughout the draft plan when telecommuications infrastructure is discussed, the term ‘fixed wireless’ needs to be added to ‘fixed-line and mobile’.

Building, operating and maintaining telecommunications infrastructure relies on the availability of a highly skilled workforce, so we agree that the infrastructure workforce must grow.

Both to cater for uncertainty and to protect against natural events telecommunications links must be provided in diverse and robust ways.

Where non-LFCs have invested in fibre to connect end users, they are often overbuilt by LFCs, duplicating infrastructure and wasting investment dollars. To avoid this unnecessary duplication it is necessary to re-visit both the definition of a 'specified fibre area' and common standards that should apply to all fibre deployments.

Under 'Governance and oversight' you need to note the important role played by MBIE in radio spectrum allocation and management. Radio spectrum allocation should be included in the National Infrastructure Plan.

As it is so expensive to deploy, and takes up valuable underground real estate, ducting is a natural infrastructure monopoly, and one with a very long life. Consideration should be given to requiring all ducting that is subsidised by public funding to be required to be open access and be able to be used by all telecommunications service providers. Such a requirement should be retrospective.

The building, ownship and control of exchanges should be part of national infrastructure planning.

Current arrangements force some ISPs to buy connectivity to Australia or the USA in order to 'peer' with other New Zealand based ISPs. This is an inefficiency and an unnecessary expense. The technical ability to peer should be included in national infrastructure requirements for exchanges.

END