

Specified Points of Interconnection (SPOIs)

Request to prescribe new SPOIs

C H ● R U S

1. Section 231 of the Telecommunications Act 2001 provides that the Commission can prescribe new or amended points of interconnection (**POIs**). A POI that has been prescribed under section 231 is a specified point of interconnection (**SPOI**).
2. On 19 December 2019, the Commission first prescribed POIs, by section 231 Notice.¹ On 16 February 2023, the Commission amended the Initial Notice and prescribed nine additional SPOIs.² At the same time, the Commission also set out its framework for how it will exercise its ongoing role to prescribe SPOIs (the **Framework**).³
3. This is a change request under the Commission's Framework; Chorus requests the Section 231 Notice be updated to add the three additional POIs described below.
4. For the reasons described below, we consider the Commission should approve this change request. In particular, the cost of establishing the POIs is minimal, our customers are generally supportive of adding these POIs and we are only adding new POIs, not proposing to remove any POIs: Overall we are making more handover options available to customers and not requiring any customers to move to a different POI.

Request to prescribe additional POIs

5. Chorus is proposing to add three new POIs by:
 - 5.1. upgrading two existing Chorus exchanges (Gleniti in Timaru and Spotswood in New Plymouth) to POIs. These exchanges are currently access only, i.e. they collect uplinks from OLTs and pass these on to aggregation sites. We had separately decided to upgrade these exchanges to aggregation sites. This work requires installation of layer 2 aggregation switches to facilitate traffic from access sites being aggregated together. Given this upgrade work, it makes sense to also designate these sites as POIs. No additional equipment is needed to convert these exchanges from an aggregation site to a POI;⁴ and
 - 5.2. establishing a new POI at Claudelands, Hamilton. This new POI will operate within an existing Chorus exchange within another LFC area, which is used by that LFC (Tuatahi First Fibre (**TFF**)) as a POI now.⁵ We intend to create this as a Chorus POI by using what is termed satellite technology to link to our existing equipment in the exchange as a cost-effective way of providing handover functions at this site.
6. We request an amendment to the Section 231 Notice to specify these additional POIs, as follows:

POI Identifier	Name	UFB geographic area (POI area)	Region	
CLE	Claudelands	Hamilton, Cambridge and Te Awamutu	Waikato	

¹ See Commerce Commission *Notice of points of interconnection under section 231 of the Telecommunications Act 2001* (19 December 2019) (**Initial Notice**).

² See Commerce Commission *Notice of points of interconnection under section 231 of the Telecommunications Act 2001* (16 February 2023) (**Section 231 Notice**).

³ Commerce Commission *Specified Points of Interconnection – Framework for exercising our powers under s 231 of the Telecommunications Act 2001* (16 February 2023) (**Framework**).

⁴ This does not hold true for all exchanges. These are new exchanges with technology that has the capacity and lifespan to handle handovers.

⁵ TFF's Hamilton East POI is located within our existing exchange at Claudelands.

GLT	Gleniti	Timaru	Canterbury	[REDACTED]
SWO	Spotswood	New Plymouth and Hawera	Taranaki	[REDACTED]

Rationale for additional POIs

7. To support this request for an updated Section 231 Notice and provide context to the Commission, we have set out below the rationale for Chorus upgrading its existing exchanges to support handovers and designating these as POIs. The decisions around additional POIs are largely driven by network architecture requirements and customer demand, as well as ensuring that Chorus is meeting its ongoing obligations under the Network Infrastructure Project Agreement (**NIPA**).⁶ Specifically, Chorus intends to upgrade/add these Exchanges for the reasons set out below.
8. The Claudelands POI is primarily being added to address immediate customer demand. RSPs want a handover at this exchange as there is also a TFF handover POI in Claudelands.⁷ Co-locating the handovers for different LFCs in a single exchange makes it easier (and more efficient) for RSPs to pick up traffic at the same location,⁸ compared to having TFF and Chorus POIs in different locations. In addition, this will assist in meeting future customer demand for backhaul services in the area.
9. As explained above, the primary driver for designating Gleniti and Spotswood as POIs is to maximise the impact of the current investment of turning these exchanges into aggregation points. By designating these new aggregation points as POIs at no extra cost, we are providing RSPs with more options now, positioning ourselves to meet future demand. Establishing Gleniti and Spotswood as POIs within Timaru and New Plymouth respectively also lessens our overall reliance on third party sites, as we do not currently have a Chorus exchange functioning as a POI in either of those locations (our POIs are located within Spark exchanges within the relevant POI areas). While we have no plans to withdraw from those exchanges, and in fact have recently committed to maintaining capacity in Spark exchanges, our long-term strategy remains to minimise reliance on third party sites over the longer term and provide for growth primarily at Chorus exchanges.⁹

Consistency with past reasoning

10. The planning and demand rationales for these three new POIs are consistent with our rationale in developing our previous POIs, including those specified by CIP under the previous framework and the nine POIs recognised by the Commission as SPOIs in February 2023.¹⁰ We noted in our 2022 application to have the nine POIs recognised that our decisions about new POIs have largely been driven by network architecture requirements

⁶ While our obligations under the UFB1 NIPA (Network Infrastructure Project Agreement, Telecom Corporation of New Zealand Limited and Crown Fibre Holdings Limited, 24 May 2011) no longer apply, we have some residual obligations under the UFB2 NIPA (Network Infrastructure Project Agreement, Chorus Limited and Crown Fibre Holdings Limited, 26 January 2017, Schedule 3, Annexure 1, clause 2.5).

⁷ As above, this is TFF's Hamilton East POI.

⁸ Our POI will be added to a building that we own in Claudelands, where TFF currently leases space from us. So, the TFF and Chorus POIs would both operate from the same building.

⁹ This is detailed further in Appendix B which sets out our response to the Commission's questions to us in relation to handover capacity.

¹⁰ See letter from Chorus to Rachel Coyle, Head of Telecommunications at the Commission *Specified points of interconnection – request to update s 231 notice* (19 May 2022) as published on the Commission's website.

and customer demand. These same factors have driven our current decision to upgrade these sites to support handovers and designate them as SPOIs.

Counterarguments

11. We do not consider that there are any persuasive counter-arguments that would result in a different proposal.
12. As explained above, for Gleniti and Spotswood, we are upgrading these exchanges from access sites to aggregation points to provide capacity increases for services on the relevant exchanges. A result of that is the exchanges can support handovers. Therefore, the options are either to optimise this investment in aggregation points to also provide handover capability, or not to do so. In that scenario it makes sense to add the additional services for the same capital investment.
13. Claudelands is being added to meet customer demand and using a low-cost technology solution. As such, we do not think there are any persuasive counterarguments to creating this POI.
14. In terms of the Commission's framework question of whether other alternatives have been considered, we are confident that the three sites selected provide the most prudent options for new POIs. However, upgrading these sites does not preclude us from upgrading other sites in future should customer demand and/or network planning support this.

Requirements under the Act

15. The considerations for evaluating a change request set out in the Commission's framework appear to be more relevant to a scenario where a regulated fibre service provider (**RFSP**) proposes to withdraw or change a SPOI or SPOIs, which requires RSPs to migrate to an alternative POI. These considerations do not fit as naturally for a request for the specification of new POIs where (as is currently being proposed) RSPs will not be required to migrate to an alternative POI. Conversely, RSPs are simply being provided more options for where they handover traffic. Despite our view that not all considerations are strictly relevant, we have addressed each below for completeness.
16. The prescription of the new SPOIs would meet the criteria and principles which the Commission's Framework has specified as follows:
 - 16.1. giving effect to the purpose in section 162;
 - 16.2. giving effect to the promotion of workable competition in the telecommunications market for the long-term benefit of end-users of telecommunication services;¹¹
 - 16.3. providing access to all end-users in the relevant candidate area, and) that all end-users in the POI area are accessible from each of the POIs; and
 - 16.4. meeting the wholesale backhaul providers principle, in that co-location and interconnection services will be available to alternative third-party providers of backhaul services at each of the SPOIs (i.e., a SPOI should be able to support at least two backhaul providers).¹²
17. Each of these criteria is discussed below.

¹¹ Section 166(2).

¹² The Framework at [91].

18. We note that the Commission recognised in its Framework it is not required to satisfy section 231(4) when prescribing new POs (as opposed to amending existing POIs). The Commission said “[w]e consider that section 231(4) only applies to amendments to SPOIs rather than prescribing additional POIs”.¹³

Purpose

19. Section 162 sets out the purpose of Part 6 of the Act:

- 162 **Purpose**
The purpose of this Part is to promote the long-term benefit of end-users in markets for FFLAS by promoting outcomes that are consistent with the outcomes produced in workably competitive markets so that RFSPs-
- (a) have incentives to innovate and invest, including replacement, upgraded and new assets; and
 - (b) have incentives to improve efficiency and supply FFLAS of a quality that reflects end-user demands; and
 - (c) allow end-users to share the benefits of efficiency gains in the supply of FFLAS, including through lower prices; and
 - (d) are limited in their ability to extract excessive profits.

20. The proposed POIs are consistent with this purpose statement. In particular:

- 20.1. We are continuing to invest in our network to ensure that we continue to have capacity available to provide high quality services to customers. Provided our investment is within our forecast expenditure, which is approved under our regulatory framework, we should not be unduly limited in how we utilise our capex in the way we consider is most efficient.
- 20.2. The new POIs contribute to improving the efficient supply of FFLAs services (including handover and backhaul) reflecting end user demands and ensuring quality is not compromised.
- 20.3. Adding new POIs and thus providing additional options for RSPs to take services enables RSPs to share the benefits of efficiency gains without additional cost (noting that handovers will be priced at the existing price points for all handovers).
- 20.4. The proposal to construct new POIs has no impact on Chorus’s ability to extract excessive profits (which is in any case limited by the regulatory framework, to which FFLAS services from these POIs are subject).

Workable Competition

21. We consider that the overall impact of the establishment of new SPOIs (in addition to existing SPOIs) will have an overall positive, but relatively limited, impact on competition. RSPs will not be required to migrate existing traffic to these new POIs, and no existing POIs are being withdrawn. If anything, the establishment of these three new POIs has a positive impact on competition both in the relevant wholesale markets and on downstream retail markets as RSPs can better move their traffic to meet their own end customer needs.

¹³ The Framework at [69].

Access to End-users and capacity for wholesale providers.

22. We confirm that each of the additional POIs will provide access to all end-users in the relevant candidate area. This is a fundamental principle of our network planning, and all our POIs satisfy this criterion.
23. We also confirm that there will be capacity for wholesale providers at each of the exchanges where these POIs are situated. We build our exchanges with enough space for third parties to either run cables to the entry point (through our TPAD service) or to set up equipment in our exchanges. At this stage it is not clear which wholesale providers would want to use our exchanges, and this is not something we can predict or control. However, the facilities are available if they choose to do so.

Costs, Benefits and Risks of the Proposal

24. Chorus has considered the benefits, costs and risks associated with its proposal, as set out below.

Benefits***General benefits of POIs***

25. There are benefits from creating new POIs generally that apply to these three POIs, including allowing for more efficient routing of RSP traffic, accommodating colocation growth (which is primarily required at POI sites) and enhancing available handover options. New POIs also enable more diversity options for backhaul around the country through RSPs being able to take advantage of POI-to-POI backhaul products that Chorus offers, which creates more (and more cost-effective) paths and diversity options. These same products would not be available at these exchanges if the site was not a POI.
26. Additional POIs also enable us to optimise our network for forecast and unpredictable changes in user behaviour that drive increasing and different demand for bandwidth that in turn require future growth of network capacity. There are two different but related capacity thresholds we plan to meet:
- 26.1. Our obligations under the UFB NIPA 1 required that each POI in a candidate area must support no more than 50,000 Layer 2 end users.¹⁴ This means that where a candidate area has more than 50,000 end users, then at least two POIs must be supplied in that candidate area. While the UFB NIPA 1 has expired, we consider that it provides a useful framework for planning and indicates the minimum number of POIs we should have in given locations.
- 26.2. We have network resilience limits of 100,000 customers at any one POI to protect the POI from overload, reduce network congestion and enhance network stability.¹⁵
- [REDACTED]
- [REDACTED]
- [REDACTED] So, in areas with multiple POIs, while a POI is required to be able to service all end-users, in practice we use multiple POIs to enable service load to be spread to ensure the quality of the service.

¹⁴ Network Infrastructure Project Agreement, Telecom Corporation of New Zealand Limited and Crown Fibre Holdings Limited, 24 May 2011, Schedule 3 Annexure 2 at [26] to [28].

¹⁵ We have exceeded this limit in some situations previously (e.g. demand for specific handovers due to usage changes due to Covid) but this should be regarded as by exception.

Providing handover connections at POIs is a balance between meeting customer demand at customer-preferred locations with maintaining network resiliency, stability and management to deliver a quality service – while investing efficiently.

27. While none of the proposed POIs are being added due to a specific capacity constraint, generally providing more POIs reduces capacity constraints arising in future. We need to plan for future growth and we are enabling more growth from Chorus sites which reduces reliance on non-Chorus sites where we have less control over the asset infrastructure.
28. There can also be a resilience value in having additional POIs in a POI area as a back-up. Generally, this is only available where we have offered and RSPs have selected geodiversity handover link services. However, in a disaster, where one POI is damaged, a second POI in a POI area can be utilised to provide services. How effective this would be would likely depend on the speed at which RSPs could move their equipment to an alternative exchange.

Specific benefits of these three POIs

29. These network planning and resilience considerations are common to POIs generally. There are also some specific benefits for the three POIs under consideration, due to their particular architecture and location, as explained below.
30. Claudelands will create greater efficiencies for customers which utilise both Chorus and TFF (the LFC in the POI area) to transport traffic. This is an innovative arrangement where TFF and Chorus will each offer handovers from the same exchange. We believe this model will be attractive for RSPs operating in Chorus areas that are contingent to another LFC area (for example, where TFF won the contract for a town or city, but Chorus later won the surrounding towns). To reach all customers in the POI area, the RSP would need both Chorus and TFF POIs. Small to medium sized RSPs, in particular, would benefit from the reduced costs and convenience of having these POIs in the same location.
31. As explained above, Gleniti and Spotswood are “opportunistic” POIs in that the existing exchange sites are being upgraded to aggregation points anyway, so it makes sense to piggyback on this investment to turn these into POIs [REDACTED] While neither are under immediate capacity constraints, this decision positions Chorus to provide for future capacity growth. Importantly, it does so [REDACTED] with the advantage of enabling handovers in the POI area at a Chorus exchange site. All other things being equal, providing for growth at Chorus sites is preferred to third party sites, not least because it allows us to have more control over required technical upgrades to meet increasing technological demand.

Costs

Chorus Costs

32. As explained above, Gleniti and Spotswood are existing exchanges that provide access services, and we are planning to upgrade these to aggregation points at a capital cost of [REDACTED] per site. The decision to optimise the use of these sites by designating them as POIs [REDACTED]
[REDACTED]
[REDACTED]
33. Claudelands will require specific capex to create a handover point. As explained above, we can use equipment which is more cost-effective than the technology we normally deploy,

and we are placing it inside an existing exchange. Because of the way in which we are setting this up the costs are expected to be low, we estimate the total capex to be [REDACTED]

34. Our expenditure, both POI specific for Claudelands and the aggregation upgrade for Gleniti and Spotswood, is included in our forecasts for FY25 (with the expectation this will be spent in first half year FY25 i.e. between July-Dec 2024, to meet our target of these POIs being available by the end of 2024). The forecasts reflect the cost which are primarily equipment and installation (labour) costs based on estimates from our suppliers and previous experience.
35. This proposed expenditure is minor, and we consider reasonable given the associated benefits. The proposed expenditure is:
- 35.1. not major capex due to the extent of the project. We are not proposing to build new exchanges, rather we propose to upgrade the equipment in existing exchanges to enable them to act as handovers; and
- 35.2. the equipment expenditure is not dedicated to the establishment of POIs, but instead is allocated to equipment that serves various functions.

Customer Costs

36. We do not expect customers to incur any additional direct costs. Any upfront expenditure is minor and will be incurred by Chorus. The expenditure is already included in our forecasts and largely already required for upgrading of our technology. These costs are a very minor part of our overall planned capex spend, and largely linked to upgrades that would have taken place in any event, therefore, we do not envisage them having an impact on RSP costs for handover services or on ultimate end-user costs.
37. Customers who choose to move equipment to the new POIs may face some costs associated with moving their equipment,¹⁶ but this is always a feature of utilising a new location (and can be minimised where customers can align utilisation of the new POI to end-of-life equipment replacement - RSP equipment at a POI generally has a five-to-seven-year life cycle). However, given we are not removing any SPOIs, no customers will be required to move. Where a customer requires further capacity at an existing POI, it will have the option to purchase more capacity at that POI rather than needing to move to a new POI.

Risks

38. The key risk here is faced by Chorus, that having spent time, effort and (albeit minor) expenditure, we designate a POI that there is not demand for. However, as already stated, the costs are minor and largely linked to equipment upgrades that we would have undertaken in any event and this is an ordinary part of our network planning. Therefore, we consider the risk level is low.
39. Between 2019 and 2022, we added nine POIs which the Commission added to the Section 231 Notice on 16 February 2023. There are now nearly 50,000 fibre connections across these nine POIs, which while small, does support our overall decision to invest in these POIs (noting that some of our expected demand did not materialise due to RSP reluctance

¹⁶ In addition to the cost of the handover and associated links where an RSP is taking an additional site. If an RSP is moving from one site to a new site we expect these to be largely the same.

to move from Spark sites and our consequent decision to retain these sites). As context, demand for handovers is not evenly spread, which is to be expected due to population and end user demand clustering around certain sites, so POIs in some areas will always likely have lower demand than others.

Impact to third parties

40. As we are proposing to specify additional POIs, and not removing any POI, there is no negative impact to third parties. The result of upgrading the equipment at these sites and, therefore, creating POIs will be that RSPs will have more choice, flexibility and handover capacity. We note that the relevant counterfactual for considering the impact is the status quo, not expansion at other exchanges.

Industry evaluation

41. As part of our general approach to provide transparency on our proposals and to consider RSP views, we signalled that we were exploring new POIs in our Product Forum paper in July 2023 and our 26 July 2023 update to the industry.¹⁷ We then undertook consultation on the three additional POIs specified in this change request on our RSP website from 9 to 25 August.¹⁸ This consultation identified the POIs to be added, the rationale for adding these and asked RSPs a series of questions about potential opportunities for service growth and efficiency stemming from these additional POIs.
42. Respondents were supportive of creating more POIs in general with all but one specifically supporting the creation of these three specific POI. One respondent said it was unsure if the specific POI would be useful at this stage.¹⁹ Explanations of this included that more diversity is always a plus and POI locations are an important factor when deciding on co-location. And, in relation to the specific locations, Claudelands was a key location because of its TFF handover point. Spotswood was also a good location as it would help RSPs to reduce their need for ICABS.
43. We have also signalled to customers that we would submit a Change Request in relation to these POI and noted this at the Product Forum, where we sought endorsement for the three new additional POIs.²⁰ The Product Forum has endorsed Chorus taking the next steps in formalising the three proposed POIs.²¹
44. Given that consultation with the industry shows support for the three additional POIs and there are limited impacts arising from the change, we consider it is not necessary for the Commission to undertake its own consultation. In its Framework, the Commission said it *"will tailor the extent of our consultation based on the extent of industry consultation which has already taken place during the industry-led process and the scope of the proposed changes to the notice"*.²² Commission consultation should only be undertaken in addition to industry consultation where the industry consultation was inadequate or there are

¹⁷ UFB Product Forum Paper "Update on UFB Handovers" dated 13 July 2023 and update to the industry on our service provider website on 26 July 2023: <https://sp.chorus.co.nz/product-update/update-our-revised-ufb-handover-strategy>.

¹⁸ See the consultation page on our service provider website:

<https://sp.chorus.co.nz/consultation/consultation-opens-new-points-interconnection-pois>.

¹⁹ Our consultation outcomes were published on our service provided website on 6 September 2023:

<https://sp.chorus.co.nz/product-update/consultation-outcomes-new-points-interconnect-pois>.

²⁰ UFB Product Forum Paper "Chorus Additional POI Consultation" dated 14 September 2023.

²¹ UFB Product Forum Meeting Minutes (14 September 2023). The Product Forum endorsement was subject to confirmation from Spark. That confirmation was provided in an email from Chontelle Logan (Spark) to Alan Mitford-Taylor (Chorus) "RE: POI endorsement" dated 18 September 2023.

²² The Framework at [58.2].

dissenting views that need to be further investigated. Neither of those situations exists here. A Commission led consultation would add time/delay which is undesirable (for both Chorus and RSPs). Furthermore, the proposed changes sought in this request are minor in terms of competition impact. Accordingly, we do not consider that it is necessary for the Commission to undertake its own consultation process which would essentially replicate the industry process that has already taken place.

Timeline and process for implementation

45. We have started the internal process to provision the above exchanges as POIs, and we are undertaking the Commission's approval process to have them prescribed as SPOIs simultaneously. We considered whether to seek this approval prior to actioning the internal processes for provisioning the POIs to provide us with certainty as to the boundary of the regulated FFLAS network. However, seeking approval prior to actioning the internal process would effectively add months to the timeline which would be an unacceptable delay that would negatively impact RSPs and ultimately end-users. This is particularly the case for Claudelands where capital investment is required to create the POI and we have immediate demand from RSPs for handover services at this site. Delay could also affect Gleniti and Spotswood, as any change to the status of an exchange into a POI necessitates certain internal provisioning and ordering systems to make the sites selectable for Handover Link requests. The change is an enabler for other future workstreams (including aspects of our REN to FAN transition). We are therefore submitting this change request alongside our internal work to establish these POIs, with the intention that (if approved), the specification takes effect on the date the relevant POI becomes available for handovers (likely to be late 2024).

Conclusion

46. In conclusion, we request that the Commission prescribe these three POIs as SPOIs and update the Section 231 Notice accordingly.

Appendix A – Response to request for information

On 3 April 2023, the Commission requested that we answer the below questions in relation to SPOIs and handover capacity on a voluntary basis.²³ This request referenced our communication to the Product Forum on 9 March 2023 regarding an update on our intentions to grandfather Spark exchanges, and 1Gbps handovers, as well as concerns about handover capacity, particularly at Spark exchanges.²⁴

We requested an extension in our substantive response, as we were re-considering our previously announced plan to withdraw from Spark exchanges, and committed to respond fully once that plan had been developed. As we have now communicated to the industry, our plan has changed and we are now committed to maintaining (and in some cases growing) capacity at Spark sites for the immediate/medium term, so some of the questions below may be less relevant, and/or addressed in the body of this Change Request.²⁵ We are also no longer intending to grandfather or withdraw 1G handovers, although we expect that demand will primarily be for 10G and 100G handovers going forward. However, for completeness and in order to provide the Commission with a full picture, we have responded as best as possible in a context where that withdrawal is no longer proposed.

Q1 - Please list the SPOIs where you are offering 10Gbps or 100Gbps FFLAS handover connections.

A list of SPOIs where we are offering 10Gbps or 100Gbps is provided in our Handover site capacity report on our service provider website: <https://sp.chorus.co.nz/report/handover-site-capacity-report>. A copy of this report is attached as **Appendix B**.

Q2 – Please list the SPOIs where you are not offering 10Gbps or 100Gbps handover connections.

As above, the handover site capacity report at **Appendix B** shows where 100 Gbps handovers are not available.

Q2(a) – Can you please explain why you are not offering these handover connections as these SPOIs?

100Gbps

The available capacity in some sites is limited by the technology deployed at those sites and/or the number of services already present at the site. This is particularly relevant to (although not exclusive to) Spark sites as the technology in most Spark sites is older and of lower capacity than that deployed more recently in Chorus Hub sites. This means that, for example, 100Gbps is only currently available in Chorus Hub sites where new chassis with increased capacity has already been installed. Popular POI sites like Mayoral Drive or Mount Eden will likely always see limitations on providing handovers due to the limitation of serving 100,000 connections from a single POI irrespective of the investment at the site. However, we have committed to investing in technology to support 100Gbps handovers at four Spark sites.²⁶

²³ Email from David Oxnam (Commerce Commission) to Sally Ma (Chorus) "Availability of FFLAS Handover Connections at SPOI locations" dated 3 April 2023.

²⁴ UFB Product Forum paper "Proposed Chorus Grandfathering of UFB handovers at Spark sites Update (Action Point: 333)" dated 9 March 2023.

²⁵ We provided a customer update on our revised UFB Handover strategy on 26 July 2023, available here: <https://sp.chorus.co.nz/product-update/update-our-revised-ufb-handover-strategy>.

²⁶ The four Spark sites we are upgrading are: Palmerston North and Levin (both completed), Mayoral Drive Exchange (planned for next calendar year) and Greymouth (expected to occur in FY25).

It would be inefficient for Chorus (and therefore ultimately costly for RSPs and end-users) for us to duplicate the investments we have made in various sites to provide 100Gbps handover connections at every POI. In addition, if an RSP requires additional capacity at a site where only 10Gbps capacity is available, they can purchase additional blocks of 10Gbps capacity.

10Gbps

We are currently facing capacity constraints in a number of sites for 10Gbps handovers, so although they are “available” there is insufficient current capacity to meet demand. We have decided to invest in technology to increase 10Gbps capacity at a number of sites, including Spark sites, and as this additional technology is deployed, additional capacity will become available. We signalled to RSPs that we would update our website as to “capacity available” as well as “service available” accordingly, and our handover capacity site report as included as **Appendix B** now reflects this.

Q2(b) – Have you ever or do you have existing FFLAS 10Gbps or 100Gbps handover connections at these SPOIs?

All our sites are designed to have at least 1Gbps and 10Gbps service availability. As described above, we are currently facing capacity constraints in a number of sites for 10Gbps handovers, so although they are “available” there is insufficient current capacity to meet demand.

100Gbps sites require upgraded technology. We are not currently aware of any 100Gbps capable sites that do not have 100Gbps capacity. We note that we are upgrading all Spark sites to provide more 10Gbps capacity, however, at this stage, we do not anticipate that these will have 100Gbps capacity, except for four Spark sites where we do not have an alternative Chorus site to provide 100Gbps capacity. These four sites are being upgraded to provide 100Gbps capacity.

Q3 – please share with us your plans for all FFLAS handover connections at a SPOI, your desire to remove a SPOI and how you will communicate and consult on these plans?

We currently have no plans to withdraw handover services at a SPOI or to remove any SPOI or to withdraw 1Gbps handovers.

Q3(a) – what consultation has taken place with access seekers to ensure an equitable access and competitively neutral migration to an alternative SPOI?

As noted above, we have no plans to withdraw from any existing SPOIs and so no migration is required.

Previous plan to withdraw handovers at Spark exchanges

As the Commission is aware, in 2021, we announced to the industry that we intended to withdraw handovers from Spark exchanges.²⁷ At that time, Chorus offered handovers at 30 Chorus sites and 18 Spark sites. This proposal was spurred by: various challenges at Spark sites (including power); the technology at these sites coming to the end of its life; and the adoption of our strategy of focusing on providing for growth at Chorus sites. However, while we have had some success with larger RSPs utilising 100Gbps handovers at Chorus hubs, informal feedback from the industry was not supportive of withdrawal, and many RSPs indicated they were reluctant to move, partly due to equipment invested.

²⁷ UFB Product Forum Paper “Additional Chorus UFB Handover Points” dated 11 March 2021 and UFB Product Forum Paper “Proposed Grandfathering of UFB Handovers at Spark sites” dated 12 August 2021. The latter paper also referred to the proposed grandfathering of 1Gbps handovers.

In addition, since 2021, we have adopted new ESAT capability which increases our ability to offer handover capacity at Spark sites at a lower costs where substantive investment had already been made in Chorus alternative sites, (effectively by “hanging” off technology at those nearby Chorus sites, thus avoiding the need for additional expensive stand-alone equipment at non-hub sites).

Current plan is to maintain and invest at existing Spark sites to increase handover capacity

After considering the feedback on our proposal to withdraw handovers from Spark exchanges, and investigating our options to deal with capacity issues, we decided not to proceed with this withdrawal. We initially signalled a review of our 2021 proposal in March 2023, and informed RSPs at the Product Forum on 13 July 2023 of our decision.²⁸ We acknowledged that there were existing capacity constraints at some exchanges (in that handover services are available at those sites but we are not always able to fulfil specific requests), and communicated our plan to at least maintain our existing capacity at Spark sites, and in four cases invest in Spark sites to provide 100Gbps handovers. This involves installing new equipment to replace end of life equipment, however, the scale and capacity of equipment will vary from site to site, meaning that specific features, such as geodiversity or 100Gbps capacity may not be available in all sites. Our plan is for 100Gbps capability to be available in all POI areas in future in at least one POI site, phased in over several years based on demand and other drivers.

RSP feedback (including informal feedback since our initial Spark exchange proposal) has generally indicated that it is important to the industry that we support sites that allow easy connectivity with other services, and these are often third-party sites. As a result, we will continue to explore options for service of third party sites in future while retaining our focus on facilitating growth at Chorus hub sites where we have already made significant equipment investments.

Consultation on proposed new POIs

At the time of the update on Spark sites we signalled our intention to facilitate growth at our own hub sites and to investigate the feasibility of adding POIs at Claudelands, Spotswood and Gleniti.²⁹

Once we had determined internally that adding POIs at Claudelands, Spotswood and Gleniti would be feasible if customers supported it, we undertook consultation on these proposed new POIs as detailed in the body of this Change Request at paragraphs 41 to 44. As noted, all responses were supportive of creating more POIs in general.³⁰ We have also received Product Forum endorsement for all three of the proposed sites as detailed in the body of the Change request at paragraph 43.

We note that while we try to accommodate RSP demand as much as possible, it can be difficult to predict this in advance. We have sought forecasts of handover demand from RSPs to support us making prudent and efficient investment decisions as to where to invest.

In addition, even where RSPs’ preferred locations are known, there can be a tension between what is most desirable for each individual RSP and what constitutes prudent investment (as

²⁸ UFB Product Forum Paper “Update on UFB Handovers” dated 13 July 2023.

²⁹ UFB Product Forum Paper “Update on UFB Handovers” dated 13 July 2023.

³⁰ Our consultation outcomes were published on our service provided website on 6 September 2023: <https://sp.chorus.co.nz/product-update/consultation-outcomes-new-points-interconnect-pois>.

required by our regulatory framework and asset management plan). Inevitably, some decisions we make will not accommodate every RSP's specific needs.

Q4 – How do you consider access seekers can maintain effective access to all end users in a POI Area from these SPOIs if FFLAS 10Gbps or 100Gbps handover connections are not available?

Chorus network and systems provide maximum flexibility for RSPs as any connection within a POI area can be mapped to any handover at any POI within the POI area. Chorus does not mandate limits on the number of subscribers per handover link for RSPs.

At the same time, we do have constraints on network capacity and the need to ensure network and service availability continue to meet customer expectations and the Mandatory Dimensions of the quality standards set by the Commission.

Balancing the flexibility with these constraints means Chorus may from time to time need to limit the supply of new handover ports at a POI to avoid exceeding any capacity limits.

In POI areas where there is more than one POI, if one POI is capacity-constrained then access seekers can maintain access to all end-users in the POI area either by handing over traffic at another POI at a site where they have equipment, or by utilising a transport product (such as ICABS) to haul traffic from the POI where they do not have a handover to a POI where they have a handover. In areas with a single POI, we strive to always provide capacity for growth at that POI (or plan to build an additional POI).

In POI areas with multiple POIs, it is not always feasible for us to provide access to all end users in a POI Area through one specific RSP-preferred POI site if every RSP wants to handover traffic for all its end users at the same location. This could potentially drive too much traffic to a single POI, especially for large POI areas such as Auckland. As noted in the body of our Change Request, we have network resilience limits which may mean that not every RSP can use its preferred POI for every connection, as it would result in overload. Providing handover connections at POIs is a balance between meeting customer demand at customer-preferred locations with maintaining network resiliency stability and management to deliver a quality service – while investing efficiently.

Appendix B – Chorus' handover capacity



UFB Handover site
capacity report - July