# Report pursuant to s42A Resource Management Act 1991

| | |
|---|---|
| **In the matter of:** | A Notice of Requirement to construct and operate a new intermodal rail and freight hub on land between Palmerston North and Bunnythorpe |
| **And:** | A hearing by Palmerston North City Council pursuant to s100A |
| **Requiring Authority:** | KiwiRail Holdings Ltd |
| **Hearing date:** | 9 August 2021 |

S42A Technical Evidence: Economic impacts

By: Shane Vuletich

# 1 Executive Summary

1. I have been asked on behalf of the determining authority, Palmerston North City Council, to assess the elements of the NoR relating to the economic impacts of the KiwiRail Freight Hub ("Freight Hub"). The key findings from my assessment are summarised below.

## 1.1 Strategic context

2. The Freight Hub is a major economic development opportunity for the Manawatu-Whanganui region. It forms part of a broader regional strategy to develop a highly efficient, multi-modal freight and distribution precinct in the North East Industrial Zone (NEIZ) area. The objective is to strengthen the Manawatu's role as a major distribution centre within the national freight network, leading to investment and employment growth in the sector.

3. The envisioned precinct, known as the Central NZ Distribution Hub ("Distribution Hub"), encompasses the NEIZ, Palmerston North Airport and the proposed Freight Hub, with connections to the future Regional Freight Ring Road. To achieve the desired level of efficiency, it is critical that the Freight Hub integrates with the other elements of the Distribution Hub in a way that enables freight to move seamlessly between them. This is important context within which to view the potential economic impacts of the Freight Hub.

## 1.2 Economic impacts of the Freight Hub

4. The main economic benefits and costs of the Freight Hub identified by KiwiRail are summarised below, together with my comments on the robustness of the analysis.

5. I generally agree with KiwiRail's assertion that the Freight Hub is likely to generate significant economic benefits for the region. However, I have concerns with some of the methodologies and assumptions that underpin KiwiRail's quantitative analysis. In addition, KiwiRail has not quantified two important categories of economic effects: long-term investment impacts and impacts on local traffic conditions.

6. Some of the issues I have identified are likely to result in expected benefits being overstated by KiwiRail, while others are likely to have the opposite effect. Without conducting an independent analysis (which is outside the scope of my evidence), I am not able to determine the net effect of these issues on the level of expected benefits.

### 1.2.1 Transport cost reduction and mode shift benefits

7. According to KiwiRail, the main economic drivers for the Freight Hub are (a) increased container capacity and (b) the ability to handle longer trains than would be possible at the existing rail yard. KiwiRail asserts that these capabilities will give rise to the following benefits:

    a. **transport cost reductions:** reduced freight transport costs for Freight Hub users resulting from the ability to move expected growth in freight demand by rail instead of by road and the use of longer, more efficient trains; and

    b. **mode shift benefits:** improved environmental, safety and congestion outcomes for wider New Zealand resulting from an increase in the mode share of rail for moving freight inter-regionally.

8. KiwiRail estimates that the Freight Hub will give rise to total transport cost reduction and mode shift benefits over a 60-year evaluation period of around $1.1b in absolute terms, or $376m in present value terms. KiwiRail expects approximately 20% of these benefits to accrue to rail users based in Palmerston North, 40% to rail users outside the region, and 20% to the wider country.

9. From a conceptual perspective, I consider KiwiRail's methods for estimating the economic benefits outlined above to be reasonable. However, I have identified the following issues in relation to some of the underlying assumptions:

    a. there appears to be uncertainty regarding whether and when the network enhancements required to enable the use of longer trains in New Zealand will be completed;

    b. the economic benefits of longer trains appear to have been modelled early when compared with KiwiRail's statements regarding the likely timing of their introduction;

    c. the regional population projections used to inform KiwiRail's estimates of future freight demand are low compared with the most recent projections available from Statistics NZ;

    d. 100% of estimated transport cost savings relating to freight traffic originating or terminating in Palmerston North have been allocated to Palmerston North-based rail users, instead of being split between shippers and recipients at both ends of the route (or retained by KiwiRail); and

e. Potential benefits relating to increased freight handling efficiencies, over and above the benefits outlined above, are identified by KiwiRail but not modelled.

10. I consider that the early reporting of longer train benefits and over-allocation of transport cost savings to Palmerston North users would have resulted in an overstatement of expected benefits to the region, whereas the use of lower population growth assumptions and omission of freight handling efficiencies would have resulted in an understatement of expected benefits. The net effect of these depends on which effect is larger.

11. These issues would benefit from further clarity from KiwiRail.

### 1.2.2 Investment benefits

12. KiwiRail asserts that the Freight Hub is likely to generate significant new investment and employment in the Manawatu-Whanganui region. It states that new investment would be expected to occur in connection with both the construction phase of the project and the longer-term operations of the Freight Hub.

13. KiwiRail uses an approach known as Economic Impact Analysis (EIA) to estimate that spending with local firms during the construction phase would be likely to increase regional GDP by around $490m. KiwiRail does not attempt to quantify the longer-term investment benefits, stating that it is difficult to do so with any accuracy.

14. I agree that construction of the Freight Hub is likely to provide income for a significant number of local businesses. However, I do not consider the estimated GDP impacts to be an appropriate measure of construction benefits. This is because in my experience EIA tends to overstate expected benefits relative to social cost-benefit analysis (CBA), which is the preferred methodology used by central government agencies.[1] If a CBA framework were used in this case, I would expect it to generate estimated economic benefits from construction of around $150m-$200m before consideration of displacement effects.

15. In addition to construction impacts, I would expect there to be significant new investment by freight sector firms wishing to utilise the improved rail facilities once operational, and by businesses that provide supporting services to freight sector firms

[1] This happens because EIA does not consider the value (or opportunity cost) of the resources expended to deliver the increase in GDP and it assumes that there are sufficient idle resources in the economy to service all of the additional demand (i.e. there is no displacement of other activity), which is rarely the case.

and their staff. Although not quantified by KiwiRail, I consider that these longer-term investment impacts have the potential to be the biggest economic benefit of the Freight Hub for the region. I would expect them to be higher than construction impacts over the longer term.

### 1.2.3 The benefits of certainty

16. In my view, the level of investment benefits generated by the Freight Hub will depend in part on the degree of certainty that exists in the public domain regarding the delivery and timing of the project.

17. Given the economic benefits expected to accrue to users of the Freight Hub, rail-dependent businesses will be more likely to invest in the region if they are confident the project will go ahead. Likewise, evidence of investment intentions by rail-dependent firms would be expected to activate investment by businesses wishing to support these firms. A relatively short "lapse" period under the RMA would give potential investors the certainty they require to make these long-term investment decisions.

18. A long wait for certainty regarding KiwiRail's plans would risk delaying or deterring private investment, as well as public investments with a dependency on the Freight Hub such as the Ring Road. A long lapse period would also prolong the uncertainty facing owners of nearby residential properties, potentially impeding their ability to make long term investments in their properties or divest and move on.

19. Given the large number of businesses, public sector organisations and households whose future plans depend on the outcome of this project, I would recommend that the lapse period be kept as short as is reasonably possible.

### 1.2.4 Ability to redevelop the existing rail yard

20. KiwiRail identifies the release of the 50-ha existing rail yard site on Tremaine Avenue as a "moderate to high positive" economic impact of the project. KiwiRail estimates that the redeveloped site could support up to 250-500 workers contributing up to $50m per year to the GDP of the city.[2] KiwiRail also states that decommissioning the Tremaine Ave site would free up relatively valuable industrial land close to the CBD, helping to offset the impact of the project on the city's industrial land stocks.

[2] See Attachment 8a.

21. I agree that the existing site has the potential to support economically beneficial activities in an alternative use. Relocating the rail yard away from Tremaine Ave may also improve amenity values for residents living near the current site. As KiwiRail notes, however, little is known about what an alternative use for the land would be or what it would cost to redevelop the site. In addition, I am not aware of a formal commitment having been made by KiwiRail to release the site, e.g. through decommissioning or removal of its designation.

22. On balance, I consider that the release of the existing rail yard has the potential to generate economic and social benefits for the region, however, I do not think significant weight should be attached to these given the limited information available about the future of the site.

### 1.2.5 Impacts on local traffic conditions

23. It is generally understood that the development of the Freight Hub, as designed, would give rise to increased traffic volumes and changes to the local roading network. Section 42A traffic and transportation expert, Harriet Fraser, considers that these changes would be likely to result in a deterioration of traffic conditions for some road-users.

24. From my perspective, this has the potential to result in negative economic and social impacts on affected parties, including increased travel times and vehicle operating costs as well as reduced connectivity between residents and the things they value, e.g. healthcare, employment, education, friends and family, etc. It could also impose additional costs on the wider community if upgrades to the roading network are required (or brought forward) because of the activities of the Freight Hub.

25. The overall economic costs of these impacts have not been quantified by KiwiRail.

## 1.3 Integration with NEIZ and Ring Road

26. KiwiRail has an opportunity to maximise the economic benefits of the Freight Hub to the region by ensuring that it integrates effectively with other key regional freight infrastructure, including the NEIZ and the Ring Road.

27. For example, I understand that stakeholders in the Central NZ Distribution Hub would like the designation to provide for the ability to develop a dedicated freight corridor between the Freight Hub and NEIZ in future. This would remove the need for NEIZ trucks to navigate through heavy traffic volumes on the public road network to access the Freight Hub and would also enable the use of specialised rolling stock to

move freight efficiently between the two sites. These capabilities are especially important for NEIZ businesses that are heavy users of rail in their day-to-day operations, e.g. distribution centres.[3]

28. In addition, given the significant demand that the Freight Hub would place on the region's roading network, I believe it is critical that the Freight Hub aligns with and complements Waka Kotahi's planned Regional Freight Ring Road. This would require that the design of the Freight Hub supports an optimal alignment for the Ring Road, and the roading connections between the Freight Hub and Ring Road are as efficient as possible.

29. I understand that the designation does not provide for the possibility of a dedicated corridor between the Freight Hub and the NEIZ, and it is not clear from KiwiRail's roading plan how the Freight Hub would integrate with the Ring Road. Traffic and transportation expert, Harriet Fraser, highlights both as significant gaps in the NoR.

30. In my view, effective integration between the Freight Hub, the NEIZ and the Ring Road are critical to the success of the city's Distribution Hub strategy and the designation should reflect this.

## 1.4 Principles to guide NoR conditions

31. Below are some suggested principles to guide the drafting of NoR conditions, based on my evaluation of the information provided by KiwiRail. If the project goes ahead, adoption of these principles will help to ensure that the region's freight sector is as efficient as it can be and the economic benefits of the project for the region are maximised.

    a. **Integration with NEIZ**: The designation should enable freight to move efficiently between the NEIZ and the Freight Hub.

    b. **Integration with Ring Road**: The design of the Freight Hub should support an optimal alignment of the Ring Road and enable freight to move efficiently between the Freight Hub and the Ring Road.

    c. **Certainty regarding delivery**: The lapse period should be kept as short as is reasonably possible to provide certainty to potential investors and affected parties.

[3] These major rail users are sometimes referred to as "Level 2 users".

d. **Optimal roading solution**: The project should minimise disruption to the road transport network, including any access impediments for NEIZ businesses.

# Contents


**1 EXECUTIVE SUMMARY 2**

**1.1 Strategic context 2**

**1.2 Economic impacts of the Freight Hub 2**
1.2.1 Transport cost reduction and mode shift benefits 3
1.2.2 Investment benefits 4
1.2.3 The benefits of certainty 5
1.2.4 Ability to redevelop the existing rail yard 5
1.2.5 Impacts on local traffic conditions 6

**1.3 Integration with NEIZ and Ring Road 6**

**1.4 Principles to guide NoR conditions 7**

**2 INTRODUCTION 11**

**2.1 Expert Witnesses – Code Of Conduct 12**

**3 BACKGROUND AND SCOPE OF EVIDENCE 13**

**3.1 Background 13**

**3.2 Scope of evidence 13**

**3.3 Reports and material considered 14**

**3.4 Site visit 14**

**4 STRATEGIC ECONOMIC DEVELOPMENT CONTEXT 15**

**4.1 Palmerston North's freight sector vision 15**

**4.2 The Central NZ Distribution Hub 16**
4.2.1 North East Industrial Zone (NEIZ) 16
4.2.2 Palmerston North Airport 17
4.2.3 Regional Freight Ring Road 17
4.2.4 KiwiRail Freight Hub 20

**4.3 Integration between nodes 21**
4.3.1 Integration between the Freight Hub and NEIZ 22
4.3.2 Integration between KiwiRail Freight Hub and Ring Road 23

**5 ECONOMIC EFFECTS OF KIWIRAIL FREIGHT HUB 24**

**5.1 Introduction and summary 24**

**5.2 Transport cost reduction and mode shift benefits 25**
5.2.1 KiwiRail Analysis 25
5.2.2 Commentary 31

**5.3 Investment benefits 37**
5.3.1 KiwiRail analysis 37
5.3.2 Commentary 40

**5.4 The benefits of certainty 43**

**5.5 Ability to redevelop existing rail yard 44**
5.5.1 KiwiRail analysis 44
5.5.2 Commentary 45

**5.6 Impacts on local traffic conditions 46**
5.6.1 Key changes 46
5.6.2 KiwiRail analysis 47
5.6.3 Commentary 48

**6 THE IMPORTANCE OF INTEGRATION 50**

**6.1 Integration between Freight Hub and NEIZ 50**

**6.2 Integration between Freight Hub and Regional Freight Ring Road 52**

**7 REVIEW OF SUBMISSIONS 55**

**8 PRINCIPLES TO GUIDE NOR CONDITIONS 57**

# Figures

Figure 1 Aerial map of Central NZ Distribution Hub (approximate boundaries) .....16
Figure 2 Examples of major projects supported by the Ring Road.....19
Figure 3 Proposed KiwiRail Freight Hub site and overlap with NEIZ Extension Area .....20

# 2 Introduction

1. My full name is Shane Andrew Vuletich. I am an economist with over 20 years of experience in regional economic development and cost-benefit analysis, both of which are relevant to the NoR.

2. I am the Managing Director of Fresh Information Limited (Fresh Info) and have held this position since October 2013. I hold the qualification of Bachelor of Commerce majoring in economics (first class honours) and commercial law from the University of Auckland.

3. I have prepared this evidence on behalf of the determining authority, Palmerston North City Council, in relation to the Notice of Requirement (NoR) for the KiwiRail Regional Freight Hub (the "Freight Hub", "KiwiRail Freight Hub" or "Rail Freight Hub") lodged by KiwiRail Holdings Ltd ("KiwiRail"). I understand that my evidence will accompany the planning report being prepared by the determining authority under section 42A of the Resource Management Act 1991 (the "Act").

4. I have worked as a consulting economist since 1998. During that time I have undertaken a large number of studies that have required me to estimate the economic and social impacts of a wide range of initiatives. I have completed these studies using both Economic Impact Analysis (EIA) and more recently social cost-benefit analysis (cost-benefit analysis or CBA) which is the preferred methodology used by government agencies to evaluate the economic impacts of projects.

5. I have recently conducted a cost-benefit analysis of hosting the America's Cup for MBIE and Auckland Council, measured the costs and benefits of major changes to Milford Sound; and developed a cost-benefit framework for measuring major event impacts which is being used by councils in New Zealand.

6. I have a sound understanding of the strategic and policy environments in Palmerston North and the wider Manawatu-Whanganui region through my involvement in several major projects. These include: measuring the potential economic benefits of different walking and cycling infrastructure options along the new Te Ahu a Turanga/Manawatu Gorge Highway route in connection with the Notice of Requirement for the highway; economic advice regarding opportunities for integration between the proposed KiwiRail Freight Hub and the North East Industrial Zone (NEIZ); economic analysis to inform the business case for redevelopment of Palmerston North's Museum, Te Manawa; economic analysis to inform the business case for the proposed Regional Freight Ring Road; assessment of the likely impacts

of the Ring Road on other major regional projects; development of a destination management plan for the Central Economic Development Agency (**CEDA**); and a PGF-sponsored assessment of the feasibility of transforming Te Apiti (Manawatu Gorge) into a major tourism destination.

## 2.1 Expert Witnesses – Code Of Conduct

7. I confirm that I have read the Code of Conduct for Expert Witnesses in the Environment Court Practice Note 2014 and that I agree to comply with it. I confirm that I have considered all the material facts that I am aware of that might alter or detract from the opinions that I express, and that except where I state I am relying on information provided by another party, the content of this evidence is within my area of expertise.

# 3 Background and Scope of Evidence

## 3.1 Background

8. KiwiRail is seeking to designate approximately 177.7 hectares of land between Palmerston North Airport and Bunnythorpe for a new Regional Rail Freight Hub.

9. The Freight Hub will consist of a centralised hub incorporating tracks, marshalling yards, maintenance and service facilities, a train control and operation centre, freight handling and storage facilities (including for logs and bulk liquids), provision of access, including road and intersection upgrades where required, and specific mitigation works including noise walls/bunds, stormwater management devices and landscaping. In addition, the North Island Main Trunk rail line will be relocated to sit within the new designation area and directly adjacent to the Regional Freight Hub. The activities that take place at KiwiRail's Tremaine Avenue freight yard (apart from the passenger terminal and the network communications centre) will be relocated to the new site to form part of the new Regional Freight Hub.

10. A detailed description of the Project is set out in 6.3 of the AEE submitted by the applicant.

## 3.2 Scope of evidence

11. I have been asked to assess the elements of the NoR relating to the economic impacts of the Freight Hub. My assessment covers the following matters:

    a. the strategic economic development context that is relevant to the project;

    b. KiwiRail's analysis of the potential economic impacts of the Freight Hub (including gaps); and

    c. Submissions relating to the economic impacts of the project.

12. My evidence should be read in conjunction with expert evidence of the other experts that have contributed to the s42A Planning Assessment. In particular, the evidence of Michael Than (rail design, construction and operation) and Harriet Fraser (traffic and transportation) are relevant to the consideration of matters I address.

## 3.3 Reports and material considered

13. The key documents that I have reviewed in preparing this evidence are listed below:

    a. The NoR and AEE;

    b. KiwiRail's responses to s92 requests for further information, dated 15 February and 28 May 2021;

    c. National Land Transport Plan, 2018-2021;

    d. Palmerston North City Long Term Plan, 2018-2028;

    e. Manawatu-Whanganui Regional Land Transport Plan, 2015-2025;

    f. Manawatu-Whanganui Regional Economic Action Plan (Accelerate 25);

    g. Central Economic Development Agency (CEDA) draft Distribution Hub Strategy, April 2021;

    h. Waka Kotahi NZTA Palmerston North Integrated Transport Improvements (PNITI) Network Options Report, January 2021;

    i. Impacts of PNITI on key regional projects, Fresh Info report for PNCC, February 2021;

    j. National Freight Demand Study 2017/18, Ministry of Transport;

    k. KiwiRail Regional Freight Hub information sheet: Roading, traffic and level crossings;

    l. Section 42A rail design, construction and operation report by Michael Than; and

    m. Section 42A traffic and transport report by Harriet Fraser.

## 3.4 Site visit

14. I undertook a site visit on November 2nd, 2020 and have visited the Palmerston North area on several other occasions. I am familiar with the surrounding environment.

# 4 Strategic Economic Development Context

## 4.1 Palmerston North's freight sector vision

15. Palmerston North's freight and logistics sector is a significant and growing segment of the City's economy. The sector employed 5,500 people in 2019 (10% of all jobs in the City) and is home to several major distribution centres including Toyota, Ezibuy, Foodstuffs, and Countdown. The City is well-placed to play a significant role in New Zealand's freight network due to its central location in the lower North Island and proximity to three key ports (Taranaki, Wellington and Hawke's Bay) and major highway and rail connections.

16. The importance of the Manawatū-Whanganui region as a centre of freight and logistics is highlighted in the 2018 National Land Transport Plan:

> As a key freight and transport hub for the central North Island, the Manawatū/Whanganui region has enormous strategic value for the whole of New Zealand.[4]

17. I understand that Palmerston North aspires to significantly strengthen its freight and logistics capabilities and elevate its role within the national freight network. Central to the growth strategy is the development of a nationally significant, multi-modal (road, rail and air) freight precinct in the north-east of the city serving the lower North Island's distribution needs. The planned precinct has been known alternatively as the Central NZ Multi-Modal Freight Hub and the Central NZ Distribution Hub (the latter name is used in this evidence).

18. The Central NZ Distribution Hub is intended to efficiently service inter-regional freight movements and act as an engine for growth in the local economy. The Distribution Hub is identified as an important growth project in several local and regional planning documents, including:

- Palmerston North City's Long-Term Plan;[5]
- The Manawatu-Whanganui Regional Land Transport Plan;[6] and

[4] See https://www.nzta.govt.nz/assets/planning-and-investment/nltp/NLTP-2018-21.pdf at p75.
[5] See https://www.pncc.govt.nz/media/3131028/10-year-plan-2018-28.pdf at pp. 26-28.
[6] See https://www.horizons.govt.nz/HRC/media/Media/Bus-Route-Timetable/Final-RLTP-2015-25.pdf?ext=.pdf at p. 23.

- The Manawatu-Whanganui Regional Economic Action Plan (Accelerate 25).[7]

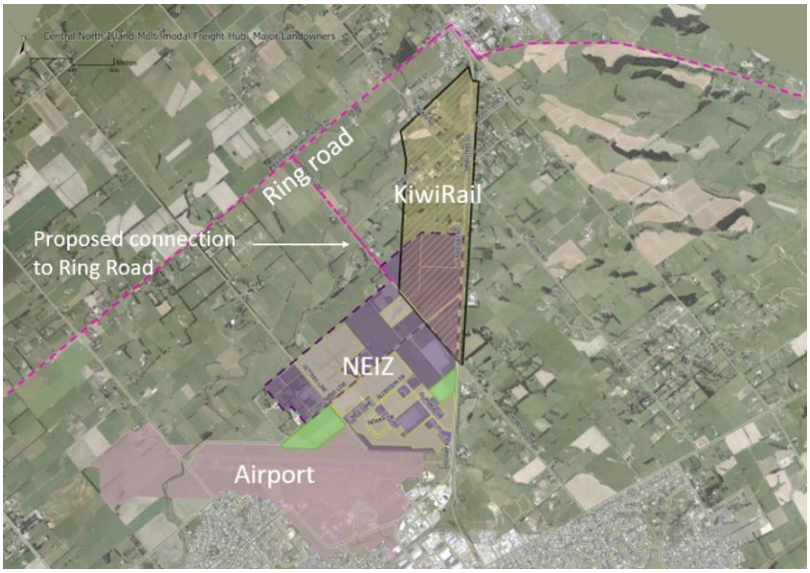
The Distribution Hub is also referenced in CEDA's draft Distribution Hub Strategy ("*Serving the Distribution Needs of the Lower North Island*") as an important element in the strategy to grow the region's freight and distribution strength.

The key elements of the Central NZ Distribution Hub are described further below.

## 4.2 The Central NZ Distribution Hub

19. The Central NZ Distribution Hub is located in the Bunnythorpe area and encompasses the North East Industrial Zone (NEIZ), Palmerston North Airport and the planned KiwiRail Freight Hub, with connections into the future Regional Freight Ring Road. Once the KiwiRail facility is developed, the Central NZ Distribution Hub will be the only location in New Zealand with rail, road and air connectivity provided in one precinct.

*Figure 1 Aerial map of Central NZ Distribution Hub (approximate boundaries)*




20. Each of the four "nodes" that make up the Central NZ Distribution Hub is outlined below.

### 4.2.1 North East Industrial Zone (NEIZ)

21. The NEIZ encompasses approximately 212 ha of land immediately south of Bunnythorpe that has been zoned for large-format transport, warehousing and

[7] See https://experience.arcgis.com/experience/5e9ce81fdc2a4e73bdbacf57929fbd2b. See also, www.accelerate25.co.nz/action-plan.html.

logistics operations. I understand the NEIZ land is well-suited to such activities as it is flat, relatively free from surrounding residential and commercial activities that could constrain its operations and growth, and adjacent to the future Ring Road route, the main trunk railway line and proposed KiwiRail Freight Hub, and the airport.

22. The NEIZ has been rezoned in stages, beginning in 2004. The 126 ha "NEIZ Extension Area", which includes 60 ha of the land subject to the NoR, was rezoned in 2017. I understand that, if the Freight Hub goes ahead, around 150 ha of the 212 ha NEIZ will be developed or secured with the intention to develop.[8] Current major occupants of the NEIZ include the Foodstuffs and Ezibuy distribution centres.

23. I consider the NEIZ to be an important economic development opportunity for the region. By providing land suitable for large format warehousing and distribution activities adjacent to key transport connections, the NEIZ is expected to stimulate investment by freight & distribution businesses in the region, leading to growth in the sector and associated increases in economic output and employment.

### 4.2.2 Palmerston North Airport

24. Palmerston North Airport (PMR) is the third busiest freight handling airport in New Zealand behind Auckland and Christchurch. Freightways and NZ Post both have significant operations at PMR.

25. I understand that, as part of its growth planning, Palmerston North Airport Limited intends to develop around 30 ha of its non-aeronautical land to accommodate light industrial, commercial, and retail activities. The development opportunity includes a 7ha large format distribution zone south of the airport terminal and a 6 ha site north of the runway adjacent to the NEIZ, both of which have the potential to accommodate significant freight and logistics operations.[9]

### 4.2.3 Regional Freight Ring Road

26. Waka Kotahi NZTA is in the process of developing a business case for a package of roading interventions collectively known as the Palmerston North Integrated Transport Improvement (PNITI) project. The centrepiece of PNITI is the Regional Freight Ring Road (Ring Road) which will run around the outskirts of Palmerston North, connecting key industrial areas including the NEIZ and proposed KiwiRail Freight Hub, Feilding and state highways to the north, Longburn and Wellington connections to

[8] See memorandum of David Murphy regarding Strategic Planning Context for the Freight Hub, pp. 6-7.

[9] See Fresh Info report to PNCC, Impacts of PNITI on Key Regional Projects, February 2021.

the south and the new Manawatu Gorge highway to the east. The Ring Road will be a purpose-built freight route, developed as a combination of new roads and upgrades to existing roads.

27. According to Waka Kotahi, the Ring Road responds to pressures that have arisen primarily due to:

- industrial areas located in what were previously the outskirts of the city becoming interspersed with residential areas as the city has grown;
- the existing KiwiRail rail yard being located in an area that is flanked by residential developments;
- deficiencies in the identified freight roading network, e.g. narrow roads, weight-restricted bridges, etc.; and
- recent rapid population growth in Palmerston North, which is expected to continue.

28. Due to these pressures, there are growing numbers of trucks using streets in Palmerston North's residential and commercial areas to travel between industrial zones. This is causing problems relating to safety, traffic congestion, loss of connectivity (severance), reduced uptake of walking and cycling, and a general loss of amenity in affected areas. [10]

29. By providing a safer, more efficient road network that redirects freight traffic around rather than through the city, the Ring Road is expected to alleviate many of these problems and enable important social and economic benefits for the region.

30. From a social perspective, the Ring Road is expected to reduce travel times for users of decongested inner-city roads, improve actual and perceived safety, increase opportunities for walking and cycling, and lift amenity values in residential and commercial areas.

31. I understand that the Ring Road is a critical enabler of several important placemaking initiatives that rely on removal of trucks from the inner city. Key among these is the City Centre Revitalisation project ("Streets for People") which aims to transform the City Centre from a vehicle-centric space into a vibrant, people-friendly commercial and entertainment hub where people want to spend time.

[10] See, e.g. Waka Kotahi NZTA PNITI Network Options Report, p.11.

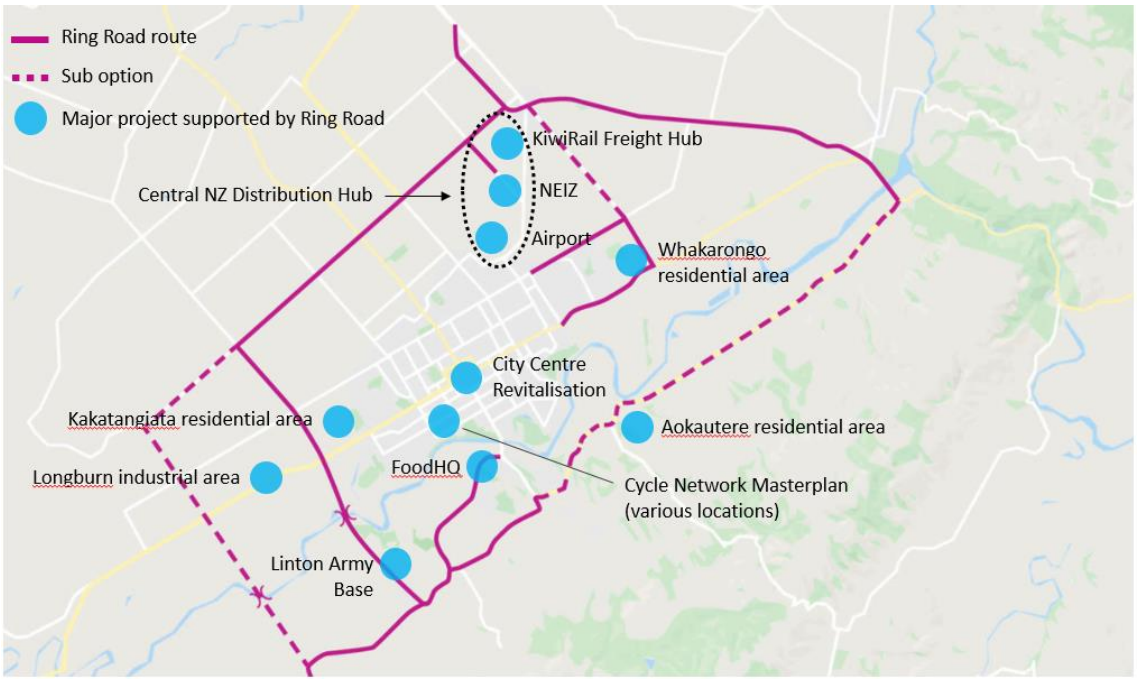
Other examples include the Urban Cycle Network Masterplan and several residential growth projects located on arterials that are currently used as freight routes.

32. From an economic perspective, the Ring Road is expected to reduce accident rates and travel costs for businesses, making them more productive and strengthening the region's reputation as an attractive place to do business.

33. There are several major economic development projects planned or underway that will be significantly enhanced by the Ring Road. These include the Central NZ Distribution Hub, the FoodHQ Science Park, growth in the Longburn Industrial Estate, and the Linton Army Base regeneration.[11]

34. Overall, the Ring Road is seen as a transformational project that will increase productivity, inward investment and employment in the region while also driving significant improvements in social wellbeing. Figure 2 shows the planned Ring Road route and some of the major projects that will be enabled or supported by the Ring Road.

*Figure 2 Examples of major projects supported by the Ring Road*

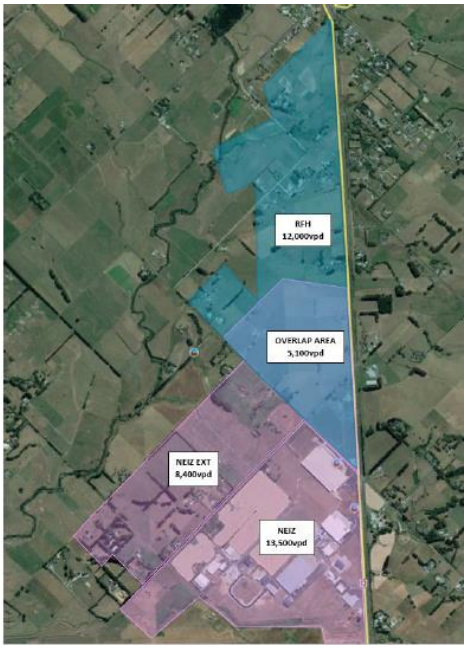



[11] See, e.g., Waka Kotahi NZTA PNITI Network Options Report, Table 14-2, p. 100 (Alignment to PNCC Strategic Direction and Vision). See also, Impacts of PNITI on key regional projects (Fresh Info, February 2021) – report prepared for PNCC.

### 4.2.4 KiwiRail Freight Hub

35. The planned KiwiRail Freight Hub would be the final component of the planned Central NZ Distribution Hub. The site that has been selected for the Freight Hub occupies part of the NEIZ as well as rural land directly to the north. According to NoR documents, the new KiwiRail facility would occupy around 178 ha and have an operational footprint of around 130 ha.[12] Approximately a third (60 ha) of the KiwiRail site falls within the NEIZ, taking up almost 50% of the 126-hectare NEIZ Extension area.[13]

*Figure 3 Proposed KiwiRail Freight Hub site and overlap with NEIZ Extension Area*




36. If developed, the new Rail Freight Hub would be around four times the size of KiwiRail's existing rail yard on Tremaine Ave[14] and would be capable of handling containerised and non-containerised freight, including from longer, high-capacity trains that KiwiRail expects to come online in the future.[15] The new facility would include marshalling tracks, a container terminal, a log yard, a tank farm, maintenance facilities for KiwiRail's network and rolling stock, and freight forwarding and warehousing space serviced by a common loading/unloading rail track that

[12] See Design Construction and Operation Report, p. 17, Integrated Transport Assessment p. 10. Figure 3 is Figure 7-4, Integrated Transport Assessment, p. 45.
[13] See memorandum of David Murphy regarding Strategic Planning Context for the Freight Hub, pp. 6-7.
[14] See Integrated Transport Assessment, October 2020.
[15] According to KiwiRail, future trains could be up to 1,500 metres long and carry up to 40 wagons. https://www.kiwirail.co.nz/what-we-do/projects/regional-freight-hub/

will be available for lease by commercial operators.[16] The NoR states that operations at the Freight Hub would be expected to begin around 2031 and the facility would become fully operational by around 2051.[17]

37. The planned development of the Freight Hub on the selected site moves the region closer to realising its vision of becoming a major multi-modal distribution centre for the lower North Island.[18] If the KiwiRail project goes ahead, the Freight Hub, NEIZ and Airport will be physically adjacent to one another and within 1-2 kms of the planned Ring Road.

## 4.3 Integration between nodes

38. An optimally efficient freight precinct will require a high level of integration between the NEIZ, KiwiRail Freight Hub, Airport, and Ring Road. This means the transport connections between nodes and the systems and processes within each node need to be designed in a way that enables freight to move seamlessly between them.

39. This requirement is seen as critical to success in CEDA's draft Distribution Hub Strategy which, although only in draft at the time of writing, observes that one of the most important aspects of the broader strategy is to ensure efficient connectivity exists between the core projects.

40. The opportunity to develop streamlined and efficient hubbing services in Palmerston North is also reflected in the 2018 National Land Transport Plan where it outlines the objectives for the Manawatu-Whanganui Region:[19]

> Palmerston North is a major intersection requiring more investment in streamlined transport movements. The city is at the centre of rail, road and air networks. This intersection of multi-modal and large product and traffic volumes must be as well designed and efficient as possible.
>
> …
>
> Efficient and well-serviced hubbing – the region needs to have the capacity to efficiently collect, package and redistribute product, and to reduce costs and

[16] See Design Construction Operation report, October 2020. Regarding Freight Forwarders, the report states that "*[p]rovision is made for 4 large and 6 smaller freight forwarders to co-locate onto the Site. The areas are serviced by a common loading/unloading rail track with road access into the facility*".

[17] See Integrated Transport Assessment, October 2020.

[18] See, e.g., CEDA NoR submission (S12), noting at p 12-4 "*The region has developed cohesive regional and city plans to ensure the area develops as a key freight and distribution hub in New Zealand. CEDA notes that the KiwiRail Regional Freight Hub NoR is generally consistent with these*".

[19] See https://www.nzta.govt.nz/assets/planning-and-investment/nltp/NLTP-2018-21.pdf at p77.

increase the speed of getting products to market, when compared to other international suppliers.

41. I understand that the objective of regional stakeholders is to create a coordinated, interconnected freight "system" with a level of integration as close as possible to that which would be possible if the precinct were master planned and developed by a single owner. Efficient movement of freight between nodes will maximise productivity for precinct users and attract higher levels of inward investment to the region.

42. Below I discuss two priority areas for integration that are relevant to the NoR:

a. integration between the Freight Hub and the NEIZ; and

b. integration between the Freight Hub and the Ring Road.

### 4.3.1 Integration between the Freight Hub and NEIZ

43. If the KiwiRail Freight Hub is developed, I understand that there are likely to be significant freight flows between the Freight Hub and the NEIZ, where some of KiwiRail's biggest customers would be located. Seamless connectivity between these two sites will accordingly be critical to the efficient functioning of the wider multi-modal Distribution Hub.

44. I understand that research undertaken by CEDA suggests that users of the Freight Hub are likely to fall into three groups, with each type of user having different infrastructure and connectivity requirements:

**Level 1:** Heavily rail-dependent businesses who require a railhead location e.g. major freight forwarders. These users are expected to prefer to locate themselves inside the Freight Hub and negotiate for siding access with KiwiRail.

**Level 2:** Businesses who prefer to locate outside the KiwiRail site but are heavy users of rail and would benefit from enhanced connectivity with the Freight Hub e.g. major distribution centres. According to CEDA's research, enhanced connectivity for Level 2 users could potentially take the form of a dedicated freight corridor between the KiwiRail site and the NEIZ that provides separation from non-operational traffic.

**Level 3:** Less frequent users of rail who prefer to locate outside the KiwiRail site and only require public roadway/gate access to the Freight Hub.

45. The connectivity requirements of Level 1 and Level 3 users appear to be provided for under current plans. However, it does not appear that a plan has been developed to provide enhanced connectivity for Level 2 users. I understand that CEDA's discussions with potential Level 2 users suggest that a dedicated freight corridor or other form of streamlined access is highly desirable and would encourage greater investment in the wider freight precinct.

46. I understand that stakeholders in the Distribution Hub (including KiwiRail, landowners and developers) are involved in ongoing discussions regarding connectivity options, among other matters of relevance to the precinct. CEDA is hopeful that a process for advancing these discussions can be agreed through the NoR process.

### 4.3.2 Integration between KiwiRail Freight Hub and Ring Road

47. Providing safe and efficient access to the Freight Hub is one of the key drivers for Waka Kotahi's Ring Road programme.[20] I understand that current plans have the Ring Road passing within approximately 500 metres of the proposed northern entrance to the Freight Hub and approximately 2 km from the proposed southern entrance.

48. Given the significant demand that the Freight Hub would place on the region's roading network, I believe it is critical that the Freight Hub and Ring Road align and complement each other. This would ensure that freight moves efficiently between the Freight Hub, producers and markets, maximising supply chain benefits and strengthening the region's reputation as a major distribution centre. It would also encourage maximum uptake of the Ring Road which is critical to PNCC's placemaking objectives.

49. In summary, it is important that the proposed Freight Hub is seen in the context of the NoR as part of a wider freight "system" of interconnected parts, rather than as an independent, self-contained facility. In my view, a successful outcome for the region will depend critically on how well the Freight Hub integrates with the other parts of this system.

50. Integration opportunities are discussed further in section 6.

[20] See, e.g., Waka Kotahi NZTA PNITI Network Options Report, p. 114.

# 5 Economic effects of KiwiRail Freight Hub

## 5.1 Introduction and summary

51. If the Freight Hub is developed, it is likely to generate significant economic benefits at a regional and national level. It is also likely to generate economic costs (negative externalities) which would be borne predominantly by local communities.

52. In this section I review the main economic benefits and costs of the project identified by KiwiRail. The main economic benefits are:

- **Transport cost reduction and mode shift benefits** resulting from increased container capacity and the ability to accommodate longer trains at the new site;
- **New investment in the region** by firms wishing to utilise the improved rail facilities, provide support services to those that do, or be involved in construction activities; and
- **Benefits arising from the ability to redevelop the existing rail yard site**.

53. The main economic costs relate to **traffic impacts** caused by KiwiRail's proposed changes to the roading network and the ongoing activities of the Freight Hub.

54. It is not within the scope of my evidence to conduct an independent analysis of the economic impacts of the project. However, I provide commentary on the appropriateness of the methodologies and assumptions used by KiwiRail and identify potential gaps in the analysis in terms of additional costs or benefits that could have been considered.

55. Later in the report (in section 6), I discuss opportunities to maximise the value of the project to the region by ensuring that it integrates effectively with other key freight infrastructure and that the period of uncertainty regarding whether the project is going ahead is kept as short as is reasonably possible.

56. I have not been able to verify all KiwiRail's data sources, so have relied on KiwiRail's data in some cases (and have noted where this is the case). Finally, the scope of my evidence is limited to consideration of the economic impacts arising from the Freight Hub. Other impacts (e.g. social, ecological, noise, etc.) are addressed by other experts.

57. The economic impacts identified above are addressed in sections 5.2 to 5.6 below.

## 5.2 Transport cost reduction and mode shift benefits

58. KiwiRail asserts that the Freight Hub will enable significant reductions in freight transport costs for users as well as environmental, safety and congestion benefits for wider New Zealand driven by an increase in the use of rail for moving freight inter-regionally.

59. In sections 5.2.1 and 5.2.2 below, I review and comment on KiwiRail's analysis of these benefits, which it asserts will be driven by increased container capacity and the ability to accommodate longer trains at the new facility. Because of the way KiwiRail has grouped its analysis of these impacts, it is convenient for me to review them together.

60. In my opinion, KiwiRail's analysis of transport cost reduction and mode shift benefits is reasonable at a conceptual level. However, I have identified several issues relating to specific assumptions, some of which would have had the effect of overstating expected benefits and some of which would have had the effect of understating expected benefits. These issues are discussed below.

### 5.2.1 KiwiRail Analysis

#### 5.2.1.1 Increased container capacity

61. According to KiwiRail, one of the key drivers for the project is the need to handle higher volumes of containerised freight in the future than would be possible at the existing rail yard on Tremaine Ave. In support of this proposition, KiwiRail provides estimates of future container demand into and out of Palmerston North and compares these to the capacity of the existing rail yard.

62. KiwiRail's freight demand estimates indicate that containerised freight volumes are expected to increase by around 35% over the period between 2020 and 2062. This is mainly driven by expected growth in inbound manufactured and retail goods destined for the region's distribution centres.[21] KiwiRail's estimates of containerised freight demand are provided in Attachment 8a, Appendix A, Table 1, which is reproduced below.

[21] See Technical Report K on Economics by Richard Paling Consulting ("Technical Report K"), Table 2.1, p. 16; see also Attachment 8a, Table 1, Appendix A.

*Table 1 Estimated containerised rail freight volumes into Palmerston North (reproduced from KiwiRail s92 response, Attachment 8a, Table 1)*

| **Table 1**<br>**Total estimates and forecasts of demand for manufactured freight traffic by rail into Palmerston North**<br>**(m tonnes pa)** | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2017 (Est) | 2020 Est | 2022 | 2030 | 2032 | 2042 | 2052 | 2062 |
| Total demand for containerised traffic (m tonnes pa) | 0.28 | 0.26 | 0.28 | 0.30 | 0.31 | 0.33 | 0.34 | 0.35 |

63. Based on these forecasts, KiwiRail estimates that the capacity of the existing container terminal would be reached by around 2030 at a level of around 0.3m tonnes per year. On this basis, KiwiRail asserts that a key outcome of the new Freight Hub would be the ability to move expected container growth beyond expected 2030 levels by rail instead of road.

64. KiwiRail outlines several benefits expected to flow from this outcome:

- direct transport cost reductions of around $0.075 per tonne-km of freight, reflecting the fact that rail is a cheaper way to move the relevant freight types than road on a per tonne-km basis;
- reduced environmental emissions (including greenhouse gases, nitrous oxides, carbon monoxide, hydrocarbons and particulates);
- reduced cost of crashes, reflecting the lower incidence of accidents involving rail relative to road; and
- reduced road congestion.

65. KiwiRail estimates total economic benefits from the use of rail over road for "*the traffic that would be forced to divert to road if the existing freight yard were to remain in operation*" of around $500,000 per year by 2032, rising to $3.2 million per year by 2062. KiwiRail's table summarising these estimates is reproduced below as Table 2.[22]

[22] See Third Section 92 Response, Attachment 1, p. 7.

*Table 2 Estimated cost savings from increased container capacity in Palmerston North (reproduced from Attachment 1 to KiwiRail's third s92 response, Table 9)*

| **Table 9<br>Transport and environmental cost savings from increased rail container handling capacity in Palmerston North ($m pa)** | | | | | |
|---|---|---|---|---|---|
| Year | Transport cost savings | Environmental cost savings | Crash cost reduction | Congestion benefits | Total savings |
| 2032 | 0.4 | 0.1 | 0.0 | 0.1 | 0.5 |
| 2042 | 1.1 | 0.2 | 0.1 | 0.2 | 1.6 |
| 2052 | 1.6 | 0.3 | 0.2 | 0.3 | 2.4 |
| 2062 | 2.1 | 0.3 | 0.3 | 0.4 | 3.2 |

#### 5.2.1.2 Ability to accommodate longer trains

66. Another important driver for the Freight Hub is the ability to accommodate longer trains than is possible at the existing rail yard. I understand this is a key reason for KiwiRail's preference for a larger site. According to KiwiRail, the extended track layout and improved facilities for marshalling trains at the new site would enable the operation of trains up to 1500m in length, compared with the current maximum of 900m. KiwiRail notes that "*although the timing of the introduction of these longer trains has not yet been determined, track capacity constraints in the rail network in the later part of the century would suggest their introduction*".[23]

67. KiwiRail estimates that the use of longer trains would give rise to operational cost savings of around 10% relative to current train lengths.[24] This reflects the economies of scale associated with the ability to carry more weight on a single train.[25] KiwiRail identifies two benefit-types likely to result from these cost savings:

- benefits to existing rail users ("base traffic") from lower transport costs; and
- benefits associated with the diversion of freight from road to rail induced by the reduction in costs ("generated traffic"). These benefits comprise transport cost reductions and environmental, crash reduction and congestion benefits similar to the mode shift benefits identified above in relation to increased container capacity.

68. In determining the impacts of freight shifting from road to rail, KiwiRail assumes that a reduction in operating costs of 10 per cent would lead to an increase in demand for rail of around 20 per cent, citing the elasticities provided in Waka Kotahi's Monetary Benefits and Costs Manual.

---

23 See Attachment 8a, response to s.92 request 121(ii).
24 See Attachment 8a, App A & B.
25 See Attachment 2 to KiwiRail's third s92 response for a detailed description of the estimated cost savings.

69. The referenced benefits are assumed to apply in relation to both traffic originating or terminating in Palmerston North and longer-distance traffic that passes through Palmerston North. KiwiRail states that the use of longer trains on routes other than Auckland-Palmerston North would be more limited due to infrastructure constraints and lower freight demand on other lines. To account for this, KiwiRail discounts the estimated benefits relating to longer-distance traffic by 50%.

70. The resulting benefit estimates are provided in Tables 11, 13, 15 and 16 in Attachment 1 to KiwiRail's third s92 response, which are reproduced as Table 3 to Table 6 below. Table 3 and Table 4 summarise benefits relating to traffic originating or terminating in Palmerston North. These total $2.8m per year in 2032, rising to $3.2m per year in 2062. Table 5 and Table 6 summarise benefits relating to longer distance traffic that passes through Palmerston North. These total $10.3m per year in 2032, rising to $12.6m per year in 2062.

*Table 3 Estimated travel cost reductions from use of longer trains to/from Palmerston North (base traffic) (reproduced from KiwiRail's third s92 response, Attachment 1, Table 11)*

**Table 11**
**Cost savings for traffic (1) to and from Manawatu-Whanganui with the use of longer trains**

| Year | Total tonne-kms affected (m) | Savings with reduced costs ($m pa) |
|---|---|---|
| 2032 | 161.4 | 1.5 |
| 2042 | 171.7 | 1.6 |
| 2052 | 179.5 | 1.6 |
| 2062 | 187.6 | 1.7 |

Notes (1) Based on the movements of all manufactured goods between Manawatu-Whanganui and Auckland/Waikato

*Table 4 Estimated cost savings relating to traffic generated by the use of longer trains to/from Palmerston North (generated traffic) (reproduced from Attachment 1 to KiwiRail's third s.92 response, Table 15)*

**Table 15**
**Benefits from Palmerston North traffic switching to rail because of reduced costs**

| Year | Base traffic (m t-kms) | Generated traffic (m tonne-kms) | Transport cost benefits ($m) | Environ-mental benefits ($m ) | Crash cost reduction ($m) | Congestion benefits ($m) | Total ($m) |
|---|---|---|---|---|---|---|---|
| 2032 | 161 | 32 | 0.1 | 0.4 | 0.3 | 0.5 | 1.3 |
| 2042 | 172 | 34 | 0.2 | 0.4 | 0.3 | 0.5 | 1.4 |
| 2052 | 179 | 36 | 0.2 | 0.4 | 0.3 | 0.5 | 1.5 |
| 2062 | 188 | 38 | 0.2 | 0.4 | 0.3 | 0.5 | 1.5 |

*Table 5 Estimated travel cost reductions from use of longer trains for longer distance traffic (base traffic) (reproduced from Attachment 1 to KiwiRail's third s.92 response, Table 13)*

**Table 13**
**Cost savings from longer trains - Long distance rail traffic passing through Palmerston North (manufactured and retail goods only)**

| Year | $m pa |
|---|---|
| 2032 | 5.8 |
| 2042 | 6.3 |
| 2052 | 6.7 |
| 2062 | 7.1 |

*Table 6 Estimated cost savings from use of longer trains for longer distance traffic (generated traffic) (reproduced from Attachment 1 to KiwiRail's third s.92 response, Table 16)*

| Table 16<br>Benefits from longer distance traffic switching to rail because of reduced costs | | | | | | | |
|---|---|---|---|---|---|---|---|
| Year | Base traffic (m t-kms) | Generated traffic (m tonne-kms) | Transport cost benefits ($m) | Environ-mental benefits ($m ) | Crash cost reduction ($m) | Congestion benefits ($m) | Total ($m) |
| 2032 | 1258 | 126 | 0.3 | 1.2 | 1.2 | 1.8 | 4.5 |
| 2042 | 1366 | 137 | 0.3 | 1.3 | 1.3 | 1.9 | 4.8 |
| 2052 | 1456 | 146 | 0.3 | 1.4 | 1.3 | 2.1 | 5.2 |
| 2062 | 1552 | 155 | 0.4 | 1.5 | 1.4 | 2.2 | 5.5 |

### 5.2.1.3 Total benefits

71. The total transport cost reduction and mode shift benefits from increased container capacity and the ability to accommodate longer trains are summarised in Attachment 1 to KiwiRail's third s92 response, Table 17. This is reproduced as Table 7 below.

*Table 7 Total benefits relating to increased container capacity and longer trains (reproduced from Attachment 1 to KiwiRail's third s.92 response, Table 17)*

| Table 17<br>Quantified benefits with the new Regional Freight Hub ($m pa) | | | | |
|---|---|---|---|---|
| Benefit type | 2032 | 2042 | 2052 | 2062 |
| **Benefits to PN users** | | | | |
| Increased container handling capacity | 0.4 | 1.1 | 1.6 | 2.1 |
| Reduced train costs | | | | |
| Existing traffic | 1.5 | 1.6 | 1.6 | 1.7 |
| Generated traffic | 0.1 | 0.2 | 0.2 | 0.2 |
| **Total benefits to PN users** | 2.0 | 2.8 | 3.4 | 4.0 |
| | | | | |
| **Benefits to longer distance traffic** | | | | |
| Reduced train costs | | | | |
| Existing traffic | 5.8 | 6.3 | 6.7 | 7.1 |
| Generated traffic | 0.3 | 0.3 | 0.3 | 0.4 |
| **Total benefits to longer distance users** | 6.0 | 6.6 | 7.0 | 7.5 |
| | | | | |
| **Environmental benefits** | | | | |
| Increased container handling capacity | 0.1 | 0.2 | 0.3 | 0.3 |
| Longer trains - PN traffic | 0.4 | 0.4 | 0.4 | 0.4 |
| Longer trains - other traffic | 1.2 | 1.3 | 1.4 | 1.5 |
| **Total environmental benefits** | 1.7 | 1.9 | 2.1 | 2.3 |
| | | | | |
| **Crash reduction benefits** | | | | |
| Increased container handling capacity | 0.0 | 0.1 | 0.2 | 0.3 |
| Longer trains - PN traffic | 0.3 | 0.3 | 0.3 | 0.3 |
| Longer trains - other traffic | 1.2 | 1.3 | 1.3 | 1.4 |
| **Total crash reduction benefits** | 1.5 | 1.7 | 1.9 | 2.0 |
| | | | | |
| **Congestion benefits** | | | | |
| Increased container handling capacity | 0.1 | 0.2 | 0.3 | 0.4 |
| Longer trains - PN traffic | 0.5 | 0.5 | 0.5 | 0.5 |
| Longer trains - other traffic | 1.8 | 1.9 | 2.1 | 2.2 |
| **Total congestion benefits** | 2.3 | 2.6 | 2.9 | 3.1 |
| | | | | |
| **Total benefits** | | | | |
| Reduced costs | 8.0 | 9.4 | 10.4 | 11.5 |
| Environmental benefits | 1.7 | 1.9 | 2.1 | 2.3 |
| Crash cost reduction benefits | 1.5 | 1.7 | 1.9 | 2.0 |
| Congestion benefits | 2.3 | 2.6 | 2.9 | 3.1 |
| **Total benefits** | 13.5 | 15.6 | 17.2 | 19.0 |

72. KiwiRail provides a time profile of these benefits over the period from 2030-2089 in its third s92 response.[26] This shows total benefits over the 60-year evaluation period amounting to about $1.1b in absolute terms or around $376m when discounted to the start of the project at a rate of 4%, as is customary for economic evaluations of transport projects.

73. KiwiRail states that these estimates do not take into account Government measures to further encourage the movement of freight by rail and *"therefore may be regarded as representing the lower bound of the results which might eventuate over the future"*.[27]

74. To understand how the estimated benefits are distributed between the two identified sources of benefit (increased container capacity and longer trains) and between Palmerston North and the rest of the country, I reorganised the estimates provided in Table 7 to create Table 8 below.

*Table 8 Distribution of KiwiRail's estimated transport cost reduction and mode shift benefits by source and geographic location*

| | **2032** | **2042** | **2052** | **2062** |
|---|---|---|---|---|
| **Source of benefits** | | | | |
| Increased container capacity ($m) | 0.6 | 1.6 | 2.4 | 3.1 |
| % of total benefits | 4% | 10% | 14% | 17% |
| Longer trains ($m) | 13.1 | 14.1 | 14.8 | 15.7 |
| % of total benefits | 96% | 90% | 86% | 83% |
| TOTAL BENEFITS ($m) | 13.5 | 15.6 | 17.2 | 19.0 |
| % of total benefits | 100% | 100% | 100% | 100% |
| | | | | |
| **Recipients of benefits** | | | | |
| Palmerston North rail users ($m) | 2.0 | 2.8 | 3.4 | 4.0 |
| % of total benefits | 15% | 18% | 20% | 21% |
| Rail users outside the region ($m) | 6.0 | 6.6 | 7.0 | 7.5 |
| % of total benefits | 44% | 42% | 40% | 40% |
| All New Zealanders ($m) | 5.5 | 6.2 | 6.9 | 7.4 |
| % of total benefits | 41% | 40% | 40% | 39% |
| TOTAL BENEFITS ($m) | 13.5 | 15.6 | 17.2 | 19.0 |
| % of total benefits | 100% | 100% | 100% | 100% |

75. As can be seen from Table 8, benefits relating to longer trains account for between 83% and 96% of total quantified benefits. Benefits relating to increased container

[26] See Attachment 1 to KiwiRail's third s.92 response, p. 13.
[27] See Attachment 1 to KiwiRail's third s.92 response, p. 12.

capacity account for the remaining 4-17% of quantified benefits. In terms of geographic split, between 15% and 21% of total benefits are expected to accrue to Palmerston North rail users, 40-44% are expected to accrue to rail users outside Palmerston North and 39-41% are expected to accrue to the wider country (in the form of reduced emissions, crashes and congestion).

76. In the following section, I provide some commentary on the methodologies and assumptions used to generate the estimates discussed above.

### 5.2.2 Commentary

77. First, I acknowledge the difficulty of predicting with any accuracy the quantum of economic impacts likely to be caused by the project. KiwiRail's efforts to identify, describe and provide some quantitative estimates of expected benefits are nonetheless helpful to building stakeholder understanding of how the Freight Hub could impact its host region and the wider country.

78. As noted above, from a conceptual standpoint, I consider KiwiRail's methodologies for estimating the economic benefits outlined above to be reasonable. I have identified some issues relating to specific assumptions used within the conceptual framework, however, which would benefit from further clarity. These are outlined below.

**Introduction of longer trains**

79. There appears to be some uncertainty surrounding the introduction of 1500m trains to the rail network. The following statements made in KiwiRail's economic impact reports reflect this uncertainty:

> As well as providing additional capacity for container handling, the proposed Regional Freight Hub would also allow the operation of longer more efficient trains. The introduction of these has only been considered at a conceptual level and for capacity reasons they may not be required until the latter half of the century, unless the demand for rail travel increases faster than expected. This could occur, for example, by the encouragement of a shift from road travel to meet broader environmental and social objectives. However it is estimated that these could reduce operating costs by up to 10 per cent which may encourage their early adoption.[28]

[28] See Attachment 8a, Appendix A.

> [A]lthough the timing of the introduction of these longer trains has not yet been determined, track capacity constraints in the rail network in the later part of the century would suggest their introduction.[29]

80. In its third s92 response, KiwiRail states that the introduction of trains longer than 900m would be dependent on a range of enabling investments being made to the wider rail network and rolling stock, as well as there being sufficient levels of freight demand to warrant the investment.[30] No timeframes are given for expected completion of the referenced works.

81. According to s42A rail design, construction and operation expert Michael Than, it is not clear based on the information provided exactly how 1500m trains would be accommodated within the Freight Hub itself or within the wider rail network. However, Mr. Than notes that both the Freight Hub project and the requirement for 1500m trains are consistent with KiwiRail's operational objective of future proofing its major infrastructure developments for growth.[31]

82. The apparent uncertainty regarding whether and when the network enhancements required to enable the use of longer trains will be completed sheds some doubt on the reliability of the estimated economic benefits associated with longer trains.

**Timing assumptions underpinning longer train benefits**

83. In addition to the uncertainty discussed above, there appears to be an inconsistency in the timing assumptions that underpin KiwiRail's benefit estimates relating to longer trains. As noted above, KiwiRail states that longer trains are not expected to come online until "*the latter half of the century*", yet its economic modelling assumes longer train benefits will be realised as early as 2030.

84. Consequently, it appears that longer train benefits may have been reported approximately 20 years earlier than they should have been given KiwiRail's stated timing expectations. If this is the case, it would have the effect of significantly overstating the level of expected economic benefits of longer trains over the 60-year lifetime of the Freight Hub.

85. In response to a s92 information request, KiwiRail provided alternative benefits modelling based on the assumption that long trains are not introduced until 2050 (instead of 2030 as in its original modelling). The alternative modelling indicates that

---

30 See Attachment 4 to KiwiRail's third s.92 response, pp.1-3.
31 See Than evidence, s. 4.3.

delaying the advent of longer train benefits until 2050 reduces the present value of total benefits from $376m to $191m over the 60-year evaluation period. This is a reduction of $185m or around 50% compared with the benefit estimates outlined in Table 7 above.

86. To provide context around these estimates, KiwiRail states that it is actively considering the use of trains longer than 900m *"which while not as large as 1500m would still be constrained by the capacity of the Existing Freight Yard"*. KiwiRail states that the Freight Hub will enable benefits from trains between 900m and 1500m in length, some of which might come online earlier than 2050. *"As a result"*, it says, *"while the full benefits from extending trains to 1500m may not be achieved immediately on the opening of the new facility, benefits from longer trains could be achieved at a much earlier date than 2050"*.[32]

87. On the basis of the above, it appears that the most likely scenario is that "longer" trains between 900m and 1500m will be introduced sometime between 2030 and 2050. This would suggest that the related economic benefits are likely to lie somewhere between $191m and $376m (the two estimates discussed above) over the 60-year time horizon of the Freight Hub.

**Freight demand estimates**

88. Expectations regarding future freight volumes are critical for understanding the required scale and configuration of the proposed facility, as well as the economic impacts likely to flow from it. Several submitters have raised questions about the reliability of KiwiRail's freight demand estimates.[33]

89. KiwiRail bases its estimates of future rail freight volumes on freight demand forecasts derived from the Ministry of Transport's (MOT) Freight Futures model, flows at the existing container facility on Tremaine Ave, and the current mode share of rail freight. As noted earlier, KiwiRail's expectations for growth in rail freight demand in Palmerston North are primarily driven by expected growth in inbound manufactured and retail items bound for the region's distribution centres.[34]

90. I have not undertaken an independent analysis of expected rail freight volumes. However, KiwiRail's forecasts appear to be generally consistent with outputs from

[32] See Attachment 1 to KiwiRail's third s.92 Response, p. 14.
[33] See, e.g. Aaron P Fox (S47), Darren Green (S71), Ji Hangfeng (S97).
[34] KiwiRail expects volumes of primary commodities to remain relatively stable, and it expects log volumes to fall until the 2040's then rise again to reach a level in 2052 that is lower than current volumes (see Technical Report K, p.15-16, Tables 2.6 and 2.7).

the MOT model provided as part of KiwiRail's third s92 response.[35] KiwiRail's forecasts are also directionally consistent with the 26% growth in flows of manufactured & retail items observed nationally between 2012 and 2017/18, as reported in the National Freight Demand Study.[36]

91. I note that the MOT model provided with KiwiRail's s92 response appears to use an outdated set of population projections to inform its freight demand forecasts. It uses Statistics NZ's 2013-based projections instead of the recently released 2018-based projections. The rate of population growth forecast for the Manawatu-Whanganui region in the 2013 projections is significantly lower than that in the 2018 projections. I would expect this to have had the effect of understating expected future freight demand and the associated economic benefits of the Freight Hub. This effect may have been further reinforced if the population figures flowed through into the GDP forecasts used in the model.

92. One submitter asked whether KiwiRail's freight demand forecasts should be revised in the light of the impact of COVID-19 on New Zealand's patterns of production, freight distribution and export.[37] While I would expect there to be some short-term impacts on freight flows as a result of the pandemic, I would not expect COVID-19 to have a material impact on the long-term requirements of the Freight Hub given the long time horizon of the project.

**Mode share**

93. There is understandable uncertainty regarding what the underlying mode share between rail and road (and other transport modes) will be for freight in the future. KiwiRail's modelling keeps rail's market share for manufactured goods on the Auckland-Palmerston North route constant for all years at its current level of around 12%. This assumes "*there is no action by the Government or other agencies to encourage the use of rail rather than road to support wider environmental and social objectives*". KiwiRail asserts that, if such action is taken, the benefits of the new Regional Freight Hub as a whole would be greater.[38]

94. I do not disagree with the proposition that additional action may be taken by the government to encourage the use of rail. On the other hand, it would be unrealistic

35 See KiwiRail's third s92 response, Attachment 1.
36 See Ministry of Transport, National Freight Demand Study 2017/18, Table 6.1, p. 76.
37 See Aaron P Fox (S47).
38 See Paling 2 Appendix A; see also Appendix B stating that, if rail's market share for manufactured goods on the Auckland-Palmerston North route "*increased to KiwiRail's ambition of 20%, then the growth would be 60% higher*".

to assume that road freight technology will remain static for the next 60 years i.e. that there will not be advances that reduce the relative advantages of rail over road for certain freight types. For example, see the submission of J. Hangfeng[39] referencing emerging road-freight technologies, including truck platooning and electric vehicle batteries.[40]

95. On balance, I consider KiwiRail's assumption that the underlying mode share of rail remains constant to be reasonable.

[39] Submission S97.

[40] See also, submission of D. Green (S 71) stating that new technologies in truck efficiencies have not been considered in the NoR.

**Geographic allocation of transport cost savings**

96. KiwiRail appears to assume that all transport cost savings associated with freight originating or terminating in Palmerston North (resulting from a larger container terminal and longer trains) would accrue to users of the Freight Hub based in Palmerston North.[41]

97. I would expect any cost reductions passed on by KiwiRail to be shared between shippers and recipients at both ends of the route and/or with downstream purchasers of the goods being shipped. It is not clear to me why 100% of the estimated cost reductions are allocated to Palmerston North rail users instead of being split between users based in Palmerston North and users based in other areas.

**Omitted benefits**

98. There are several references in the NoR documents to potential economic benefits associated with improved handling efficiencies at the Freight Hub, which appear to be additional to the benefits modelled by KiwiRail. For example, see Technical Report K, p.17 (*"In terms of its economic development impacts, the new Freight Hub on its larger Site will provide benefits arising from...[i]mproved handling facilities for goods transferring between road and rail both for unitised cargos (either in standard export containers or in lighter intermodal units for the domestic market) and other products, particularly logs"*). See also Technical Report K, p.18, noting that improved handling facilities would be expected to improve *"the efficiency of the supply chain for goods moved into and out of Palmerston North..., potentially reducing the costs of transport and improving the reliability of the service provided to users in the area"*.

99. I am not able to comment on the extent to which the new facility would give rise to the stated efficiency benefits. If realised, however, they would have the potential to increase the likely transport cost reduction and mode shift benefits of the Freight Hub relative to the estimates provided in Table 7.

**Summary**

100. Without conducting my own independent analysis, I am unable to determine the impact of the above points on the original benefit estimates provided by KiwiRail. However, it appears likely that the early reporting of longer train benefits and over-allocation of transport cost savings to Palmerston North users will have resulted in regional benefits being overstated, while the omission of freight handling efficiencies

[41] These cost savings account for around 20% of the quantified benefits summarised in Table 7. See also Table 8 showing the geographic distribution of benefits.

will have resulted in these benefits being understated. The net effect therefore depends on the relative scale of each of these impacts. This would benefit from further clarity by KiwiRail.

## 5.3 Investment benefits

101. The Freight Hub is expected to generate significant new investment and employment in the Manawatu-Whanganui region as businesses start up, relocate to the area, or expand their activities to take advantage of the economic opportunities generated by the Freight Hub. Growth in investment would be expected to occur in connection with both the construction phase of the project and the ongoing operations of the Freight Hub.

102. I outline KiwiRail's analysis of investment impacts in section 5.3.1, and provide my commentary in section 5.3.2.

### 5.3.1 KiwiRail analysis

#### 5.3.1.1 Investment during the construction phase

103. KiwiRail provides estimates of the GDP and employment impacts of the construction phase of the project[42] in Attachment 8b to its s92 response ("Attachment 8b"). The estimates are generated using an approach known as Economic Impact Analysis (EIA)[43], which uses a set of tables called "input-output tables" to estimate the direct and indirect (flow-on) impacts of construction spending by KiwiRail.

104. The impacts are calculated based on an estimated construction cost of around $1b.[44] KiwiRail adopts the North Island as its study area, noting that *"the proposed development is significant in terms of scale and will therefore draw on resources across a broad area for its construction"*.

105. The results of KiwiRail's analysis are presented in Tables 2 and 3 in Attachment 8b[45], which are reproduced as Table 9 and Table 10 below. Table 9 provides the total estimated impacts of construction spending by KiwiRail on North Island GDP, employment and household incomes. Table 10 breaks these into annual impacts by dividing them equally over the 10-year construction period.

---

42 The term "construction" is used here for simplicity. It is intended to represent all the activities that pre-date the site becoming operational, including planning, design, construction and fit-out.
43 EIA is sometimes referred to as Multiplier analysis.
44 See Attachment 3 to KiwiRail's third s92 Response.
45 See Attachment 8b, p. 11-12.

*Table 9 Estimated total GDP and employment impacts of construction (reproduced from KiwiRail s92 response, Attachment 8b, Table 2)*

Table 2: Estimated Total Economic Impacts of Construction ($million)

| Economic Impact Measures | Direct | Flow-On | Total |
|---|---|---|---|
| GDP $m | $300m | $680m | $980m |
| Employment (FTE-years) | 2,960 | 6,230 | 9,190 |
| Household Incomes $m | $185m | $295m | $480m |

*Table 10 Estimated annual GDP and employment impacts of construction (reproduced from KiwiRail s92 response, Attachment 8b, Table 3)*

Table 3: Estimated Annual Economic Impacts of Construction ($million)

| Economic Impact Measures | Direct | Flow-On | Total |
|---|---|---|---|
| GDP $m | $30m | $68m | $98m |
| Employment (FTE-years) | 296 | 623 | 919 |
| Household Incomes $m | $18m | $30m | $48m |

106. The "direct" estimates in the tables above represent GDP and employment impacts resulting directly from construction spending by KiwiRail. The "flow-on" estimates capture the indirect and induced GDP and employment impacts that are estimated to take place as a result of spending by businesses and employees further down the supply chain.

107. KiwiRail assumes that 50% of the impacts would occur regionally. On this basis, it divides the North Island estimates in half to convert them into estimates of impacts on the Manawatu-Whanganui region. KiwiRail concludes that "*the RFH could boost regional GDP by nearly $50 million per annum for 10 years, provide employment for almost 460 people, and lift regional household incomes by $24 million per annum for 10 years*".

#### 5.3.1.2 Longer-term investment

108. In addition to construction impacts, KiwiRail highlights the potential for the ongoing operations of the Freight Hub to generate new investment in the region.

109. KiwiRail does not quantify these impacts, noting that "*[t]here is little quantitative evidence on the scale of the potential for new freight hubs to generate increased economic activity, and it is therefore challenging to assess the scale for this impact*".[46] KiwiRail describes the potential impacts in its economic reporting, however, e.g.:

[46] See Technical Report K, p.18.

> [T]he qualitative assessment would suggest that the scale of activities potentially locating in the Freight Hub and the areas immediately surrounding could provide a critical mass for specialist suppliers in handling and logistics. This will encourage the relocation or new development of facilities to support these activities, with consequent increases in output and employment. The NEIZ zoning is suitable for industrial and commercial development and would supply opportunities to accommodate any new or relocated activities, allowing these to gain the benefits from the expanded Freight Hub.[47]

110. To illustrate the potential for supporting businesses to establish or expand in the area around the Freight Hub over time, KiwiRail compares a breakdown of employment by industry in the NEIZ with that in the more developed Tremaine Ave area. KiwiRail observes that "*service type activities…account for about 28 per cent of total employment in the [Tremaine Ave] area compared to just 4 per cent in the existing NEIZ/Palmerston North airport area*". KiwiRail states that this "*demonstrate[es] the potential for the development of these activities with the larger employment base on the combined Regional Freight Hub and expanded NEIZ*".

111. KiwiRail also estimates the number of jobs likely to be created at the Freight Hub itself. Table 11 below (reproduced from KiwiRail's third s92 response) shows that there are currently 543 people employed at the existing rail yard. This is expected to increase to 1005 jobs once the Freight Hub becomes fully operational. This indicates that the Freight Hub is likely to generate around 460 additional jobs relative to the existing rail yard. KiwiRail notes that "*this may be conservative because it does not allow for any increase in KiwiRail employment requirements as the Freight Hub reaches its full operating capacity, and so there is potential for this figure to be significantly higher*".[48]

[47] See Technical Report K, p.18.
[48] See Attachment 3 to third s.92 response.

*Table 11 KiwiRail Actual and Projected Future Employment (including Partners) (reproduced from Attachment 3 to Third s.92 response, Table 2)*

| **Existing Employment at Tremaine Avenue** | **Employees** |
|---|---|
| Tenant 1 | 100 |
| Tenant 2 | 43 |
| Tenant 3 | 95 |
| KiwiRail - Tremaine Avenue | 305 |
| **Total** | **543** |
| | |
| **Projected Future Employment - Stage 1** | |
| Freight partners | 280 |
| KiwiRail (based on Tremaine Avenue) | 305 |
| **Total** | **585** |
| | |
| **Projected Future Employment - All Stages** | |
| Freight partners | 700 |
| KiwiRail | 305 |
| **Total** | **1005** |

112. In addition to investment and employment growth, KiwiRail notes the potential for agglomeration benefits to arise as a result of the concentration of freight sector firms in the Central NZ Distribution Hub area. Agglomeration benefits are productivity gains that can accrue to firms that cluster together as a result of the ability to share things like information, specialist suppliers, and a pool of qualified employment candidates.[49]

## 5.3.2 Commentary

### 5.3.2.1 Investment during the construction phase

113. Overall, I agree with the assertion that construction of the Freight Hub is likely to provide jobs for a significant number of local people and utilise significant resources from local businesses. However, I have identified some issues below which, in my view, are likely to result in construction benefits being significantly overstated. These are outlined below.

    a. As noted above, KiwiRail's estimates of construction benefits were developed using EIA. In my experience, EIA tends to overstate expected benefits relative to social cost-benefit analysis (CBA), which is the preferred methodology used by central government agencies.

[49] See Attachment 8b, p. 17.

b. This happens because EIA does not consider the value (or opportunity cost) of the resources expended to deliver the increase in GDP. This usually results in costs being materially understated in an EIA and means that GDP cannot be used as a valid measure of "net benefit".

c. In addition, the increase in GDP can only be realised if there are sufficient idle resources in the economy to absorb the additional demand, which is rarely the case. Servicing an increase in demand in one part of a constrained economy will generally require the reallocation of resources from another part of the economy i.e. one part of the economy wins at the expense of another - this is known as displacement. Where displacement occurs, the net impact on the economy ends up being much smaller than the impact on the part of the economy that wins. I note that there is currently an unprecedented pipeline of capital works planned or underway in the Manawatu-Whanganui region[50], making displacement more likely.[51]

d. These issues are amplified by the use of economic multipliers to calculate flow-on effects in the economy. When these multipliers are applied, an additional dollar of expenditure can result in close to an additional dollar of GDP.

e. If a CBA framework were used instead of EIA, I would expect it to generate estimated economic benefits from the construction phase of around $150m-$200m, compared with the EIA-based estimate of $490m. Note that this assumes there is no displacement of other activity. If, say, a third of the construction spending would have been spent in the region anyway (i.e., a third of the resources used on the project were diverted from other projects), the estimated benefits would reduce by a third.

f. Finally, KiwiRail does not appear to discount the underlying estimates of future construction spending to reflect the time value of money, as is the preferred practice under Treasury's CBA Framework. In my view, discounting could reduce the estimated GDP impacts by a further 10-30% over the 10-year construction period.

---

[50] See, e.g. Attachment 8b, Figure 6, listing major projects planned for the region.

[51] This observation is made in at least one submission. See, e.g. submission of D. O'Keeffe & D. Butts (S72) ("*There are interim employment opportunities due to construction, figures given as 300, however these are not permanent, and would typically be employed in the construction industry elsewhere in the region*").

#### 5.3.2.2 Longer-term investment

114. I agree with KiwiRail that long term investment impacts are likely to be a key economic benefit of the project to the Manawatu-Whanganui region.

115. I would expect there to be significant new investment by freight and logistics operators looking to locate inside the Freight Hub, in the adjacent NEIZ or elsewhere in the city to make use of the KiwiRail facility.[52] I would also expect there to be growth in the number and/or size of businesses that provide supporting services to freight sector firms and their staff e.g. cafes, office supplies, vehicle servicing, short haul transport[53], etc. These businesses could decide to locate in the NEIZ or in nearby areas such as Bunnythorpe.

116. New investment by freight sector firms and supporting businesses would be expected to result in increased economic output and employment in the region. This could occur both as a result of increased activity within the firms themselves and as a result of increases in spending further down the supply chain (subject to our comments regarding displacement above). In my opinion, these ongoing investment impacts have the potential to be the biggest long-term economic benefit of the Freight Hub for the region.

117. Multiple submitters in support of the project point to the positive impacts that the Freight Hub would be expected to have on economic development and employment in the region.[54] Several submitters specifically highlight the potential for the Freight Hub to contribute to economic growth in areas outside the main centres such as Bunnythorpe.[55]

118. Finally, by increasing the amount of freight in the region that can be carried by rail, the Freight Hub would be expected to increase the resilience of the national freight network. This is another important benefit of the project that is not identified in KiwiRail's economic impact reports. The ability to move higher volumes of freight by

---

52 Only activity associated with firms who start up, expand or migrate to the region as a result of the Freight Hub would be considered an impact of the project. Activity connected with existing firms who relocate to the Rail Hub area from elsewhere in the region, without expanding their output, would not be considered new investment attributable to the project.

53 As KiwiRail notes, there may be some offsetting loss in business for long haul freight transport companies as a result of the anticipated increase in the mode shift to rail.

54 See, e.g., submissions of Manawatu District Council (S51); CEDA (S12); Accelerate 25 Manawatu-Whanganui (S56); Janet Susan Stirling (S19); Mike Tate (S23); see also Zaneta Park (S24); Michael Sharp (S55).

55 See, e.g. Mike Tate (S23) noting that "*the proposed KiwiRail hub is likely to create economic opportunities for Bunnythorpe and surrounding regions. This is both due to construction opportunities, and due to the development of associated industries and services (for example, cafes and childcare services)*". See also Zaneta Park (S24) and Michael Sharp (S55).

rail than would otherwise be possible would help to minimise the costs and disruption that can occur when key roading connections are damaged e.g. the closure of the Manawatu Gorge highway following land slips. Improved resilience would in turn be expected to attract higher levels of investment in the region by freight-dependent businesses.

## 5.4 The benefits of certainty

119. Certainty regarding the delivery and timing of the Freight Hub will be required to activate investments that are dependent on the new facility. As noted above, examples of potential investors include new or expanded distribution centres or logistics providers looking to locate on or near the KiwiRail site, as well as supporting businesses such as vehicle maintenance providers, cafes and personal services firms. In my view, the sooner there is certainty regarding delivery of the Freight Hub, the sooner these investments will be made.

120. On the other hand, an extended period of uncertainty regarding the Freight Hub may result in businesses that are currently located in other parts of the city delaying needed capital investment (e.g. to upgrade premises or machinery) to preserve the option to relocate closer to the Freight Hub if and when it is ultimately confirmed. Likewise, firms located outside the region may delay consideration of investing in the Manawatu until there is clarity regarding whether the Freight Hub will go ahead.

121. Either way, a long wait for certainty regarding KiwiRail's plans would be likely to deter investment and associated employment growth while also restricting the options available to residential landowners affected by the Freight Hub to invest in or sell their properties.

122. Progress on the Ring Road is also to some extent dependent on the Freight Hub. Waka Kotahi has stated that it is awaiting certainty regarding the size, location, and timing of the Freight Hub before progressing planning for key parts of the Ring Road programme, including road upgrades between Ashhurst and Bunnythorpe and the new Manawatu River bridge.[56]

123. I note that the Freight Hub is only one of several drivers for the Ring Road programme, and that a strong case exists for development of the Ring Road even if the Freight Hub does not proceed. Other important regional projects and

[56] See, e.g. PNITI Network Options Report, January 2021, p. 114 ("*Due to the extent of the Freight Hub and its influence on future freight and traffic movements within the Manawatū, certainty about the size, location, and extent, along with the optimal transport connections to support the Hub are necessary to enable the ongoing implementation and delivery of the PNITI programme*").

organisations that will benefits from the Ring Road include the NEIZ, City Centre Revitalisation, the FoodHQ Science Park and Linton Army Base, as well as others mentioned in section 4.2.3. Certainty regarding the Freight Hub will strengthen the case for the Ring Road to be developed in a timely manner, enabling the important social and economic benefits outlined in section 4.2.3 to be realised.

124. Finally, certainty regarding the Freight Hub would assist PNCC in determining whether and how much additional industrial land would need to be rezoned to replace the section of the NEIZ taken up by KiwiRail, and when this would be required.

125. Given the large number of businesses, public sector organisations and households whose future plans depend on the outcome of this project, I recommend that the lapse period is kept as short as is reasonably possible.

## 5.5 Ability to redevelop existing rail yard

126. KiwiRail considers the release of the 50-ha existing rail yard site on Tremaine Avenue to be a "moderate to high positive" economic impact of the project. Below I review KiwiRail's analysis in relation to this stated benefit.

### 5.5.1 KiwiRail analysis

127. According to the NoR, KiwiRail's operations at the existing rail yard on Tremaine Ave would transfer to the new site once the Freight Hub becomes operational.[57] This would potentially free up the land at the existing site for redevelopment. KiwiRail notes that there is uncertainty regarding how the land would be redeveloped but states that it "*would likely be suitable for a range of light industrial and commercial activities*".[58]

128. KiwiRail estimates that the redeveloped site "*could support up to 250-500 workers contributing up to $50m per year to the GDP of the city*".[59] KiwiRail also states that decommissioning of the Tremaine Ave site would free up "relatively valuable" industrial land close to the CBD, helping to offset the NEIZ land taken up by the Freight Hub and reduce the impact of the project on the city's industrial land stocks.

[57] See Integrated Transport Assessment, October 2020.
[58] See Attachment 8b, p. 3.
[59] See Attachment 8a.

### 5.5.2 Commentary

129. In my view, release of the Tremaine Ave site would have the potential to generate economic benefits to the region if it became more productive (in terms of direct output and externalities) in an alternative use than it would have been as a rail yard. Based on the information provided by KiwiRail, I am unable determine whether this is likely to be the case.

130. Relocating the activities of the rail yard away from Tremaine Ave would also have the potential to improve amenity values for residents living near the current site. This would be expected to occur if the new use of the site generated better outcomes relating to quality-of-life factors (e.g. noise, safety, traffic, severance, etc.) than the existing use would have. Release of the site could also improve the Council's ability to redevelop the land consistent with its vision for this part of the city.

131. As KiwiRail notes, little is known about alternative uses for the rail yard land.[60] The cost of redevelopment, including any required reinstatement or remediation work,[61] is also unknown. However, the fact that the Tremaine Ave site is already served by utilities and other infrastructure would have the potential to reduce development costs relative to a similarly sized greenfield site.

132. Finally, I am not aware of a formal commitment having been made by KiwiRail to release the site e.g. through decommissioning or removal of its designation. On balance, I consider that the release of the existing rail yard land has the potential to generate economic and social benefits for the region, however I do not think that significant weight can be attached to these given the limited information available about the future of the site.

---

[60] See, e.g. Technical Report K, p. 20 ("*It is not certain at present what would be the potential use for this area, noting that the land has been used for an operational rail site for 50 years and would be bordered by a busy operational rail line and a heavily trafficked road*").

[61] See, e.g. Technical Report K, p. 20 ("*In its present state [the site] may not be suitable for a range of sensitive uses. Any redevelopment of the site would need to comply with planning requirements, including national environmental standards*").

## 5.6 Impacts on local traffic conditions

133. It is generally understood that the development of the Freight Hub, as designed, would result in increased traffic volumes and changes to the local roading network. I understand that these changes have the potential to materially lengthen journey times for some road-users, imposing economic costs in the form of lost time and higher vehicle operating costs. It is important that these negative transport externalities are understood and mitigated to the extent possible.

134. The expected traffic and roading changes associated with the operations of the Freight Hub are outlined briefly in section 5.6.1. Section 5.6.2 describes KiwiRail's economic analysis in relation to some of the changes. In section 5.6.3, I provide commentary on KiwiRail's analysis and on expected traffic impacts more generally.

### 5.6.1 Key changes

135. Some of the key traffic and roading changes expected to arise as a result of the operations of the Freight Hub are summarised below:

a. **Increased traffic volumes:** The activities of the freight hub would be expected to generate an increase in the number of vehicle trips taken in Palmerston North and the wider region each year. According to KiwiRail's traffic modelling, the Freight Hub is forecast to generate 12,000 vehicles per day (vpd) at full build-out.[62]

b. **Changes to roads and intersections:** Several changes to local roading infrastructure are planned to accommodate the desired scale and configuration of the Freight Hub.[63] These include:

- Closure of a section of Railway Road, which is currently an important north-south arterial for vehicles travelling between Bunnythorpe/Feilding and Palmerston North, including trips to the airport.
- Creation of a new perimeter road around the western extent of the Freight Hub. The perimeter road would include an existing section of Roberts Line, which borders the proposed Freight Hub to the south and the NEIZ to the north.
- Creation of Freight Hub entrances, one on its northern boundary, one on its western boundary and one on its southern boundary at the intersection

[62] See Fraser evidence, para 13.
[63] These and other changes are listed in the Integrated Transport Assessment, p. iv.

of Roberts Line and Richardsons Line. The southern entrance would be the main entrance to the Freight Hub and would be used by most vehicles accessing the Freight Hub from the south, including Palmerston North and the NEIZ.

136. The expected impacts of the above changes on road users are discussed below.

### 5.6.2 KiwiRail analysis

137. In the economic evaluation provided with the NoR, KiwiRail states that the changes outlined above would be expected to have the effect of increasing traffic volumes on Roberts Line and that this could impede the ability of businesses located on Roberts Line to move to and from their sites.[64] KiwiRail assesses the scale of this impact as a "small negative". KiwiRail comments that "*[t]here is however the potential to develop measures which would mitigate these access issues*" and that "*[w]ith these the impact on the existing firms in the vicinity of the Freight Hub is expected to be negligible*".

138. In response to questions about the economic impacts of changes to traffic conditions, KiwiRail provides modelled estimates of travel time and cost changes for vehicle journeys to and from several affected areas in 2051. These include:

a. increased travel time and distance-related costs[65] for residents and businesses travelling from **Bunnythorpe** to the main urban area of Palmerston North during the AM peak period, including 1-2% increases for trips to destinations in western Palmerston North, 0-10% increases for trips to central-east Palmerston North, and more than 10% increases for trips to the Kelvin Grove area[66];

b. reductions in travel costs of $0-$2 per journey for heavy vehicles traveling between the **NEIZ** and urban areas to the west and south during the interpeak period, and increases in travel costs of $0-$3 per journey for heavy vehicles traveling between the NEIZ and areas to the north and east,

64 See Technical Report K, p.19.

65 KiwiRail estimated expected travel time and distance changes using the parameters set out in the NZTA/Waka Kotahi Monetised Benefits and Costs Manual. (See Attachment 8a, footnote 1.)

66 See Attachment 8a, Figure 1 and KiwiRail statement that "*[i]n general, there will be an increase in travel costs [from Bunnythorpe] to all destinations to the south as a result of the closure of part of existing Railway Road, construction of the new perimeter road, and the increased volumes of traffic on the routes linking Bunnythorpe to the main urban area identified by the PNCC traffic modelling*".

including Feilding, Bunnythorpe and the Kelvin Grove industrial area, during the interpeak period[67];

c. increases in the cost of heavy vehicle trips between **Kelvin Grove** and areas west and north (including Bunnythorpe, Feilding and the KFH/NEIZ area) during the interpeak period of between 10 cents and more than $2.50[68]; and

d. increases in heavy vehicle transport costs for most trips in the **urban area of Palmerston North** during the interpeak period, ranging from 0.5% to more than 5%, with the worst effects experienced in the City Centre and areas to the west of the City Centre.[69]

### 5.6.3 Commentary

139. S42A traffic and transportation expert, Harriet Fraser, identifies a range of adverse effects on different parts of the city's roading network that she considers likely to result from the changes outlined above.[70] She also expresses a concern that KiwiRail's traffic modelling underestimates the impacts on travel times in some cases, including in relation to journeys involving central Bunnythorpe[71] and Tremaine Avenue at peak times.[72]

140. Regarding the NEIZ, Ms. Fraser expects that businesses in the NEIZ that rely on vehicle access to the city via Railway Road to the south would be adversely affected by worsening congestion associated with the additional RFH traffic[73], as would the ability of businesses located on the section of Roberts Line included within the designation to move to and from their sites.[74]

141. Overall, Ms. Fraser considers that traffic conditions at multiple locations within the network would be expected to deteriorate as a result of the activities of the Freight Hub. From my perspective, this has the potential to result in negative economic and social impacts on affected road users, including increased travel times and vehicle operating costs as well as reduced connectivity between residents and the things they value e.g. healthcare, employment, education, friends and family, etc. It could also impose additional costs on the wider community if upgrades to the roading

67 See Attachment 8a, Figure 2.
68 See Attachment 8a, Figure 5.
69 See Attachment 8a, Figure 4.
70 See Fraser evidence, para 115.
71 See Fraser evidence, para 8.
72 See Fraser evidence, para 15.
73 See Fraser evidence, para 11.
74 See Fraser evidence, paras 115(g) and 133-137.

network are required (or brought forward) because of the activities of the Freight Hub.

142. While the overall economic costs of these disruptions have not been quantified, they would be likely to be quite material over time.

143. Connectivity is an increasingly critical driver of economic and social wellbeing. In my view, any project that has the potential to reduce connectivity should be evaluated very carefully and opportunities to avoid or mitigate such impacts should be sought.

# 6 The importance of integration

144. KiwiRail has an opportunity to maximise the cost reduction, mode shift and investment benefits of the Freight Hub by ensuring that it integrates effectively with other key regional freight infrastructure such as the NEIZ and Ring Road.

## 6.1 Integration between Freight Hub and NEIZ

145. As discussed earlier, there is a strong desire among stakeholders involved in planning for the Central NZ Distribution Hub for a connectivity solution between the Freight Hub and adjacent NEIZ that allows freight to move efficiently between the two sites. This is especially important for businesses based in the NEIZ that are heavy users of rail in their day-to-day operations e.g. distribution centres ("Level 2 users").

146. Given the heavy traffic volumes expected on Roberts Line[75], stakeholder preference is for Level 2 users to be able to access the Freight Hub via a grade-separated freight corridor. A dedicated corridor would provide separation from other traffic using Roberts Line and enable the use of specialised rolling stock (e.g. mafi units or combi lifts) to move large volumes of freight between the NEIZ and Freight Hub.[76] This would be expected to result in safer, more efficient freight movements relative to a solution involving the public road network.

147. I understand that the desired end state is for the NEIZ and Freight Hub to be connected in a way that enables freight to move seamlessly between them as part of a single, integrated freight system, consistent with the vision for the Central NZ Distribution Hub outlined in section 4. In my opinion, this would enhance the productivity of the precinct and strengthen Palmerston North's reputation as a major freight and logistics centre, maximising the economic benefits of the Freight Hub to the region. It would also go some way towards mitigating the negative impacts of the Freight Hub on vehicle movements to and from the NEIZ.

148. Initial freight volumes may not warrant the level of expenditure that would be required to develop a grade-separated connection immediately. In my view, however, it is important that the designation preserves the option for grade

[75] As discussed in section 5.6, current plans for the Freight Hub would see the section of Roberts Line that separates the NEIZ from the Freight Hub become a busy thoroughfare for trucks carrying freight to and from the Freight Hub as well as commuter traffic traveling north-south between the city and Bunnythorpe.

[76] The concept of a dedicated freight corridor between the NEIZ and Freight Hub is also discussed in the traffic and transportation evidence of Harriet Fraser. See, e.g. "*My understanding is that for containers to be moved between the two sites without using the public road network a straddle corridor with a width of around 50m would be needed*". (Fraser evidence, paragraph 125.)

separation in future, once the NEIZ and Freight Hub have developed further, and freight volumes have increased to a level that justifies the investment.

149. I understand that the Central NZ Distribution Hub Stakeholder Group (CNZDHSG)[77] is currently involved in master planning discussions pertaining to the wider distribution precinct (which includes the NEIZ and proposed KiwiRail facility),[78] including consideration of access issues. The CNZDHSG (excluding KiwiRail) highlights the importance of preserving future optionality in its submission:

> CNZDHSG seek an outcome that enables KiwiRail and CNZDHSG to respond to the outcome of the wider master planning process, particularly integrated transport connections and infrastructure to enable the "Level 2 User" to access the KiwiRail rail infrastructure. In the first instance that means developing the land in a way which does not restrict future opportunities for that connection to occur and for the infrastructure to adjust and be upgraded as freight movements between the NEIZ, Airport and KiwiRail Freight Hub increase.[79]

150. KiwiRail's current roading plan has NEIZ businesses accessing the Freight Hub via a public roundabout at the intersection between Roberts Line and Richardsons Line. In addition to freight vehicles from the NEIZ, the roundabout would be used by other Freight Hub customers from around the region as well as non-freight related traffic using Roberts Line as a through-road. KiwiRail has not expressed an intention to provide a dedicated accessway for Level 2 users (or NEIZ users generally) and has stated that grade separation to enable one to be developed in future is unnecessary. For example, see the following excerpt from KiwiRail's response to s92 request # 116(i):

> The traffic models and results reported in the ITA have been updated in response to Request 143, with the updated 2051 analysis showing that the expected volumes at this intersection will be adequately accommodated with a dual-lane roundabout, performing at a LOS A in the 2051 'with RFH' scenario. The updated model demonstrates there is no need to provide for a grade separated intersection. The NoR is sufficiently sized to accommodate this roundabout, providing access to the RFH including for NEIZ customers.

151. S42A Traffic and Transportation expert, Harriet Fraser, sees this as a missed opportunity to create a connectivity solution for the NEIZ that is better than the public road network:

---

77 Members of the CNZDHSG include KiwiRail, CEDA, PNCC, Horizons Regional Council, Waka Kotahi, Palmerston North Airport Limited, DKSH and PMB Landco Ltd.

78 See section 4.2 for further information about the Central NZ Distribution Hub.

79 A similar submission was made by CEDA (S12) in its own right.

> The Freight Hub site plan does not include any separate provision for the movement of containers between the Freight Hub site and the NEIZ other than by truck on the public road network. As such, the access provision to the Freight Hub by NEIZ businesses is no different to that of the wider public. The only transport benefit is the proximity of the two areas to each other.[80]

152. In my opinion, KiwiRail's proposal risks severing the distribution precinct into two distinct "islands", foregoing the potential integration efficiencies enabled by the adjacency of the Freight Hub to the NEIZ. One submitter describes the conflicts inherent in KiwiRail's proposed access solution as follows:

> The current design and layout of the KiwiRail Regional Freight Hub, as indicated in the Landscape Plan, has a single main entrance which is furnished with a roundabout at the point where it intersects the road which will be one of the main thoroughfares for traffic from Feilding and Northern townships into Palmerston North. This indicates that trucks or vehicles from the KiwiRail Regional Freight Hub will be required to navigate, and integrate with, vehicle traffic on what is likely to be a busy road.[81]

153. KiwiRail states in the NoR documents that it intends to work with Distribution Hub stakeholders on integration solutions.[82] To ensure this is undertaken in a transparent and coordinated way, I would support a condition that requires KiwiRail to actively engage with stakeholders (e.g. as part of the Central NZ Distribution Hub Stakeholder Group) regarding opportunities for integration with surrounding land uses, including Level 2 users.

## 6.2 Integration between Freight Hub and Regional Freight Ring Road

154. In section 4.3.2, I outlined the importance of ensuring the Freight Hub integrates effectively with the planned Regional Freight Ring Road. To maximise the benefits of both projects for the region, I believe it is critical that they connect with each other in a way that allows freight to move seamlessly between the Freight Hub and producers and markets located elsewhere in the lower North Island. This requires that:

- the Ring Road is in place by the time the Freight Hub becomes operational;

---

80 See, evidence of Harriet Fraser, paragraph 124.

81 See submission S17 (N. Schreurs and T. Good).

82 See, e.g., Assessment of Environmental Effects, p.52 ("*KiwiRail has also been working with PNCC, CEDA and local landowners to look at the integration of the Freight Hub with the surrounding land uses and transport links (including how freight from the NEIZ zone/Airport could access the Freight Hub). This work is currently being led by CEDA and KiwiRail has indicated it will continue to be involved as part of the wider group to develop solutions which enable the transfer of local freight to the Freight Hub site*").

- the design of the Rail Hub supports an optimal alignment for the Ring Road; and

- the roading connections between the Freight Hub and Ring Road are as efficient as possible.

155. Fulfilment of these conditions will enable the efficient transfer of freight between road and rail, maximising the economic benefits described in section 5 and advancing the region's objective of becoming a major distribution centre. It will also encourage maximum uptake of the Ring Road and diversion of trucks away from the central city, which are critical to PNCC's placemaking objectives.

156. Several submitters highlight the importance of efficient connectivity between the Freight Hub and the Ring Road. For example, CEDA and the Central NZ Distribution Hub Stakeholders Group express their desire for "*an outcome that enables the KiwiRail Freight Hub to connect to the future transport network detailed in the NZTA PNITI Business Case in an efficient and effective manner*".[83]

> The full benefits of the proposed Freight Hub depend on upgrading the roading infrastructure to unlock the distribution potential of the region….. As the Freight Hub is being progressed by KiwiRail separately from the roading initiatives, it is not possible to properly assess whether the projects will successfully realise their respective (or collective) intended benefits.[84]

157. I understand that, as currently designed, the northern section of KiwiRail's proposed perimeter road overlaps the planned alignment of the Ring Road at the point where it bypasses the town of Bunnythorpe. Traffic and Transportation expert, Harriet Fraser, states in her evidence that she is concerned about the potential impacts of the Freight Hub on these bypasses, which she says are critical to the removal of through-traffic from central Bunnythorpe.[85]

158. When asked via s92 information request about the plan for connections with the Ring Road, KiwiRail responded that Waka Kotahi has not yet finalised plans for timing, route alignments and tie-in positions for the Ring Road and "*[i]t is not KiwiRail's responsibility to assume route alignments and connections for the Ring Road*".[86]

---

83 See CEDA submission (S12) and CNZDHSG submission (S63).
84 See submission of P. Gore & D. O'Reilly (S61).
85 See, e.g. Fraser evidence at paragraph 9.
86 See KiwiRail response to s.92 request 114 (response number 2.1.1).

159. KiwiRail goes on to state that the Rail Hub has been designed in such a way as to enable future connections to the western and southern bypasses of Bunnythorpe. *"This could occur, for example, with the northern section of the [Freight Hub] perimeter road being converted into, or connecting into, a southern bypass while the western section of the perimeter road could be aligned within the designation to link to a western bypass".*[87]

160. According to Ms. Fraser, however, KiwiRail has not provided enough information to demonstrate that the NoR would support the delivery of these future bypasses. For example, see Fraser evidence at paragraph 123:

> Regarding the western and southern bypasses of Bunnythorpe, I expect these would effectively remove Freight Hub trips and other trips that do not have origins or destinations in Bunnythorpe and its immediate surroundings from central Bunnythorpe. In my view, it is imperative that the Freight Hub does not impede the delivery of these possible future bypasses. This is particularly the case for the southern bypass, which is likely to share some of the corridor of the northern section of the proposed Freight Hub perimeter road. To date, KiwiRail has not demonstrated how this might be achieved.

161. KiwiRail has proposed an NoR condition that requires it to work with stakeholders to agree a Road Network Integration Plan (RNIP) that will *"provide a mechanism to enable the roading network for the Rail Hub to be appropriately integrated with plans for the wider transport network".*[88] The proposed condition requires the Plan to be developed 12 months prior to construction of the Rail Hub.

162. Horizons Regional Council and Waka Kotahi propose some amendments to this condition in their submissions. Horizons requests that PNCC and Waka Kotahi be included in the RNIP stakeholder group and that the RNIP be updated regularly e.g. every 3-6 months.[89] Waka Kotahi recommends a requirement for KiwiRail to work with Waka Kotahi *"to agree an appropriate timeframe for the preparation of the RNIP [and] agree a process where the RNIP is endorsed by all parties before it is included in the outline plan".*[90]

163. I would support a condition that requires KiwiRail to actively engage with Ring Road stakeholders to agree a roading plan that delivers on the objectives outlined in paragraph 154 above.

---

87 See KiwiRail response to s.92 request 114 (response number 2.1.2).
88 See KiwiRail response to request 114 and proposed NoR condition.
89 See submission of Horizons Regional Council (S20).
90 See submission of Waka Kotahi (S65).

# 7 Review of submissions

164. I have reviewed all of the public submissions on the NoR relevant to economics. The matters raised can be broadly summarised as follows:

a. The Freight Hub would generate investment and employment benefits in the Manawatu-Whanganui region;[91]

b. The Freight Hub would support a mode shift of freight from road to rail, resulting in reduced emissions, congestion, safety issues and road maintenance;[92]

c. The Freight Hub would help to improve supply chain efficiency and resilience, including for local industries;[93]

d. The Freight Hub would negatively impact the performance of the local roading network;[94]

e. It is important that the Freight Hub integrates effectively with the NEIZ and/or the Regional Freight Ring Road;[95]

f. KiwiRail's economic benefit estimates are overly optimistic;[96]

g. New technologies in truck efficiencies have not been considered;[97] and

h. The Freight Hub would take up valuable residential and/or industrial land.[98]

165. The topics listed in paragraphs a through g are addressed in various places throughout my evidence. Submissions relating to roading and traffic impacts are

---

91 See, e.g. Manawatu District Council (S51), Central Economic Development Agency (CEDA) (S12), Accelerate 25 Manawatu-Whanganui (S56), Janet Susan Stirling (S19), Zaneta Park (S24), Michael Sharp (S55), Mike Tate (S23), Renee louise Thomas-Crowther (S70).

92 See, e.g. Horowhenua District Council (S73), Central Economic Development Agency (CEDA) (S12), Christopher Joseph Clarke (S11), Janet Susan Stirling (S19), Zaneta Park (S24), Michael Sharp (S55), Ben Foster (S78), Mike Tate (S23).

93 See, e.g. Horowhenua District Council (S73), Central Economic Development Agency (CEDA) (S12), Accelerate 25 Manawatu-Whanganui (S56).

94 See, e.g. Horizons Regional Council (S20), Foodstuff North Island (S58), Tutaki 2019 Ltd (S13), Danelle O'Keeffe & Duane Butts (S72).

95 See, e.g. Central Economic Development Agency (CEDA) (S12), Central New Zealand Distribution Hub Stakeholder Group (S63), Mike Tate (S23), Nicola Schreurs and Thomas Good (S17), Aaron P Fox (S47), Peter Gore & Dale O'Reilly (S61), Waka Kotahi NZ Transport Agency (S65).

96 See, e.g. Aaron P Fox (S47), Darren Green (S71), Danelle O'Keeffe & Duane Butts (S72), Ji Hangfeng (S97).

97 See, e.g. Darren Green (S71), Ji Hangfeng (S97).

98 See, e.g. Nicola Schreurs and Thomas Good (S17), Aaron P Fox (S47), Raewyn Carey (S84), Danelle O'Keeffe & Duane Butts (S72).

covered in greater detail in the evidence of s42A traffic and transportation expert, Harriet Fraser.

166. Regarding the issue identified in paragraph h, I understand that the Freight Hub would take up around 60 ha of the NEIZ Extension Zone and around 120 ha of rural/residential land to the north of the NEIZ. It will be important for the Council to review its land stocks in light of this and prepare to rezone additional land if this is needed to meet the city's expected industrial and residential land requirements.

167. From an industrial land perspective, I note that the selected location for the Freight Hub is consistent with PNCC's long-held strategy of developing a multi-modal (air, rail, road) freight precinct in the NEIZ area. I also understand that PNCC plans to formally review the capacity of the NEIZ in the near future recognising that, if the Freight Hub goes ahead, around 150ha of the 212 ha NEIZ will at that stage have been developed or secured with the intention to develop in the short to medium term.[99]

168. From a residential perspective, I understand there are several major housing developments planned or underway in the city that are designed to meet expected growth in housing demand over the next 30 or so years (without needing the land subject to the NoR). I also understand that the Council and other stakeholders are investigating options for housing growth in Bunnythorpe to accommodate expected employment growth associated with the Freight Hub.[100]

[99] See memorandum of David Murphy regarding Strategic Planning Context for the Freight Hub, p. 7.

[100] See memorandum of David Murphy regarding Strategic Planning Context for the Freight Hub, p. 8.

# 8 Principles to guide NoR conditions

169. Below are some suggested principles to guide the drafting of NoR conditions, based on my evaluation of the information provided by KiwiRail. If the project goes ahead, adoption of these principles will help to ensure that the region's freight sector is as efficient as it can be and the economic benefits of the project for the region are maximised.

a. **Integration with NEIZ**: The designation should enable freight to move efficiently between the NEIZ and the Freight Hub.

b. **Integration with Ring Road**: The design of the Freight Hub should support an optimal alignment of the Ring Road and enable freight to move efficiently between the Freight Hub and the Ring Road.

c. **Certainty regarding delivery**: The lapse period should be kept as short as is reasonably possible to provide certainty to potential investors and other affected parties.

d. **Optimal roading solution**: The project should minimise disruption to the road transport network, including any access impediments for NEIZ businesses.

Shane Vuletich

18 June 2021