

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: Planning

By: Anita Copplestone and Phillip Percy, Consultant Planners

1 Executive Summary

1.1 Purpose of this report

1. KiwiRail Holdings Limited has lodged a Notice of Requirement for a Regional Freight Hub with Palmerston North City Council. The NOR is for a designation for the construction and operation of an intermodal rail and freight facility.
2. An Independent Hearing Panel ("**the Panel**") has been appointed by the Council to make a recommendation on the NOR to the Requiring Authority (KiwiRail). We have prepared this planning report on behalf of the Council to assist the Panel to make a recommendation on the NOR. The report has been prepared in accordance with s 42A of the RMA.
3. The purpose of this report is to identify and crystallise the principal issues, environmental effects and policy that will be considered through the hearing process. In providing this planning advice, we draw on and cross reference the independent advice provided by other experts in the s 42A team.
4. The expert scientific or engineering advice that we have relied on is set out in the following supporting Technical Evidence s 42A reports:
 - a. Technical Report on Traffic and Transport effects – by Harriet Fraser;
 - b. Technical Report on Noise and Vibration effects - by Nigel Lloyd;
 - c. Technical Report on Landscape and visual effects – by Chantal Whitby;
 - d. Technical Report on ecological effects - by Justine Quinn;
 - e. Technical Report on Stormwater and Flooding – by David Arseneau and Reiko Baugham;
 - f. Technical Report on Lighting effects – by Glen Wright;
 - g. Technical Report on Air quality effects – by Deborah Ryan;
 - h. Technical Report on Social effects – by Amelia Linzey;
 - i. Technical Report on Economic effects – by Shane Vuletich;

- j. Technical Report on Palmerston North City Council Assets and Infrastructure – by Robert van Bentum;
- k. Technical Report on Railway track design, construction and operation – by Michael Than.

1.2 Submissions received

- 5. Ninety-eight submissions were received, covering a broad range of issues, both in support and opposition to the Freight Hub. We have categorised those submission points into issues and have addressed them in detail in our report. Our analysis of submissions has been supported by material provided by KiwiRail and the advice of the Council's technical experts.

1.3 Relevant provisions of policy documents

- 6. The relevant statutory provisions for the consideration of the NOR are set out in a standalone document that accompanies this report.¹ We evaluate the relevant statutory provisions as we go through the topics in this report.
- 7. Generally, the proposal is consistent with relevant planning provisions that focus on enabling infrastructure, including the infrastructure objectives and policies in the Horizons One Plan ("**One Plan**") and the Palmerston North District Plan ("**District Plan**"). However, on the information available for assessment at the time of this report, the proposal is inconsistent with some relevant provisions, including:
 - a. District Plan provisions that seek to maintain the character and amenity of rural and residential environments;
 - b. District Plan provisions directed at ensuring a safe and efficient land transport network for all road users;
 - c. provisions in the One Plan and the National Policy Statement for Freshwater Management 2020 ("NPS FM") that seek to prioritise the health and wellbeing of waterbodies and freshwater ecosystems;

¹ Relevant Planning Instruments: KiwiRail Freight Hub Notice of Requirement

8. In our opinion, the following matters require additional controls to achieve alignment with the relevant provisions (in no particular order):
 - a. Resolve safety and efficiency issues on the road network;
 - b. Provide safe and efficient active transport routes;
 - c. Identify more comprehensive mitigation, and offsetting and compensation, to address the loss of freshwater bodies and their values (including natural character and Te Mana o te Wai);
 - d. Establish noise limits, and provide off-site mitigation where needed;
 - e. Develop bespoke design principles and outcomes to inform the detailed design and effects mitigation.

1.4 Consideration of alternative sites, routes and methods

9. In our opinion, KiwiRail has undertaken adequate consideration of alternative sites or locations for the Freight Hub through its multi-criterion assessment of the suitability of the site.
10. KiwiRail has, however, identified several alternative project design methods for addressing significant adverse effects which were not assessed in formulating the NOR. Those alternative methods include:
 - a. Extending the designation boundary to include properties that are expected to be significantly affected by noise;
 - b. Methods for mitigating conflicts in the roading network created by the Freight Hub;
 - c. Methods for efficient connection between businesses in the NEIZ and the Freight Hub;
 - d. Grade separation at the Kairanga-Bunnythorpe Road intersection with the level crossing in Bunnythorpe to alleviate safety and efficiency effects.
11. There is no information in the NOR to explain why these alternative methods were not followed through or considered for the NOR, which we consider to be a deficiency in the assessment of alternatives. In particular, we consider

that extending the boundaries of the NOR to allow for the management of significant noise effects should have been given specific consideration.

1.5 Whether the designation is reasonably necessary for achieving the objectives

12. We consider that the Freight Hub is reasonably necessary to achieve KiwiRail's objectives. However, we consider the objectives could be better achieved through refinement and improvement to the design to better integrate the Freight Hub with other infrastructure and economic activities.

1.6 Any other matters

13. The Freight Hub proposal is well aligned with national, regional and city strategic planning documents that seek to facilitate the growth of the freight and logistics sector and to improve the capacity and efficiency of the rail freight network. The proposal fits well with the Council's land use strategy for the north-eastern part of the city. However, there is uncertainty regarding the degree of alignment with strategic transport documents, including those that seek to achieve:
 - a. Integration of transport and land use to support well connected communities;
 - b. Reliable multi-modal transport system with less modal conflict, including an integrated walking and cycling network;
 - c. A transport system where no-one is killed or seriously injured with a target for reduction of 40% in the next decade;
 - d. Efficient, reliable access and movement by road, rail and public transport, including for freight.
14. The Freight Hub and the Palmerston North Integrated Transport Initiative ("PNITI") programme of works are two major land transport infrastructure projects that will need to be developed in an integrated manner. Heavy reliance is placed on the proposed Road Network Integration Plan ("RNIP") to achieve effective integration. While this may be the appropriate mechanism, we consider further refinement is appropriate to provide certainty of process and outcomes and to optimise the Freight Hub's integration with these

programmes. We consider that the positive effects of the Freight Hub will be increased by better integrating with the programmes above and nearby industrial activities.

1.7 Effects on the Environment

15. We have prepared a Summary of Effects and Recommendations Table to accompany our report and to provide an accessible summary of our opinions and recommendations regarding the effects of the NOR. This table provides a summary of:
 - a. effects that have been identified by submitters, KiwiRail and the Council's s 42A reporting team;
 - b. our recommendations to address these effects;
 - c. recommended requirements for conditions; and
 - d. references to where these effects and recommendations are fully addressed in our report.

1.8 Positive effects on the environment

16. The Freight Hub will have significant positive effects on the environment. The most significant positive effects will be economic. In particular, the Freight Hub will enable growth of the freight and logistics sector, provide employment opportunities, and increase the capacity and efficiency of the rail freight transport network.
17. Achievement of these positive effects is heavily reliant on the Freight Hub being well connected and integrated with the wider transport network and with the other economic activities in the northeast of the city (e.g. the North East Industrial Zone ("**NEIZ**") and Palmerston North Airport). More work is needed to demonstrate how and when these integrations will be achieved, however, the development of the Freight Hub in its proposed location is well aligned with local and regional strategic planning to develop an integrated, well-connected multi-modal freight and logistics centre in the north-east of the city.

1.9 Adverse effects on the environment

18. We have also identified potentially significant adverse effects of allowing the NOR. We have identified these as significant due to:
 - a. the large scale of the effects and the fundamental changes to the characteristics of the environment;
 - b. the nature and potential intensity of the effects; and
 - c. the uncertain timing and long duration of the effects.
19. We consider the most potentially significant adverse effects are:
 - a. effects of noise and vibration on sensitive receivers during construction and operation;
 - b. social effects arising from disruption to communities, displacement of people and loss of amenity;
 - c. effects on the safe and efficient functioning of the road network;
 - d. loss of waterbodies (streams and wetlands) and their actual and potential values, including in relation to Te Mana o te Wai and natural character;
 - e. effects on the relationship of Māori and their culture and traditions with their ancestral lands, water, sites, wāhi tapu and other taonga;
 - f. visual effects arising from the introduction of large scale buildings, structures and roads.
20. The above list includes effects where there is limited information on the scale, characteristics and intensity of the effects and/or the way in which those effects can be avoided, remedied or mitigated.
21. The effects are complex and interrelated, and we are not confident that we have the 'full picture' of them individually and collectively at this stage of the process.
22. We do consider, however, that the following measures will contribute significantly to avoiding, remedying or mitigating potential adverse effects:

- a. adopting stringent noise standards, along with off-site mitigation, or alternatively, by extending the designation boundaries;
 - b. developing a design framework with a set of agreed principles and outcomes, in consultation with mana whenua and the community, which the detailed design and mitigations must achieve;
 - c. providing for safe and efficient connections and access to the existing and future road network, including in and around Bunnythorpe, the NEIZ and the strategic road network;
 - d. strengthening the role of the CLF to enable it to influence the design, mitigation of effects and ongoing site management;
 - e. facilitating the active and meaningful participation of tangata whenua in all relevant aspects of the Freight Hub design, implementation and ongoing management, including, importantly, in relation to all matters relating to freshwater management;
 - f. collaborating with key stakeholders, including through the RNIP and potentially the NEIZ user group, if adopted by KiwiRail.
23. This is not a complete list of recommended conditions and mitigations. A full summary of those recommendations is set out in the Summary of Effects and Recommendations Table, which accompanies our report.
24. The NOR has been lodged without an assessment of effects on cultural values. This leaves an information vacuum in assessing the potential effects of the NOR on Māori cultural values. We are not in a position to evaluate and give recommendations on mitigation measures as we do not possess the required knowledge or expertise on these matters. That knowledge and expertise is held by mana whenua and we consider that they must be more directly involved in the NOR evaluation than they are at present (as submitters only). We understand KiwiRail has been engaging with mana whenua since the NOR was lodged and we anticipate that KiwiRail will provide an update through their evidence or at the hearing.

1.10 Recommendation

25. Currently, we do not consider there is sufficient information to thoroughly understand the predicted effects of the proposal's consistency with the

relevant policy documents or the adequacy of proposed mitigation measures. This impacts our ability to give overall recommendations on the NOR.

26. The Summary of Effects and Recommendations Table identifies the areas where we consider further information is required to enable informed recommendations on the NOR.
27. We do not agree with KiwiRail that it is an appropriate wholesale approach to leave the resolution of these matters to the detailed design, including preparation of management plan and outline plan stage. Particularly where there is limited input from the community, other key stakeholders or the Council as recommending authority during those processes. Leaving all matters to management plans and subsequently an outline plan is not appropriate, in our opinion, when clear standards (as conditions on the designation) can put an upper limit on permissible effects.
28. In our opinion, further information and analysis are needed from KiwiRail to inform a robust recommendation on the NOR. Where we have been able to form conclusions on various topics, we have provided recommendations for designation conditions. Further work on conditions will be required once additional information is provided through KiwiRail's evidence and that of submitters.

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Abbreviations used in this report

AEE	Assessment of Environmental Effects
AEP	Annual Exceedance Probability
Airport	Palmerston North Airport
AMSL	above mean sea level
ARI	Annual Recurrence Interval
BPE-MHO A	Transpower Bunnythorpe – Mangahao A
BPE-MHO A	Bunnythorpe – Mangahao A transmission line
CAA NZ	Civil Aviation Authority of New Zealand
CEDA	Central Economic Development Agency
CEDF	Cultural and Environmental Design Framework
CIA	Cultural Impact Assessment
CLF	Community Liaison Forum
CLMP	Construction Lighting Management Plan
CNVMP	Construction Noise and Vibration Management Plan
CTMP	Construction Traffic Management Plan
CTMP	Construction Traffic Management Plan
CVA	Cultural Values Assessment
District Plan	Operative Palmerston North City District Plan (2018)
DSI	Detailed Site Investigation
FENZ	Fire and Emergency New Zealand
FIDOL	Frequency, Intensity, Duration, Odour character, Location
Freight Hub	Regional Freight Hub
FSNI	Food Stuffs North Island
GPS LT	Government Policy Statement on Land Transport 2021
GPS LT or GPS on Land Transport	Government Policy Statement on Land Transport
HSNO Act	Hazardous Substances and New Organisms Act 1996
ITA	Integrated Transport Assessment
KiwiRail	KiwiRail Holdings Limited
LTMA	Land Transport Management Act 2003

LVA	Landscape and Visual Assessment
MCA	Multi Criteria Analysis
MDHB	MidCentral District Health Board
NEI Design Guide	North East Industrial Design Guide
NEIZ	North East Industrial Zone
NES FW	Resource Management (National Environmental Standards for Freshwater) Regulations 2020
NES-CS or NES-C Regulations	Resource Management (National Environmental Standards for Assessing and Managing Contaminants in Soil to Protect Human Health) Regulations 2011
NIMT	North Island Main Trunk
NOR	Notice of Requirement
NPS	National Policy Statement
NPS	National Policy Statement
NPS UD	National Policy Statement on Urban Development (2020)
NPSET	National Policy Statement on Electricity Transmission 2008
NPSFM	National Policy Statement on Freshwater Management 2020
One Plan	Horizons Regional Council: One Plan
OTMP	Operational Traffic Management Plan
Panel	Independent Hearing Panel
PN	Palmerston North
PNATM	Palmerston North Area Traffic Model
PNCC or Council	Palmerston North City Council
PNITI	Palmerston North Integrated Transport Initiative
PSI	Preliminary Site Investigation
RLTP	Regional Land Transport Plan
RMA	Resource Management Act 1991
RNIP	Road Network Integration Plan
SHE	Safety, Health and Environment
SIA	Social Impact Assessment
SiD	Safety in Design
Transpower	Transpower New Zealand Limited

2 Introduction

2.1 Purpose of this report

29. KiwiRail Holdings Limited has lodged a Notice of Requirement for a Regional Freight Hub with Palmerston North City Council. The NOR is for a designation for the construction and operation of an intermodal rail and freight facility.
30. An Independent Hearing Panel ("**the Panel**") has been appointed by the Council to make a recommendation on the NOR to the Requiring Authority (KiwiRail). We have prepared this planning report on behalf of the Council to assist the Panel to make a recommendation on the NOR. The report has been prepared in accordance with s 42A of the RMA.
31. The purpose of this report is to identify and crystallise the principal issues, environmental effects and policy that will be considered through the hearing process. In providing this planning advice, we draw on and cross reference the independent advice provided by other experts in the s 42A team.
32. The expert scientific or engineering advice that we have relied on is set out in the following supporting Technical Evidence s 42A reports:
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 - g. Technical Report on Air quality effects – by Deborah Ryan;

- h. Technical Report on Social effects – by Amelia Linzey;
- i. Technical Report on Economic effects – by Shane Vuletich;
- j. Technical Report on Palmerston North City Council Assets and Infrastructure – by Robert van Bentum;
- k. Technical Report on Railway track design, construction and operation – by Michael Than.

2.2 Report authorship – Qualifications and Experience

- 33. This report has been prepared jointly by Anita Coplestone and Phillip Percy. Our qualifications and experience are set out below.

2.2.1 Anita Coplestone

- 34. My full name is Anita Renie Coplestone. I am a senior planner at Kahū Environmental. I have been practicing as a planner since 1999 and have experience in policy and plan development, preparation and processing of resource consent applications, in private practice and local government. This includes roles in both regional and territorial authorities. I hold a Bachelor degree (with Honours) in Resource and Environmental Planning from Massey University with a specialism in ecology, and a Postgraduate Diploma in Business Studies with Distinction (also from Massey University). I was a full chartered member of the RTPI (UK) from 2010 to 2018. I hold a current Making Good Decisions certificate and am a member of the RMLA.
- 35. I have worked on a number of major transport infrastructure projects, both in the UK and New Zealand. I was the planning lead for two nationally significant infrastructure projects for the A1 in Northumberland Strategic Improvements Programme (for Highways England), comprising two major road dualling schemes (13 miles in total), the A6 to Manchester Airport Relief Road (10km, dual carriageway road), new bus interchange and major town centre redevelopment - Stockport City (UK), and interchange improvements to Crewe and Warrington East Rail stations. I have contributed to a number of energy infrastructure projects including energy from waste plants, wind farms, a tidal barrage scheme and new nuclear; and three waters infrastructure planning, including strategic flood risk and water cycle studies. I have also held a number of spatial planning and policy planning roles in both the UK and

New Zealand, including for the Mayor of London, Ealing Borough Council (London), the Greater Wellington Regional Council and Whangarei District Council.

36. Together with Phillip, I acted as s 42A reporting officer for the Te Ahu a Turanga: Manawatū Tararua Highway Project to provide a replacement SH3 link between Ashhurst and Woodville, and I continue to act as processing planner for all Outline Plans of Works, enabling works resource consents and Outline Plan Waivers for this project.

2.2.2 Phillip Percy

37. My full name is Phillip Harry Percy. I hold the degree of Bachelor of Resource and Environmental Planning with Honours from Massey University with a specialisation in physical geography. I hold a current Making Good Decisions certificate.
38. I have been practicing as a planner since 1998 (approximately 23 years). This has included working as a Resource Advisor (Policy) for Greater Wellington Regional Council, a Senior Planner for Eliot Sinclair and Partners in Christchurch and as a Senior Planner for Beca in Wellington. I have previously worked as a Planner in the United Kingdom including in consent processing, enforcement and monitoring roles. I am currently a Director of Kāhu Environmental, a resource management consultancy established in 2007 and which employs 15 professional staff. I have been involved in a professional capacity in a wide range of planning matters including applications for large-scale subdivision consents, land use consents for dwellings, commercial buildings, earthworks and infrastructure projects including in the Palmerston North, Kapiti Coast, Wellington and Christchurch areas. I have experience in assessing proposals against both regional and district planning provisions and in both urban and rural environments.
39. I have also been involved in resource consent applications for discharges to land, water and air and including discharges of stormwater. I have experience in the development of RMA planning documents, both at regional and district level. In the local geographical area, this includes involvement in the development of, hearings and appeals on the Horizon Regional Council's One Plan. I was involved with the resolution of appeals on the land disturbance and vegetation disturbance provisions in Chapter 13 and in

the Freshwater and Natural Hazards Chapters. I have been involved in plan changes and policy development for Palmerston North City Council and Manawatu District Council.

40. I acted as s 42A reporting officer for the Te Ahu a Turanga: Manawatū Tararua Highway Project (alongside Anita) to provide a replacement SH3 link between Ashhurst and Woodville. I have an ongoing role to review and make recommendations and decisions on various aspects of the Outline Plan and management plan approvals process.

2.3 Environment Court Code of Conduct

41. The following confirmation is made by both authors.
42. 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.

2.3.1 Site visit

43. We undertook a site visit on Monday 2 November 2020 with the s 42A reporting team to locations of interest on public land. We are familiar with the surrounding environment.

2.3.2 Erratum and procedural matters

i. Scope of the Requiring Authorities designation

44. Two submissions² seek clarification of the scope of activities authorised by the designation. The submitters consider the designation can only authorise activities for which KiwiRail has financial responsibility and within the scope of its Requiring Authority Approval.³ To our understanding, the issue raised is

² Submission 45: PMB Landco Ltd, Brian Green Properties Ltd & Commbuild Property Ltd, and Submission 58: Foodstuff North Island

³ Submission 45: PMB Landco Ltd, Brian Green Properties Ltd & Commbuild Property Ltd, Submission 45: Foodstuff North Island

largely a legal point, and therefore we leave this matter to be addressed in legal submissions.

ii. Adequacy of information about the proposals and the public submission period

45. Two submissions question the adequacy of the information in the NOR and the effect this has had on the ability of potentially affected parties to make an informed submission.⁴ Further, Peter Gore & Dale O'Reilly⁵ object to the length of the public submission period and state that this period should have been extended.
46. We appreciate the submitters' concerns that there is a substantial amount of information in the NOR to digest and that the nature of this material is highly technical. We also agree that there are gaps in the information provided, which has made it difficult to determine effects on affected parties and the environment. The reporting officers have made three requests in order to elicit further information on many matters, and outstanding information gaps are addressed within this report, with a discussion on the significance of the absent information.
47. As to the time available to submitters, we sympathise with those who did not consider sufficient time was available. However, the NOR material was available for a long period of time prior to the formal submission period and the submission period was in accordance with the requirements of the RMA.

2.3.3 KiwiRail's planning strategy

48. As the Freight Hub has been developed to Concept Design stage, KiwiRail says that its site layout is "indicative",⁶ and that the design will be further developed over time. The NOR relies on the provision of limited supporting information at this stage, given the inherent lack of certainty in relation to the level of development and layout.
49. Given the indicative nature of the Freight Hub design, KiwiRail relies on accurate assessment of adverse effects and identification of appropriate measures to mitigate these to be confirmed at a later stage. This includes

⁴ Submission 66: Andrew Wotton, Submission 61: Peter Gore & Dale O'Reilly

⁵ Submission 61: Peter Gore & Dale O'Reilly

⁶ AEE, section 6.3.1.

reliance on the adoption of and compliance with various 'management plans', applications for necessary approvals, and regional resource consents to be sought at a later date.

50. This strategy has made it difficult for submitters and the Council's reporting officers to reach firm conclusions on the likely scale and extent of the effects of allowing the requirement, in turn affecting our ability to offer confident conclusions or recommendations. Consequently, we consider it appropriate to adopt a cautious approach in both our reporting and recommendations as to appropriate conditions for the NOR.

2.3.4 Documents submitted

51. The NOR and supporting AEE comprises three volumes of documents, which are organised as follows:
 - a. Volume 1 – regulatory forms, schedule of affected land parcels and plans of the designation extent;
 - b. Volume 2 – the assessment of environmental effects and supporting reports on community engagement, the Freight Hub Master Plan, Concept Plan, Landscape Plan, Multi Criteria Assessment report (which informed the site selection process) and supporting appendices;
 - c. Volume 3 – supporting technical reports (addressing the topics of design, construction and operation, contaminated land, geotechnical, transport, acoustic, landscape and visual, ecological, stormwater flooding, archaeology, social impact and economics).
52. To avoid repeating material in the NOR, our report relies on cross references where possible, drawing on the enabling provisions of s 42A(1A) and (1B) RMA. Where we rely on cross references, these are indicated by footnotes. Direct quotations are in italics.

2.3.5 Format of this report

i. Effects Table

53. Given the detail and extent of issues that are covered in this report, we considered it would be helpful to prepare a table providing an accessible summary of our opinions and recommendations in relation to the effects of

the Freight Hub, covering all identified topics. This table is provided as a separate document alongside our report.

ii. Consideration of submissions

54. Ninety-eight submissions have been received, covering a broad range of issues. We have read and carefully considered all the submissions received. Due to the large number of submission points, it was not practical to directly reference every submission point, and some grouping of submission points has been necessary. To assist submitters and the Panel to understand how their submissions have been evaluated, the submissions which have been considered under each topic are identified in a table at the beginning of each section.

iii. The relevant statutory provisions

55. At the request of the Panel in its 1st Minute, we have collated the relevant statutory planning provisions into a standalone reference document.⁷ For ease of reference, the provisions are collated by each topic area in the order they are addressed in this report. Our assessment of the effects of allowing the NOR reflects our consideration of these relevant provisions, as required by s171. We have not replicated the provisions within the body of this report.

3 Overview

3.1 Overview of the Proposal

56. KiwiRail, as a Requiring Authority, has lodged a NOR for a designation in the Palmerston North City Council District Plan for the construction and operation of a new intermodal rail and freight hub. The designation extent is shown in Appendix 1 to the NOR⁸ and includes approximately 177.7ha of land to the west of Railway Road, between Palmerston North and Bunnythorpe. The designation extent includes land that is currently designated for the North Island Main Trunk rail line ("NIMT").

57. KiwiRail is planning to replace its existing Palmerston North freight yard on Tremaine Avenue with a new future-proofed intermodal freight facility. The

⁷ Relevant Planning Instruments: KiwiRail Freight Hub Notice of Requirement.

⁸ Volume 1.

Freight Hub will provide for future demand for freight services in the southern and central North Island and has been designed to accommodate future rail needs to 2050 “and beyond”.⁹ KiwiRail proposes to deliver the Freight Hub over three stages:

- a. Stage 1 – initial opening and full demobilisation from the existing Tremaine Avenue yard (2030);
- b. Stage 2 – implementation of between 50-100% of all functional areas (2040); and
- c. Stage 3 – full implementation (2050)¹⁰.

58. KiwiRail state that the level of development and timing of that development may change due to detailed design and various external factors.¹¹
59. The Freight Hub is based on a master plan for intermodal freight hubs developed for KiwiRail in 2019, which has been adapted to address the local environment and rail constraints. The Freight Hub has been developed to what KiwiRail describes as a ‘concept design’ stage, with an indicative site layout as shown on the Concept Plan.¹² The indicative layout is informed by KiwiRail’s anticipated operational requirements and standards, along with the likely location and extent of land needed for noise and visual mitigation, roading and management of stormwater and flood risk.¹³
60. The main elements of the Freight Hub are set out in the Assessment of Effects on the Environment (“**AEE**”) prepared by KiwiRail at Section 6.3 Project Works, and illustrated in the Concept Plan¹⁴ and Landscape Plan and Cross Sections.¹⁵ The Freight Hub proposal is described in detail in the AEE and supporting Design Construction and Operation Report.¹⁶

⁹ AEE, section 6.3.1.

¹⁰ Technical Report A – Design Construction and Operation Report, Table 7 Interim Indicative Demand and Staging Timeline, pg 21.

¹¹ AEE, Section 6.3.1 – The Freight Hub.

¹² See Volume 2, Appendix B: Concept Plan.

¹³ AEE, Section 6.3.1 – The Freight Hub.

¹⁴ Volume 2, Appendix B: Concept Plan.

¹⁵ Volume 2, Appendix C: Landscape Plan and Cross Sections.

¹⁶ Volume 3, Technical Report A: Design Construction and Operation Report.

3.2 The detailed design and construction process

61. KiwiRail anticipates a long lead in time will be necessary to undertake the necessary detailed site investigations, detailed design, procurement of regional consents and lodgement of Outline Plans (approximately 3.5 years).
62. It is likely to be a further six years before the Freight Hub can start operating. This period includes a minimum of three years for bulk earthworks and site preparation works and another three years for construction of the initial operational elements of the Freight Hub (Stage 1).
63. The development and construction sequence is complex and multiple activities will need to take place simultaneously. This complexity is partly due to the extent of earthworks required to create a level site and the need to maintain an operational NIMT line and strategic roading connections for the duration of the construction programme. An indicative construction programme is set out in Section 4.2 of the Design, Construction and Operation Report.¹⁷
64. A largely level site is required to maintain a gradient difference between the mainline and connecting tracks to the Arrival/Departure Yard of no more than 1:200 (0.5%), which will work with the existing NIMT constraints. These constraints include the current level of the NIMT, which ranges between RL 49m – RL 51m, the NIMT bridge to the north of Bunnythorpe, and achieving adequate height to provide a gradient sufficient to pass overland stormwater flows through the site by either piping or constructed open channels.¹⁸ Bulk earthworks will be required to provide a 130ha level platform (or 'formation level') for the main operational area of the Freight Hub, at RL 50m. A likely construction sequence for these formation level bulk earthworks is set out in Section 1.3.3.2 of the Design, Construction and Operation Report.
65. Given the undulating topography of the site, the creation of this level platform will require substantial earthworks, with up to 5-6m of fill expected in some locations. Total fill could be in the order of 2,340,000 m³, requiring approximately 1,500,000m³ of imported fill to construct the formation level (at around RL 49.3m). Foundation elements such as granular fill, ballast, concrete and asphalt will then be imported to provide the final 700mm finishing

¹⁷ Volume 3, Technical Report A: Design Construction and Operation Report.

¹⁸ AEE, Section 6.3.5 Construction.

surfaces¹⁹. Sources of these materials are not confirmed, and KiwiRail anticipates these materials will be transported by road (unless rail access can be economically established via a temporary track and unloading facility)²⁰.

66. Bulk earthworks are likely to be staged west to east, starting from the proposed perimeter road and working towards Railway Road, although earthworks may occur around the site in different sequences, in response to contractor availability and overall programme. Excavation and preparation of the detention ponds and treatment wetlands will be an early construction task so that these facilities can be used for erosion and sediment control.²¹
67. A new perimeter road will be constructed around the western boundary of the Freight Hub to provide access to the Freight Hub facilities on the western side, including the log loading facility and Network and Maintenance Services areas. The perimeter road will have a dual function, as it will replace Railway Road as a major arterial route between Palmerston North and Bunnythorpe. Railway Road will be stopped and closed from the intersection with Roberts Line, to south of Maple Street, Bunnythorpe.
68. Construction of the perimeter road will also be one of the early construction activities, allowing traffic to be relocated from Railway Road, and for Railway Road to be closed. A new formation and track for the NIMT will then be constructed immediately adjacent to the Freight Hub, to allow track access to and from the yard for mainline trains, shunts and other train movements. Once this is constructed, the NIMT will be transferred westward (approx 20m) to the new alignment. The area of land vacated by the NIMT will be retained within the designation to provide room for future double tracking of the NIMT (as currently provided for within the NIMT corridor) and space for noise mitigation and landscape planting on the eastern boundary of the site.
69. Three road accesses to the Freight Hub are proposed:
 - a. at an upgraded Roberts Line/ Richardsons Line intersection, this will be the principal access to the hub, and in particular, the freight forwarding and container areas;

¹⁹ AEE, Section 6.3.5 Construction.

²⁰ Attachment 3 – s92 response Design, Construction and Operation Report, response to Q 168.

²¹ Design, Construction and Operation Report: Section 1.3.3.2, pg 4.

- b. from the perimeter road where Clevely Line intersects the designation extent, providing access to the tank farm, administration facilities and freight forwarding facilities;
 - c. from the perimeter road in a location north of Te Ngaio Road, providing a northern access to the log handling facility, maintenance and service areas, and storage facilities.
70. The NOR will require a number of physical changes to existing roads and private accesses, closure of roads and level crossings in order to connect the Freight Hub to the existing road network. These network changes are detailed in the AEE in Section 6.3.2 and in Section 2.3 of the Design, Construction and Operation Report. On the southern side of Roberts Line, the Te Araroa Trail will be rerouted to remain on the eastern side of Railway Road, where it previously crossed over to the west.
71. Existing watercourses running under the NIMT, Railway Road or through the site will be predominantly culverted and will discharge to the Mangaone Stream (via the stormwater attenuation ponds) in the same location as the current discharges. The watercourses will be culverted for operational reasons, as they cross almost perpendicular to the yard tracks, container and freight forwarding facilities. KiwiRail has identified an opportunity to retain some sections of the watercourse at the northern end of the site as a partly open channel, described as a 'naturalised' channel, with the possibility for stream enhancement through reconstructed stream reaches.
72. Three stormwater attenuation ponds with a storage capacity of 80,000m³ will be constructed with the designation extent. The ponds will manage the reduced floodplain capacity and surface permeability and reduce peak flows to avoid increasing flood levels downstream. The ponds will also form part of the treatment process for collected stormwater. The ponds are located to accommodate discharges from the three natural drainage paths and outside of the flood plain. Two of the ponds, with wetland planting, will be located on the downstream boundary of the Freight Hub. A third stormwater attenuation pond will be located within the operational area, near the southern entrance to the Freight Hub.
73. A large culvert will be installed within the centre of the Freight Hub, running from Sangsters Road to discharge to a stream on the eastern side of Clevely

Line. These earthworks will raise the level of the land in the unformed section of Sangsters Road.

74. Noise barriers will be constructed around the boundary of the Freight Hub. The barriers will consist of a combination of earth bunds/embankments and timber/concrete walls, with the height of the barrier ranging between 3 metres to 8 metres above the level of the Freight Hub. The height and constitution of the barrier in the indicative design vary in response to the adjacent terrain, availability of space and adjoining land use. A process of optimisation and refinement of barrier locations and heights is anticipated at the detailed design stage, following future noise modelling.²²
75. Mitigation planting is proposed, including River Plain, River Terrace and Wetland species, and indigenous specimen trees. Planting is proposed to rehabilitate earthwork batters, provide a degree of screening (of vertical noise mitigation walls and Freight Hub buildings) and on noise mitigation earth bunds (although some may be retained in pasture). Wetland planting will be provided in association with the detention ponds to assist with stormwater management. Mitigation planting is also proposed to the edges of the Te Araroa Trail and track lines on the eastern side of the site.²³
76. Some physical mitigation works will be implemented early in the construction sequence, such as the northern noise mitigation bund and associated planting. However, construction of the noise mitigation bund and wall on the eastern side of the site and adjacent to Sangsters Road will not be able to take place until the new NIMT formation and track is built, and once the NIMT has been relocated. This is because the noise bund and landscaping will occupy the space formerly occupied by the NIMT.²⁴
77. Construction hours are anticipated to be Monday – Saturday, 7am to 7pm.²⁵

3.3 Operational components of the Freight Hub

78. KiwiRail anticipates that there will be three operational phases for the Freight Hub. Initial rail operations will commence around 2030 (Stage 1), with an

²² This may include localised increases to the height of the eastern barrier where houses are elevated. See Technical Report D: Acoustic Assessment, Section 7, pg 38.

²³ Technical Report E: Landscape and Visual effects Assessment, pg 30.

²⁴ Technical Report A: Design Construction and Operation Report, Section 1.3.3.2, pg 5.

²⁵ Technical Report A: Design Construction and Operation Report, pg 4.

interim stage (Stage 2) developed by 2040 and a fully developed Freight Hub (Stage 3) by 2050. Table 7 in the Design Construction and Operation Report sets out the 'interim indicative demand and staging timeline', with approximate timing for delivery of the key functional areas and facilities.²⁶ Full demobilisation from the existing Tremaine Avenue yard will take place at Stage 1.

79. Once fully operational, the Freight Hub will consist of the following key elements:
- a. arrivals and departure yard – with eight tracks with sufficient length to provide for staging of a 1500m long train on any track;
 - b. marshalling yard, with 12 tracks to provide for 900m and 1500m long trains, plus two tracks for broken/damaged wagons and a run around track for movements from one end of the yard to the other;
 - c. container terminal, served by four tracks to provide access for direct arrival and departure of unit trains, and including hardstanding islands for loading/unloading of containers from truck to wagon;
 - d. wagon and locomotive storage;
 - e. maintenance facilities for maintenance and repair of wagons, locomotives and other rail equipment, including 15 tracks, turnaround triangle, a maintenance yard with four storage tracks, locomotive refuelling and sand loading facilities;
 - f. onsite storage of fuel, including diesel, LPG and air (with refuelling taking place within the marshalling yard, arrival/departure yard and maintenance yard);
 - g. network services depot, including storage (for railway infrastructure materials related to tracks, structures, signals, power);
 - h. freight forwarding facilities, including private sidings and warehouses (up to three storeys), with access to a common loading and unloading track;

²⁶ Technical Report A: Design Construction and Operation Report, pg 21.

- i. log handling yard with two 450m tracks;
 - j. bulk liquid storage ('tank farm') with siding;
 - k. container storage;
 - l. run around tracks to service different parts of the site;
 - m. train control and rail operation centre and administrative office buildings and associated carparking;
 - n. staff amenity facilities and car parking;
 - o. outdoor training area;
 - p. materials storage areas and parking for heavy vehicles;
 - q. operational and safety lighting, including underside lighting on tracks, overhead lighting in all yards, carparks, buildings and street lighting ;
 - r. internal roads to provide for movement of goods and personnel, and maintenance roads to serve tracks;
 - s. security fencing, CCTV, security lighting and controlled site accesses;
 - t. weigh bridges;
 - u. spill containment surfaces and bunds in the Marshalling Yard and Arrival/Departure tracks, approaches to Maintenance work bays, and around the bulk liquid storage;
 - v. stormwater management areas with associated planting;
 - w. noise management areas (earth bunds and noise wall) with associated planting.
80. A number of the tracks will be electrified at Stage 1. This will include some of the tracks within the arrivals and departure yard, maintenance yard and northern engine setoff/holding track. A new termination point for electrification will be established south of the Freight Hub and Roberts Line level crossing at approximately km 141,400 (the NIMT is currently electrified from the existing Tremaine Avenue yard north to Hamilton). Further

electrification will take place at later stages, with timing depending on demand.

81. The Freight Hub will operate 24 hours a day and seven days a week. The rail operational areas will be lit during hours of darkness. The indicative lighting design includes overhead lighting of all open track areas by 22m high poles with single or double heads, building mounted poles at 20m for large structures and buildings and 7.3m high poles with single or double heads around lower structures, roadways and carpark areas.²⁷
82. Stormwater treatment will include on-site practices to limit contaminant generation in high risk areas, with isolation and diversion to wastewater, and/or pre-treatment prior to discharge to the stormwater or wastewater systems. KiwiRail intends that the details of the stormwater treatment design will be determined through a Stormwater Management Framework, which will be prepared as part of the detailed design stage. The designation extent has been developed to provide for a dedicated stormwater treatment wetland facility within the land set aside for the detention ponds.²⁸
83. The Freight Hub will require potable water,²⁹ firefighting water, gas, wastewater (including two onsite pump stations) and electricity utilities. Stormwater collection and reuse will provide water for washdown requirements.
84. Existing utilities will need to be relocated, including the First Gas high pressure gas transmission pipeline to Hastings, the wastewater rising main sewer that services Bunnythorpe from the pumping station on Kairanga-Bunnythorpe Road,³⁰ and local electricity reticulation provided by PowerCo along Railway Road, Te Ngaio Road to Railway Road³¹ and Clevely Line.³² The Transpower Bunnythorpe – Mangahao A (BPE-MHO A) 110kV transmission line crosses the northern corner of the designation extent and a transmission tower (Tower

²⁷ Technical Report A: Design Construction and Operation, Section 3.4 Lighting Design, pg 17.

²⁸ Technical Report G: Stormwater Flooding Assessment, pg 13.

²⁹ Provisionally estimated at 50m³ per day. See Technical Report A: Design Construction and Operation Report, pg 11.

³⁰ This sewer runs from the pumping station along Te Ngaio Road and Railway Road.

³¹ From approximately 200m south of Maple Street to Railway Road, see Technical Report A: Design Construction and Operation Report, pg 12.

³² From Railway Road to 400m south of Roberts Line, see Technical Report A: Design Construction and Operation Report, pg 12.

A0632) is located within the site (but beyond the operational area), between Maple Street and Railway Road.

85. A fire engineering assessment will be required at detailed design due to the specific fire hazard rating of certain activities within the Freight Hub.
86. Together, the above elements constitute the 'Freight Hub' and will be collectively referred to as such in our report.

3.4 Overview of the existing environment

87. Chapter 5 of the AEE describes the existing environment. We generally agree with the description included in the NOR, with the following qualifications:
 - a. the surrounding zones include the Residential zone and Recreational zone, which are not described in the existing environment description in the AEE. The residential zone covers much of the village of Bunnythorpe. The recreational zone covers the Bunnythorpe cemetery;
 - b. With respect to the description of the NEIZ, an area of the NEIZ (approximately 126 ha) has not yet been developed for industrial development and is still in rural land use;
 - c. In addition to the network utilities identified in the AEE, the designation extent includes 11kV and 33kV electricity transmission lines.

4 The drivers for development of the Freight Hub

4.1 Requiring Authority status and drivers

88. KiwiRail is a State-Owned Enterprise responsible for the planning, construction, maintenance, and operation of New Zealand's rail network, which carries both freight and passengers. The network includes three interisland ferries providing transport for passengers, private vehicles, and rail freight between the North and South Islands.
89. KiwiRail is a network utility operator approved as a requiring authority under s 167(3) of the RMA for its network utility operation, being:

the construction, operation, maintenance, replacement, upgrading, improvement, and extension of its railway line³³

90. As a requiring authority, KiwiRail can utilise the powers under Section 8 - Designations, of the RMA to register a new designation or alter an existing one.
91. Long term planning for the heavy rail network operated by KiwiRail has recently been integrated into the Land Transport Management Act 2003 ("**LTMA**").³⁴ The purpose of the LTMA is:
- to contribute to an effective, efficient, and safe land transport system in the public interest³⁵
92. Under s 22A of the LTMA, KiwiRail is required to prepare a Rail Network Investment Programme (three year investment programme and ten year forecast), which takes into account the purpose of the LTMA and the Government Policy Statement on Land Transport ("**GPS LT**").
93. The GPS LT sets the Government's priorities for investment in land transport over a ten year period. The scope and requirements of the GPS LT is also set by the LTMA (at Part 3). The GPS LT guides how money from the National Land Transport Fund will be spent, which includes spending on public transport, state highways, local and regional roads, road safety and now rail.
94. To inform the latest GPS LT, the Ministry of Transport prepared a Draft New Zealand Rail Plan in 2019, which sets out the Government's vision and priorities for rail until 2030 and the investment needed to achieve it. During preparation of this report, the Rail Plan has been finalised and published. The Rail Plan both informs and is influenced by the GPS LT.
95. The Rail Plan was prepared in response to the Future of Rail Review, which commenced in December 2017. The Rail Plan identifies that the social, economic and environmental benefits of rail³⁶ have not been fully realised because of a lack of long-term sustainable investment in rail, and inadequate

³³ The Gazette Notice for this Approval is dated 14 March 2013.

³⁴ By the Land Transport (Rail) Legislation Act 2020 which came into force on the 1 July 2020.

³⁵ Section 3, Land Transport Management Act 2003. Accessed at: <https://www.legislation.govt.nz/act/public/2003/0118/latest/DLM226230.html#LMS374428>.

³⁶ Which are set out in 'The Value of Rail in New Zealand – 2016, prepared by EY for NZTA, September 2016, available from: <https://www.kiwirail.co.nz/media/the-value-of-rail-in-new-zealand/>.

planning and funding frameworks. The draft Rail Plan sets out two strategic investment priorities, one of which is:

investing in the national rail network to restore rail freight and provide a platform for future investments for growth³⁷

96. Rail is recognised as an integral part of the freight supply chain in the Rail Plan, with potential to play a greater role.
97. Alongside the strategic investment priorities, the Government is also investing in regional freight projects to enable regional development and connectivity. This investment is intended to increase the throughput of freight, improve the resilience and sustainability of transport infrastructure connecting regions and export products to markets and to create employment and economic development opportunities in the regions. The Rail Plan includes securing land for a multimodal hub in Palmerston North to help grow Palmerston North's role as a critical freight distribution centre for the lower North Island. The hub is identified as a key regional project³⁸ and development of the hub is being progressed through this NOR. Further details about the Provincial Growth Fund investment in the Freight Hub are set out in the AEE at Section 2.5. Further consideration of the alignment of the Freight Hub NOR with the GPS LT is set out in the technical report of Ms Fraser.

4.2 The necessity for development of the Freight Hub

98. The necessity and drivers for development of the Freight Hub are set out in Chapter 2 and 3 of KiwiRail's AEE. In summary, these are described as:
 - a. expected growth in export and import volumes of freight;³⁹
 - b. the environmental and safety benefits of a modal shift to rail for freight services, including the reduction in greenhouse gas emissions, and

³⁷ New Zealand Rail Plan, pg 25. Accessed from: <https://www.transport.govt.nz/assets/Uploads/Report/The-New-Zealand-Rail-Plan.pdf>.

³⁸ New Zealand Rail Plan, pg 41.

³⁹ The National Freight Demand Study 2017/2018 gives a total growth in national domestic freight movements of about 45% to 404m tonnes from 2017/18 to 2052/53. See Technical Report K: Economics, pg 13.

reduction in the national road toll through avoidance of road safety incidents;⁴⁰

- c. a desire to increase the resilience and reliability of the transport network, reduce congestion and improve connectivity, to support a thriving economy;
 - d. recent government commitments to invest in rehabilitation of the rail network;⁴¹
 - e. changes to land transport management funding, with spending on the heavy rail network now incorporated into the Land Transport Management Fund, under the LTMA;
 - f. a successful Provincial Growth Fund application, recognising the economic benefits of supporting and enabling Palmerston North's strategic plans for the city.
99. The AEE describes⁴² how Palmerston North is recognised as a 'transport cross-roads' and strategic intersection of important road and rail corridors, including the main north/south and east/west rail lines (NIMT, Palmerston North to Gisborne Line, Marton to New Plymouth Line), State Highway 1 and State Highway 3. It is also at the southern end of the electrified section of the NIMT to Hamilton.
100. As a consequence, Palmerston North has developed as an important logistics hub, serving the distribution and transport of goods across the lower North Island. The Manawatu-Whanganui region is also an important producer of primary exports, including logs, meat and dairy products, which must be transported to the ports at Napier or Wellington for onwards travel.⁴³ Palmerston North has therefore been widely recognised as the appropriate location for supporting distribution/logistics activities and facilitating regional economic development, including through investment in rail.⁴⁴

⁴⁰ The Value of Rail in New Zealand – 2016, prepared by EY for NZTA, September 2016, available from: <https://www.kiwirail.co.nz/media/the-value-of-rail-in-new-zealand/>.

⁴¹ New Zealand Rail Plan.

⁴² AEE, Section 3.3: The Importance of Palmerston North.

⁴³ Technical Report K: Economics, pg 5.

⁴⁴ See for example Accelerate 25, The Manawatu-Whanganui Economic Action Plan, August 2016, The Palmerston North City Council Economic Development Strategy, June 2018 and the PNCC 10 Year Plan 2018-2028, dated June 2018.

101. To facilitate and accelerate this economic objective, the Central Economic Development Agency (“CEDA”) is developing a strategy (the draft Central NZ Distribution Hub Strategy – ‘Servicing the Distribution Needs of the Lower North Island’), which promotes Palmerston North as the “natural and logical centre” for distribution across the Lower North Island. CEDA and other stakeholders intend to use a master planning process to facilitate the development of a multimodal hub for distribution activities, which will seek to coordinate the delivery of infrastructure and transport connections between key nodes within and beyond this hub.⁴⁵ The distribution hub is located in the north eastern part of Palmerston North and encompasses the proposed site for the Freight Hub, along with the North East Industrial Zone and Palmerston North Airport.

4.2.1 Constraints of the existing Freight Yard at Tremaine Avenue

102. KiwiRail operates a freight yard at Tremaine Avenue, which is on the NIMT. Almost all freight passing through the yard (whether that is travelling north-south or east-west) is marshalled at the site.⁴⁶ The AEE describes the constraints with the existing freight yard,⁴⁷ which include the dimensions of the yard (“long and skinny”), the proximity of sensitive residential land uses, and existing and potential future congestion on Tremaine Avenue (including as a result of industrial zoning changes), which is the main vehicle access to the yard. In addition, the existing freight yard does not provide for the efficient exchange of containers between trains, requiring individual containers to be moved on and off the train, rather than sorting wagons by shunting.⁴⁸ These constraints impact the ability to reconfigure the existing yard to handle the projected future freight growth, including accommodating longer trains, which are considered more efficient and cost effective.
103. The proposed Freight Hub is intended to accommodate the operation of trains up to 1500m long on the NIMT between Palmerston North and Auckland. Currently, the longest train which can be accommodated at the existing yard is 610m long.⁴⁹ The proposed Freight Hub will provide increased capacity for a longer working length trains and therefore faster access to containers.⁵⁰

⁴⁵ See Submission 12: CEDA.

⁴⁶ Technical Report K: Economics.

⁴⁷ AEE, Section 3.2 Existing Palmerston North Yard.

⁴⁸ Attachment 8a s 92 Response – Economics.

⁴⁹ Attachment 8a s 92 Response – Economics, Appendix B.

⁵⁰ Attachment 8a s 92 Response – Economics.

KiwiRail expects improved services and handling facilities to provide a more efficient and cost-effective service for existing customers, and encourage a modal shift to attract more freight to be carried by rail.⁵¹

4.2.2 Operational requirements for the proposed Freight Hub

104. Chapter 4 of the AEE describes how the operational requirements for the Freight Hub were identified, including through the development of a master plan for intermodal freight hubs, which will act as a blueprint for developing future hubs at key locations across the national network. This work included reviewing the existing rail network and its current freight movements, considering the improvements required and scoping the high-level components of a regional freight hub. The existing freight yard at Tremaine Avenue was used as a case example for this work. The master plan was developed on the basis it could be adapted and tailored to meet freight requirements in any specified location.⁵² Key components of the master plan were then sized to accommodate forecasted freight and network operational growth for Palmerston North out to approximately 2050.
105. The master planning exercise identified that the Palmerston North Freight Hub would need to address three functions (in rough order of importance):
- a. marshalling of trains – this is the primary function of the Tremaine Avenue yard, with 76% of rail traffic being traffic which is passing through, on its way to somewhere else on the network;
 - b. wagon storage, equipment maintenance, network services and yard operations;
 - c. accommodating increasing demand for container and commodity storage, commercial operations with freight forwarders and specialised traffic such as logs. (This is described as an 'additional' function in the AEE).

⁵¹ Technical Report K: Economics, pg 6, and KiwiRail Statement of Corporate Intent 2021-2023, accessed from: <https://www.kiwirail.co.nz/assets/KiwiRail-Statement-of-Corporate-Intent-2021-2023.pdf>.

⁵² A copy of the Master Plan is appended to the AEE at Appendix F.

4.2.3 A 'concept design'

106. Building on the master plan, the Freight Hub has been developed to a 'concept design stage', with an indicative site layout shown in the Concept Plan.⁵³ The Design, Construction and Operation Report describes how the concept design meets the functional requirements.⁵⁴ It further explains the technical parameters needed to meet KiwiRail's operational standards and address the physical constraints.⁵⁵ The operational standards cover details such as track alignment and geometry, the types of locomotives and rolling stock, track structure and operational and safety requirements. Physical constraints include topography, rail gradients, geological considerations, flood risk and ecology. Due to the long planning horizon, the development is proposed to be staged. KiwiRail state that the level of development at each stage, and the timing of that stage, may change due to detailed design and various external factors.⁵⁶

4.2.4 Objectives of the Freight Hub

107. Section 6.1 of the AEE sets out KiwiRail's objectives for the Freight Hub. The objectives are derived from the aspirations and issues associated with the national and regional freight task that the Freight Hub is designed to address, along with the broad locational and operational requirements.⁵⁷ The objectives are:

- a. increase its operational capacity to efficiently accommodate projected regional and national freight growth and support wider regional development;
- b. enable rail to be integrated with, and connected to, other transport modes and networks; and
- c. improve the resilience of the regional and national freight transport system over time.

⁵³ Volume 2, Appendix B.

⁵⁴ Technical Report A: Design Construction and Operation Report

⁵⁵ Technical Report A: Design Construction and Operation Report, Chapter 2, pg 7

⁵⁶ AEE, Section 6.3.1.

⁵⁷ AEE, Section 6.1 – Purpose and Objectives.

108. Our assessment of whether the works and designation are reasonably necessary for achieving the objectives for which the designation is sought under s 171(1)(c) is set out in Section 12 (Achieving Objectives of the Requiring Authority) of our report.

5 Development of the Freight Hub proposal

5.1 The Master Plan

109. As part of its investment in future proofing the rail network, the AEE explains that KiwiRail is seeking to improve the quality, location and layout of its freight terminals and yards in order to achieve improved speed, connectivity, capacity and efficiency⁵⁸ across the network. To achieve this, the master planning process described earlier was undertaken in 2019/2020. The AEE provides more detail about the drivers of this work and the end product at Section 4.1 and 4.2, and the master plan report is attached as Appendix F to the NOR.

5.2 The site selection process

110. Once the master plan process was finalised, a site selection process was undertaken along the existing NIMT corridor, informed by the master plan and guided by a Multi Criteria Assessment and decision conferencing process. This process is described at Section 10.2.1 of the AEE and in detail in Appendix F MCA Summary Report and supporting appendices. The process involved KiwiRail representatives, technical specialists and key stakeholders (including the Council), with input from iwi through a parallel process.
111. A long list of nine potential locations along the NIMT corridor was initially identified, including four sites to the northeast of the city in the vicinity of Bunnythorpe, four to the south in the vicinity of Longburn; and the existing freight yard. This was subsequently narrowed down to a short list of five area options through a series of workshops undertaken to agree assessment criteria, technical comparative assessments, scoring and weighting of criteria and sensitivity testing. This process resulted in four of the locations being assessed as 'fatally flawed', including the existing yard at Tremaine Avenue. Site

⁵⁸ AEE Section 4.1 Best Practice

options were then assessed by applying potential site layouts and repeating the assessment and scoring process. A final short list of three site options were identified, including the preferred site (Site 3) which lies to the south-west of Bunnythorpe on the western side of the NIMT and Railway Road, a site to the east of Railway Road and the NIMT (Site 4), and a site north-west of Bunnythorpe, on the eastern side of the NIMT (Site 2).

112. To inform the final site selection, a more detailed assessment was undertaken by each of the contributing technical specialists, followed by further workshops to agree scoring and review the weighting of criteria and sensitivity testing. Although the scoring difference between the sites to the west and east of Railway Road was not significant, the proposed site to the west of Railway Road (Site 3) was identified as the preferred site. KiwiRail state this is on the basis of its strategic fit and compatibility with the existing industrial zoning in this location, proximity to the North East Industrial Zone, potential for connectivity with the Palmerston North Integrated Transport Initiative (PNITI) and potential to serve traffic between Bunnythorpe and Palmerston North as well as the Freight Hub traffic, via a diverted Railway Road.⁵⁹
113. A review was subsequently undertaken of four potential site layout options for the preferred site. The preferred layout ("G2") located noisier activities such as the Container Terminal and operations area to the south, further away from Bunnythorpe. The final designation extent was informed by noise, traffic and flood modelling, site visits and review of council information, in order to incorporate land for on-site noise mitigation, storage of stormwater and provision of new roading connections.⁶⁰

5.3 Pre-application consultation and engagement

114. The affected parties (including stakeholders) identified by KiwiRail are set out in Chapter 7 of the AEE. The Engagement Report in Appendix E to the AEE describes the pre-application consultation undertaken with affected parties, stakeholders and the community and Section 7.5 of the AEE describes how feedback provided has informed the development of the Freight Hub.

⁵⁹ AEE, Section 10.2.2 Site Location.

⁶⁰ AEE, Section 10.2.3 Stage 2 – Site Layout and Section 10.2.4 Stage 3 – Spatial Extent.

115. The wider community was engaged with at three significant milestones in development of the Freight Hub proposal, including:
- a. in February 2020, to introduce the project, the Master Plan and the site selection process;
 - b. in July 2020, following ministerial announcement of the proposed site and indicative site layout;
 - c. in September 2020, following confirmation of the designation extent.
116. Key themes identified in the Engagement Report include road access, landscape and visual effects, flooding, noise, vibration and lighting impacts, impacts on property; and impacts on Bunnythorpe as a community, including community assets such as the cemetery, Te Araroa walkway and Linklater Reserve.
117. Landowners identified as being within or immediately adjacent to the designation extent were contacted by KiwiRail and offered individual meetings in June 2020, prior to announcement of the preferred site and wider community engagement. Further contact was made in September, following confirmation of the designation extent.
118. KiwiRail identified and consulted with stakeholders including Waka Kotahi NZ Transport Agency, the Council Horizons Regional Council, regional economic development agencies (Accelerate25, CEDA, Spearhead Manawatu), freight transport groups, utility providers, existing and potential customers and the business community, including those within the NEIZ. This included through dedicated meetings, and for some stakeholders (the Council, Horizons Regional Council, Waka Kotahi), involvement in the MCA site selection workshops and specific discussions on the PNITI programme.
119. Engagement with the Council specifically addressed matters such as potential transport, flooding and stormwater effects, zoning, integration with the NEIZ, and impacts on existing Council assets, such as the water supply bore.

5.3.1 Directly affected landowners

120. The parcels of land included or partially included within the designation extent are set out in Appendix 2 of the NOR. These 91 parcels of land (which includes

a number of named road and unnamed paper road parcels) are owned by 38 land owners.

121. Other than identifying that there will be some effects on property access, KiwiRail has not undertaken an assessment of effects on landowners.

5.3.2 Engagement with mana whenua

122. Engagement with iwi is described in Section 3.1 of the Engagement Report. Three main groups were directly engaged with:

- a. Ngāti Kauwhata
- b. Rangitāne ki Manawatu
- c. Ngāti Raukawa ki te Tonga.

123. The Engagement Report states that formal engagement with iwi commenced following announcement of the Provincial Growth Fund funding in November 2019. A site visit was undertaken in September 2020 with Ngāti Kauwhata and a visit to Aorangi Marae in October 2020. This followed discussions in August 2020 with Ngāti Kauwhata regarding the site selection process, in particular the site options west and east of Railway Road.

124. Although the Engagement Report submitted with the NOR indicated that a cultural values assessment would be provided by Ngāti Raukawa ki te Tonga, KiwiRail's s 92 response in February 2021 advised that it was unlikely that formal Cultural Values Assessment feedback would be provided by any of the iwi groups.

125. Instead, KiwiRail advised that there was a general preference for direct relationship agreements between the parties, to provide for participation throughout the project. The s 92 response indicated that KiwiRail are exploring this with iwi, with a view to formalising both the relationships and engagement steps.

126. We further understand from the February 2021 s 92 response that KiwiRail is working with Ngāti Kauwhata on a Kawenata agreement, as well as on a working framework agreement, similar to that which Waka Kotahi established for its Te Ahu a Turanga: Manawatū Tararua Highway project.

6 The Application for a Notice of Requirement

127. The proposed Freight Hub requires a NOR under s 168 and s 181 RMA to designate land and alter an existing designation. A NOR was lodged with the Council on the 27th October 2020. The extent of the designation (approximately 177.7ha) is set out in Volume 1 of the NOR, Appendix 1 – Designation Extent.
128. The NOR is supported by a set of proposed conditions, which are set out in Appendix 3 to the NOR (and amended by Appendix B of KiwiRail's February 2021 s 92 response).

6.1 Timing and Need for Resource Consent Applications and other approvals

129. KiwiRail will require other authorisations or approvals to undertake the works described in the NOR including, at least, consents relating to bulk earthworks, discharges from the disturbance of contaminated spill, stormwater discharges, and stream works, including the diversion of existing watercourses and installation of culverts. KiwiRail has chosen not to apply concurrently for the resource consents necessary to authorise the works under the Regional Plan, and these will be sought as part of the detailed design phase.⁶¹
130. Other consents will likely be required under National Environmental Standards, including the Resource Management (National Environmental Standards for Freshwater) Regulations 2020 for works in streams; and a land use consent under the National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health).
131. We consider there is also potential that regional consents will be required for discharge of contaminants to land which may enter water, and for discharges to air, although KiwiRail does not consider that regional consents will be required for those activities.

⁶¹ AEE, Section 6.6.

6.2 Decommissioning of redundant facilities at Tremaine Avenue

132. The activities currently undertaken by KiwiRail at its Tremaine Avenue freight yard will be relocated to the new site, except for the passenger terminal and the network communications centre. The NOR does not provide any detail about the decommissioning of redundant facilities and decommissioning or relinquishment of the existing designation is not part of the NOR. We understand from the s 92 response⁶² that this has not been considered in any specific detail at this stage, but is anticipated to take place once Stage 1 works are complete (approximately 2030). Planning, re-development and disposal of site assets will be informed by its future land use, which has not been determined.

6.3 Lapse period to give effect to the designation

133. KiwiRail seeks a lapse period of 15 years to give effect to the designation under s 184(1)(c). KiwiRail consider this lapse period is required due to the scale and complexity of the works (including in relation to changes to the existing road network), land acquisition (land will be acquired from approximately 42 different landowners) and necessary site investigations/resource consents. A longer lapse period is also referenced as enabling adequate time for alignment and integration with upgrades to the wider strategic transport network.⁶³

i. Existing designations and other approvals

134. The proposed designation extent includes land that is subject to earlier designations in favour of other requiring authorities. In particular, all of the roads (formed and unformed) for which the Council is the Road Controlling Authority, are subject to a designation for roading purposes.⁶⁴ The NIMT designation is also affected by the Freight Hub, but as KiwiRail is the Requiring Authority for this designation, 'overriding' the earlier designation is not an issue.

135. The Freight Hub will require the formal stopping of Council's paper and functional roads and the relocation of the Council's assets within those roads.

⁶² Attachment 3 s 92 response – Design, Construction and Operations, response to Q130.

⁶³ AEE, Section 6.4 Lapse Period.

⁶⁴ PNCC District Plan, Rule R24.3.

We understand that a draft Project Agreement between KiwiRail and the Council is being progressed to address these asset replacement works and the required statutory approvals. The purpose and content of that agreement is covered in more detail in the technical report of Mr van Bentum. Written consent under s 177(1)(a) will also be required from the Council before construction activities can commence where the Council has the Primary designation. A number of level crossings will need to be closed, a process which also requires agreement from the Council as the Road Controlling Authority.

136. Effects on the Council's infrastructure and assets are dealt with in the s 42A report of Mr Robert van Bentum and at section 8.13 of this report.

6.4 Requests for Further Information under s92(1) RMA

137. Three requests for further information under s92(1) of the RMA were issued to assist the Council in its consideration of the NOR. These requests and KiwiRail's responses are available to view on the Council's NOR webpage.⁶⁵

138. The first request (issued on 15 December 2020) covered a broad range of requests on various issues, including but not limited to:

- a. the assessment of effects on the local community and neighbouring land uses, including the North East Industrial Estate; and potential for mitigation;
- b. integration with the local road network and proposed regional freight ring road;
- c. the use and application of the PNCC strategic traffic model to the assessment of traffic effects;
- d. effects on values or relationships of importance to tangata whenua;
- e. economic and social effects;
- f. rail design and operational issues;

⁶⁵ <https://www.pncc.govt.nz/participate-palmy/have-your-say/kiwirail-regional-freight-hub/>.

- g. the relevant planning framework for assessment; and
 - h. other strategic documents.
139. Being a large request, further time was required to prepare the answers, with KiwiRail's responses received on Monday 15th February 2021.
140. Not all the requests were answered to the satisfaction of the Council's reporting officers. Matters on which uncertainty remains are generally addressed by the relevant technical experts for the Council.
141. Two further requests for further information were made following the public submission period to:
- a. request an assessment of air quality and dust effects (issued 28 April 2021 and responses were received on the 24th May 2021);
 - b. address issues raised in public submissions (issued 7 May and responses were received on the 28th May 2021).

6.5 Public Notification

142. The NOR was publicly notified as requested by KiwiRail (AEE, section 8.1.1) under s 149ZCB(2)(b) of the RMA. The Council used the 'local impact area' defined in KiwiRail's Social Impact Assessment⁶⁶ as a starting point for identifying affected parties. In addition to all landowners within the 'local impact area', the following landowners were directly notified:
- a. all properties in the Bunnythorpe township (inclusive of Waughs Road, Eggletons Road and Te Ngaio Road);⁶⁷
 - b. all landowners within the NEIZ, including landowners on Settlers Line and Richardsons Line;
 - c. properties on Roberts Line which will be affected by closing of the Robert's Line level crossing; and

⁶⁶ Technical Report J – Social Impact Assessment, Figure 1, pg 4.

⁶⁷ This area is part of the former 'notional' subdivision area provided for around rural townships under the previous Manawatū District Plan, which allowed for subdivision down to 400 sqm in the periphery of Bunnythorpe. A similar pattern of smaller lots can be seen on the eastern side of the railway, south of Bunnythorpe.

- d. rural residential properties on Orakei Road and Tutaki Road.
143. A total of 534 affected party letters were posted on 24 February 2021, prior to public notification on 26 February 2021. This figure includes notification to 'interested parties' including neighbouring territorial authorities, iwi, transport user organisations and statutory organisations identified as stakeholders. Thirteen tangata whenua representatives were sent a copy of the affected party letter by email.
144. The NOR was publicly notified by way of a notice in the Manawatu Standard on 27 February and 3 March 2021.
145. Copies of the public notification, NOR documents and submission forms were made available at several other locations.⁶⁸
146. A total of 98 submissions were received. There were two late submissions, which were accepted and waived by the Council. 53 submitters have asked to be heard. A summary of key themes raised in the submissions is set out in Section 7 of this report.

7 Key themes and issues arising from submissions

147. The following summary provides an overview of the prominent themes and issues identified in the public submissions. Consideration of the submissions and relief sought is addressed in detail in the assessment of effects chapter of this report, and variously throughout the Council's technical reports. Given the volume of submissions received, submission points have been grouped and considered by topic.

7.1 Submissions in Support

148. The Council received 71 submission points in support, or partly in support of the Freight Hub NOR.

⁶⁸ The Customer Service Centre, Palmerston North City Council, The Square, Palmerston North; The Palmerston North Public Library, The Square, Palmerston North; The Ashhurst Community Library, Cnr Cambridge and Bamford Streets, Ashhurst; Bunnythorpe School, 5 Baring Street, Bunnythorpe; Feilding Library, Cnr Stafford and Bowen Streets, Feilding; and Council's website.

149. The submissions in support cover a wide range of topics. Some submitters note that the “*Railhub will be good for Palmerston North*”⁶⁹ and the wider region, for reasons including the employment and economic opportunities it would generate⁷⁰. Several submitters consider the Freight Hub will also be positive for Bunnythorpe, as a result of the population increase and potential for additional services and facilities to establish in the village as a result⁷¹. Several submitters identify that the Manawatū/Palmerston North is an ideal location for the Freight Hub due to its central location in the lower North Island⁷² and others welcome the contribution that the hub will make to growing the region’s distribution and logistics sector⁷³. Submitters are supportive of the hub facilitating a shift to rail for freight transport, including as a means of reducing carbon emissions, improving sustainability and meeting New Zealand’s climate change responsibilities⁷⁴, improving road safety and prolonging the longevity of urban streets and rural highways⁷⁵.
150. Many submitters caveat their support for the Freight Hub on the basis that KiwiRail addresses their concerns about external adverse effects first. Concerns include light pollution, noise and vibration, dust, safe access to properties, separate routes for walking and cycling, heavy goods traffic and impacts on the local community⁷⁶. Several submitters support relocating the NIMT to the west of its current location in order to ease the existing effects of noise and vibration on houses to the east of the NIMT⁷⁷ and the noise mitigation and landscaping works proposed in this location⁷⁸.
151. A number of submitters feel the selected site (to the west of the NIMT) is appropriate⁷⁹, including because a significant part of the land is already zoned industrial and because this site is readily accessible to the NEIZ and the

⁶⁹ Submission 2: Warren Bradley.

⁷⁰ Submission 19: Janet Susan Stirling, Submission 23: Mike Tate, S24 – Zaneta Park, S55 – Michael Sharp, S56 – Accelerate 25 Manawatu-Whanganui, S73 – Horowhenua District Council, Submission 78: Ben Foster.

⁷¹ S23 – Mike Tate, S24 – Zaneta Park.

⁷² S11 - Christopher Joseph Clarke, S19 – Janet Susan Stirling, S56 – Accelerate 25 Manawatu-Whanganui.

⁷³ S12 – CEDA, S56 – Accelerate 25 Manawatu-Whanganui, S73 Horowhenua District Council.

⁷⁴ S11 - Christopher Joseph Clarke, S19 – Janet Susan Stirling, S20 - Horizons Regional Council, S23 – Mike Tate, S24 – Zaneta Park, S55 – Michael Sharp, S73 – Horowhenua District Council, S78 – Ben Foster.

⁷⁵ S55 – Michael Sharp.

⁷⁶ S2 – Warren Bradley, S18 – Kevin and Yvonne Stafford, S42 – Matthew McKenzie.

⁷⁷ S23 – Mike Tate, S24 – Zaneta Park, S74 – Arthur George Park.

⁷⁸ S23 – Mike Tate, S24 – Zaneta Park.

⁷⁹ S74 – Arthur George Park.

proposed freight ring road⁸⁰. However, achieving efficient and effective connections to that future road network and the NEIZ is important to many submitters⁸¹. The Central Distribution Hub Stakeholder Group⁸² would like to see the Freight Hub develop in a way which does not restrict future opportunities for closer integration/dedicated infrastructure to connect the NEIZ and the Freight Hub.

152. Submitters are supportive of the proposed mitigation planting and in particular the use of native planting.⁸³ Two submitters support the proposals for culverting and stormwater ponds, due to the susceptibility of the site to flooding⁸⁴ and proposals to naturalise the northern watercourse and provide for fish passage through culverts.⁸⁵
153. A number of submitters seek assurance that safe and separated cycling connections will be provided between Bunnythorpe and Palmerston North.⁸⁶ A new roading layout that bypasses Bunnythorpe village and improves safety and amenity is supported⁸⁷, as is the provision of off-road trails for walking and cycling and improvements to the environment of the Te Araroa Trail⁸⁸. The proposed closure of the level crossings on Railway Road is also supported, for safety reasons.⁸⁹
154. While not always the preferred solution, several submitters support the proposed Roding Network Implementation Plan as a means of integrating the roading plans of KiwiRail, Waka Kotahi and the Council.⁹⁰

⁸⁰ S23 - Mike Tate, S24 - Zaneta Park.

⁸¹ S63 - Central Distribution Hub Stakeholder Group, S20 – Horizons Regional Council.

⁸² Submission 63.

⁸³ S57 - John David Bryan Austin & Rosaleen Mary Wapp, S23 – Mike Tate, S24 – Zaneta Park, S57 – John David Bryan Austin & Rosaleen Mary Wapp.

⁸⁴ S23 – Mike Tate, S24 – Zaneta Park.

⁸⁵ S23 – Mike Tate, S24 – Zaneta Park.

⁸⁶ S20 – Horizons Regional Council, S42 - Matthew McKenzie, S9 - Jim Jefferies.

⁸⁷ S23 – Mike Tate, S24 – Zaneta Park, S74 – Arthur George Park.

⁸⁸ S23 – Mike Tate, S24 – Zaneta Park, S73 – Horowhenua District Council.

⁸⁹ S23 – Mike Tate, S24 – Zaneta Park.

⁹⁰ S20 – Horizons Regional Council, S23 – Mike Tate, S24 – Zaneta Park.

7.2 Submissions in Opposition, Neutral Submissions and those whose position was not stated

155. The Council received 327 submission points that were either neutral, in opposition, partly in opposition, or the submitter chose not to state their position on the Freight Hub NOR. The following provides an overview:

- a. *Noise and vibration* - this issue attracted the largest volume of submissions.⁹¹ Submitters are concerned about construction noise (and the length of the construction period), operational noise and particularly the proposal to operate the Freight Hub over a 24/7 working week, noise from heavy vehicles and noise from other traffic on the road network.⁹² Submitters are concerned that noise and vibration will affect their sleep, health, general wellbeing and amenity.⁹³ Many submitters are concerned about the timing of construction of noise mitigation barriers, the effectiveness of these barriers, and other noise management controls in mitigating noise effects.⁹⁴ Some submitters are also concerned about damage to their property from vibration.⁹⁵
- b. *Traffic effects* - Submitters raise a wide range of concerns about traffic effects, with this being the second most common submission topic.⁹⁶ Some submitters are concerned that the NOR will bring an increase in traffic and particularly heavy truck traffic, with subsequent effects on health and safety and quality of life.⁹⁷ Others are concerned that the

⁹¹ Approximately 18% of all submission points.

⁹² S41 – Warrick George, S3 – Mason Durie, S57 – John Austin & Rosaleen Wapp, S27 – Helen & Pita Kinaston, S40 – Gerry Rose & Gill Frampton, S44 – Mereti Taipana, S75 – Ian & Andrea Ritchie, S62 – Mary Chapman, S1 – Sonia & Neal Watson, S59 – Joanne Whittle, S4 – Bruce & Alison Hill, S84 – Raewyn Carey, S76 – Athol & Florence Gibson, S87 – Mary & Michael Hurley, S34 – Stuart Robinson.

⁹³ S94 – MidCentral District Health Board, S57 – John Austin & Rosaleen Wapp, S72 – Danelle O’Keeffe & Duane Butts, S25 – Andreas Hofman, S70 – Renee Thomas-Crowther, S86 – June Hurly, S53 – Raewyn Eastwood, S35 – Robyn Curtis, S36 – Helen Thompson, S22 – Fiona Hurly, S6 – Glen & Karen Woodfield, S26 – Peter Hurly, S88 – Corrine Dingwall, S80 – Riana Carroll, S50 – Kevin & Erina Carroll, S3 – Mason Durie.

⁹⁴ S18 – Kevin & Yvonne Stafford, S94 – MidCentral District Health Board, S7 – Rochelle & Rex McGill, S31 – Courtney Kibby, S95 – Owen Reid, S72 – Danelle O’Keeffe & Duane Butts, S16 – Martin Jones, S68 – Friederike Lugt, S59 – Joanne Whittle, S61 – Peter Gore & Dale O’Reilly, S6 – Glen & Karen Woodfield, S17 – Nicola Schreurs & Thomas Good.

⁹⁵ S33 – Linda Spearpoint, S84 – Raewyn Carey, S38 – Logan Harvey, S37 – Ian Harvey, S36 – Helen Thompson, S7 – Rochelle & Rex McGill.

⁹⁶ Approximately 16% of all submission points.

⁹⁷ S3 – Mason Durie, SW90 – Justine Jensen, S36 – Helen Thompson, S35 – Robyn Curtis, S37 – Ian Harvey, S38 – Logan Harvey, S22 – Fiona Hurly, S93 – Craig Forbes.

proposed changes to the roading network, including the closure of Railway Road, will result in more traffic travelling through Bunnythorpe, or Kelvin Grove, or on minor rural roads such as Cleverly Line, Sangsters Road, Parris Road, Stoney Creek Road and Tutaki Road. Submitters are concerned this will result in adverse effects on the safety of road users, residents and pedestrians, and on the amenity of residents.⁹⁸ The lack of provision for safe cycling in the NOR is opposed.⁹⁹

- c. *Integration with the existing road network* - A number of submitters are concerned about the lack of integration between the Freight Hub, the NEIZ and the airport, and the potential for conflict between vehicles moving between these areas and vehicles travelling between Palmerston North and townships to the north.¹⁰⁰ A related concern is the consequential impact on travel times and preferred travel routes.¹⁰¹ Others are concerned about the cumulative effects of the Freight Hub and Regional Freight Ring Road on the local community,¹⁰² and the perceived lack of integration in the delivery of these two projects¹⁰³.
- d. *Air quality and dust effects* - A large number of submitters are concerned about the effects of windblown dust and potential airborne pollutants within that dust, both during site earthworks and construction; and once the Freight Hub is operational¹⁰⁴. Submitters are concerned about the potential for adverse effects on the health of nearby residents,¹⁰⁵ particularly where drinking water is gathered

⁹⁸ S7 – Rochelle & Rex McGill, S84 – Raewyn Carey, S30 – Bunnythorpe Community Committee, S44 – Mereti Taipana, S91 – Steve Kinane, S72 – Danelle O’Keeffe & Duane Butts, S1 – Sonia & Neal Watson, S22 – Fiona Hurly, S28 – Katrina George, S26 – Peter Hurly, S52 – Jeff Williams, S57 – John Austin & Rosaleen Wapp,

⁹⁹ S29 – Tomas Behrens, S26 – Peter Hurly.

¹⁰⁰ S17 – Nicola Schreurs & Thomas Good, S13 – Tutaki 2019 Ltd, S72 – Danelle O’Keeffe & Duane Butts, S4 – Bruce & Alison Hill, S28 – Katrina George, S58 – Foodstuff North Island.

¹⁰¹ S15 – Maree Woods, S13 – Tutaki 2019 Ltd, S72 – Danelle o’Keeffe & Duane Butts, S77 – William Bent, S4 – Bruce & Alison Hill, S33 – Linda Spearpoint, S15 – Maree Woods.

¹⁰² S61 – Peter Gore & Dale O’Reilly, S4 – Bruce & Alison Hill.

¹⁰³ S65 – Waka Kotahi NZ Transport Agency, S72 – Danelle O’Keeffe & Duane Butts, S47 – Aaron Fox.

¹⁰⁴ S19 – Kevin & Yvonne Stafford, S4 – Bruce & Alison Hill, S94 – MidCentral District Health Board Public Health Service, S25 – Andreas Hofman, S86 – June Hurly, S90 – Justine Jensen, S21 – Ian Shaw, S33 – Linda Spearpoint, S10 – Timothy Tewake, S82 – Christina Holdaway.

¹⁰⁵ S94 – MidCentral District Health Board Public Health Service, S57 – John Austin & Rosaleen Wapp, S7 – Rochelle & Rex McGill, S53 – Raewyn Eastwood, S75 – Ian & Andrea Ritchie, S72 – Danelle O’Keeffe & Duane Butts, S1 – Sonia & Neal Watson, S22 – Fiona Hurly, S84 – Raewyn Carey, S36 – Helen Thompson, S15 – Maree Woods, S26 – Peter Hurly, S38 – Logan Harvey, S37 – Ian Harvey, S34 – Stuart Robinson.

from rooves, and on their amenity. Some submitters also worry that they will be affected by the odour of fumes.¹⁰⁶

- e. *Lighting effects* - A number of submitters object to the introduction of artificial lighting (and the associated light spill and glare) across the Freight Hub area. Resultant adverse effects raised include loss of enjoyment of the dark night sky, disruption to sleep and subsequent effects on health,¹⁰⁷ and further disturbance from headlights of vehicles.¹⁰⁸ Several submitters are concerned about the potential interference of the lighting design with safe operation of Palmerston North Airport.¹⁰⁹
- f. *Landscape and visual effects* - Submitters have similar concerns about the landscape and visual impacts on the receiving environment, which includes rural, rural-residential and residential properties, and the views they currently enjoy.¹¹⁰
- g. *Storage of hazardous substances* - Some submitters are concerned about bulk storage of hazardous liquids and chemicals, in particular the potential for leakages, explosions, or fire resulting in adverse effects on the health and safety of the community and on the environment.¹¹¹
- h. *Stormwater and flooding effects* - A number of submitters are concerned about stormwater and flooding effects associated with the Managone Stream and its tributaries, due to the frequency of flood

¹⁰⁶ S86 – June Hurly, S35 – Robyn Curtis, S87 – Mary & Michael Hurley, S62 – Mary Chapman, S1 – Sonia & Neal Watson, S22 – Fiona Hurly, S21 – Ian Shaw, S33 – Linda Spearpoint.

¹⁰⁷ S34 – Stuart Robinson, S7 – Rochelle & Rex McGill, S16 – Martin Jones, S70 – Renee Louise Thomas-Crowther, S36 – Helen S Thompson, S53 – Raewyn M Eastwood, S35 – Robyn Curtis, S91 – Steve M Kinane, S90 – Justine Jensen, S87 – Mary & Michael Hurley, S59 – Joanne K Whittle, S64 – Sharon Lee Gore, S1 – Sonia & Neal Watson, S6 – Glen & Karen Woodfield, S22 – Fiona Hurly, S84 – Raewyn Carey, S82 – Christina J Holdaway, S15 – Maree Woods, S80 – Riana Carroll, S10 – Timothy Brenoon Tewake, S50 – Kevin and Erina Carroll, S57 – John Austin and Rosaleen Wapp.

¹⁰⁸ S70 – Renee Louise Thomas-Crowther.

¹⁰⁹ S54 – Airways Corporation, S5 – Palmerston North Airport Ltd, S72 – Danelle O'Keeffe & Duane Butts.

¹¹⁰ S61 – Peter Gore & Dale O'Reilly, S70 – Renee Thomas-Crowther, S90 – Justine Jensen, S72 – Danelle O'Keeffe & Duane Butts, S37 – Ian Harvey, S36 – Helen Thompson, S1 – Sonia & Neal Watson, S21 – Ian Shaw, S38 – Logan Harvey.

¹¹¹ S3 – Mason Durie on behalf of Aorangi Papakainga, S8 – Fire and Emergency New Zealand, S1 – Sonia & Neal Watson, S72 – Danelle O'Keeffe & Duane Butts, S57 – John Austin & Rosaleen Wapp.

events and incidents of sewage overflows which currently occur across the site.¹¹²

- i. *Social effects* - Many of the submissions on external effects such as dust, noise, vibration, light and traffic highlight a social dimension to the submitters concerns, and the potential for prolonged uncertainty, stress, fear, and constant exposure to these effects to lead to adverse effects on mental and physical health.¹¹³ Other social issues which submitters raise include the impacts of the Freight Hub on housing need, both through loss of existing homes and the lost opportunity to develop the land for housing,¹¹⁴ impacts on the Bunnythorpe community (which is described as close-knit, rural, small-village living) and rural residential lifestyles,¹¹⁵ loss of property values and subsequent adverse impacts on economic wellbeing.¹¹⁶
- j. *Scale of effects* - Many submitters feel that the Freight Hub should be built elsewhere, where it would have less of an effect on the Bunnythorpe community, nearby rural-residential properties or the environment.¹¹⁷ Submitters cite the scale and level of adverse effects associated with the Freight Hub as the reason for this, including the 24/7 operation of the Hub, which does not offer any 'respite' for nearby residents.¹¹⁸ Some submitters consider there is insufficient information in the NOR application to enable an informed decision to be made

¹¹² S18 – Kevin & Yvonne Stafford, S61 – Peter Gore & Dale O'Reilly, S86 – June Hurly, S89 – Max Houghton, S36 – Helen Thompson, S1 – Sonia & Neal Watson, S37 – Ian Harvey, S77 – William Bent, S22 – Fional Hurly, S84 – Raewyn Carey, S4 – Bruce & Alison Hill, S21 – Ian Shaw, S47 – Aaron Fox, S38 – Logan Harvey, S26 – Peter Hurly.

¹¹³ S72 – Danelle O'Keeffe & Duane Butts, S40 – Gerry Rose & Gill Frampton, S25 – Andreas Hofman, S980 – Justine Jensen, S59 – Joanne Whittle, S64 – Sharon Gore, S38 – Logan Harvey, S37 – Ian Harvey, S50 – Kevin & Erina Carroll, S36 – Helen Thompson, , S57 – John Austin & Rosaleen Wapp.

¹¹⁴ S22 – Fiona Hurly, S64 – Sharon Gore, S84 – Raewyn Carey, S17 – Nicola Schreurs & Thomas Good.

¹¹⁵ S84 – Raewyn Carey, S15 – Maree Woods, S79 – Kate McKenzie, S47 – Aaron Fox, S34 – Stuart Robinson, S4 – Bruce & Alison Hill, S1 – Sonia & Neal Watson, S30 – Bunnythorpe Community Committee, , S57 – John Austin & Rosaleen Wapp, S97 – Ji Hangfeng.

¹¹⁶ S18 Kevin & Yvonne Stafford, S81 – Dianne Tipene, S17 – Nicola Schreurs & Thomas Good, S95 – Owen Reid, S40 – Rerry Rose & Gill Frampton, S72 – Danelle O'Keeffe & Duane Butts, S35 – Robyn Curtis, S53 – Raewyn Eastwood, S1 – Sonia & Neal Watson, S64 – Sharon Gore, S21 – Ian Shaw, S26 – Peter Hurly, S57 – John Austin & Rosaleen Wapp, S97 – Ji Hangfeng.

¹¹⁷ S17 – Nicola Schreurs & Thomas Good, S32 – Richard Kibby, S70 – Renee Thomas-Crowther, S4 – Bruce & Alison Hill, S47 – Aaron Fox.

¹¹⁸ S72 – Danelle O'Keeffe & Duane Butts, S59 – Joanne Whittle, S37 – Ian Harvey, S90 – Justine Jensen, S70 – Renee Thomas-Crowther, S36 – Helen Thompson, S38 – Logan Harvey, S1 – Sonia & Neal Watson, S64 – Sharon Gore.

about the magnitude of effects and whether these can be appropriately avoided, remedied, or mitigated.¹¹⁹

- k. *Site selection* - Some submitters consider a site in Longburn would be more suitable, including because this area is already industrialised.¹²⁰ Several submitters prefer a site at Taonui.¹²¹ A few submitters criticise the site selection process and the accuracy of the information used to inform that process.¹²²
- l. *Ecological effects* - Ecological effects which are cited by submitters include the loss of a population of eels, which are a source of mahinga kai for local iwi (Ngati Kauwhata),¹²³ effects on black-fronted dotterel¹²⁴ and other wildlife, including through loss of habitat,¹²⁵ and concern about the introduction of pest species (both flora and fauna).¹²⁶
- m. *Cultural effects* - A number of submissions have been received from iwi, recording the significant impacts that the NOR will have on cultural values, and their relationship with their ancestral lands, water, sites, wahi tapu, and other taonga.¹²⁷
- n. *Effects on infrastructure and utilities* - A number of submitters are concerned about effects of the NOR on existing infrastructure and utilities, including the Council's water bore on Roberts Line which supplies drinking water to the city, the wastewater sewer on Te Ngaio Road, First Gas mainline, Transpower 110kv transmission infrastructure, Powerco's local electricity network, and closure of Railway Road, as a strategically significant road.¹²⁸

¹¹⁹ S59 – Joanne Whittle, S47 – Aaron Fox, S61 – Peter Gore & Dale O'Reilly.

¹²⁰ S44 – Mereti Taipana, S64 – Sharon Gore, S72 – Danelle O'Keeffe & Duane Butts.

¹²¹ S88 Corinne Dingwall, S43 – Nick Turner, S41 – Warrick George.

¹²² S61 – Peter Gore & Dale O'Reilly, S72 – Danelle O'Keeffe & Duane Butts, S17 – Nicola Schreurs & Thomas Good.

¹²³ S81 – Dianne Tipene.

¹²⁴ S61 – Peter Gore & Dale O'Reilly.

¹²⁵ S70 – Renee Thomas-Crowther, S37 – Ian Harvey, S36 – Helen Thompson, S22 – Fiona Hurly, S38 – Logan Harvey.

¹²⁶ S7 – Rochele & Rex McGill, S57 – John Austin & Rosaleen Wapp, S47 – Aaron Fox.

¹²⁷ S69 – Te Ao Turoa Environmental Centre/Bestcare Whakapai Hauora Charitable Trust Mandated Iwi Authority Rangitāne o Manawatū, S14 – Nga Kaitiaki O Ngati Kauwhata Incorporated, S96 – Te Runanga o Raukawa, S49 – Ngai Turanga.

¹²⁸ S72 – Danelle O'Keeffe & Duane Butts, S61 – Peter Gore & Dale O'Reilly, S30 – Bunnythorpe Community Committee, S48 – Powerco Limited, S67 – Transpower New Zealand Limited.

- o. *Lapse period* - Several submitters oppose the requested lapse period of 15 years to give effect to the designation, stating that this is too great a period of uncertainty.¹²⁹
 - p. *Industrial land availability* - Several are also concerned about the restrictions that the Freight Hub will impose on future development/expansion of the city, including both urban/residential growth and industrial expansion, with a large area of the existing NEIZ being taken up by the hub.¹³⁰
 - q. *Economic impact* - A few submitters question the accuracy of the economic analysis and dependency on the freight forecast and successful transition from road freight to rail.¹³¹
 - r. *Climate change effects* - Some submitters are opposed to the Freight Hub for sustainability or carbon emission reasons, citing the loss of productive rural land, increase in heavy vehicle traffic and carbon emissions associated with construction of the Freight Hub, which they feel outweigh the reduction in emissions from road transport.¹³²
156. Many submitters requested or proposed mitigation to address their concerns about the Freight Hub NOR. Others suggested conditions, or amendments to the conditions proposed by KiwiRail to provide this mitigation. We address the mitigation sought by submitters in the assessment of effects section of this report. The most raised mitigation requests were as follows:
- a. Early implementation of mitigation planting, before construction starts and to give plants sufficient time to establish, to address noise, lighting, visual amenity and dust effects;¹³³

¹²⁹ S77 – William Bent, S61 – Peter Gore & Dale O'Reilly, S59 – Joanne Whittle.

¹³⁰ S72 – Danelle O'Keeffe & Duane Butts, S97 – Ji Hangfeng.

¹³¹ S71 – Darren Green, S72 – Danelle O'Keeffe & Duane Butts, S97 – Ji Hangfeng, S47 – Aaron Fox.

¹³² S44 – Mereti Taipana, S66 – Andrew Wotton, S72 - Danelle O'Keeffe & Duane Butts, S47 – Aaron Fox, S97 – Ji Hangfeng, S24 – Zaneta Park, S57 – John David Bryan Austin & Rosaleen Mary Wapp.

¹³³ S57 – John Austin & Rosaleen Wapp, S57 – John Austin & Rosaleen Wapp, S23 – Mike Tate, S24 – Zaneta Park.

- b. Early implementation of noise mitigation walls, to mitigate construction noise;¹³⁴
 - c. Mitigation to address airborne contaminants, including first flush diverters/extra filtration for rainwater capture from rooves, and additional cleaning/replacement filters for water tanks;¹³⁵
 - d. Off-site noise and light mitigation, including double or triple glazing, black out curtains and mechanical ventilation;¹³⁶
 - e. Restrict the operating hours of the Freight Hub, in particular at night and at the weekends;¹³⁷
 - f. Provision of management plans up front and prior to designation of the Freight Hub, or alternatively, specific, measurable and monitorable conditions to address adverse effects;¹³⁸
 - g. Compensation for those who live adjacent to the development, for the losses they sustain in their amenity and in the devaluation of their properties;¹³⁹
 - h. Partnership with iwi, through either a reference panel, governance committee or decision-making panel, similar to the Alliance used in the Te Ahu a Turanga designation;¹⁴⁰
157. Many submitters sought relief in the form of further information to inform the hearing process. Requests for further information included:
- a. assessment of airborne pollutants;

¹³⁴ S57 – John Austin & Rosaleen Wapp, S23 – Mike Tate, S24 – Zaneta Park, S95 – Owen Reid.

¹³⁵ S7 – Rochelle & Rex McGill, S72 - Danelle O’Keeffe & Duane Butts.

¹³⁶ S57 – John Austin & Rosaleen Wapp, S94 – MidCentral District Health Board, S7 - Rochelle & Rex McGill, S72 – Danelle O’Keeffe & Duane Butts.

¹³⁷ S7 - Rochelle & Rex McGill, S72 – Danelle O’Keeffe & Duane Butts, S27 – Helen & Pita Kinaston, S59 – Joanne Whittle.

¹³⁸ S47 – Aaron Fox, S59 – Joanne Whittle, S61 – Peter Gore & Dale O’Reilly, S68 – Friederike Lugt.

¹³⁹ Submission 18: Kevin and Yvonne Stafford, Submission 97: Ji Hangfeng, Submission 57: John Austin & Rosaleen Wapp, Submission 6: Glen & Karen Woodfield.

¹⁴⁰ Submission 14: Nga Kaitiaki o Ngati Kauwhata Incorporated, Submission 49: Ngati Turanga, Submission 69: Te Ao Tuora Environmental Centre (Rangitāne o Manawatū), Submission 96: Te Rungana o Raukawa.

- b. assessment of noise impacts at individual properties and identification of mitigation required;
- c. collection of vibration data;
- d. provision of draft management plans;
- e. assessment of effects on network utilities;
- f. information on what hazardous substances will be stored at the site;
- g. cultural impact assessments;
- h. complete ecological surveys;
- i. independent review of the MCA outputs;
- j. assessment of navigational effects on the airport;
- k. risk assessment of potential hazards/industrial accidents;
- l. review of impacts on local roads and costs for repair;
- m. investigation of health impacts of noise;
- n. investigation of groundwater contamination risks;
- o. assessment of noise effects on Bunnythorpe school;
- p. Further information on job forecasts and review of economic assumptions.

158. These submissions informed a further information request to KiwiRail in May 2021.

8 Statutory Evaluation

8.1 Statutory context for the assessment

159. The following section provides an overview of the statutory context for consideration of the Freight Hub.

160. In forming a recommendation on the Freight Hub the Panel must have regard to the matters set out in s 171(1) and comply with s 171(1A) of the RMA. The

following table identifies the relevant s 171(1) matters and where they are addressed within the NOR and this report. Our assessment of the effects of allowing the NOR is structured by topic. Each topic section in the report addresses the most relevant statutory and planning provisions for that topic. The relevant provisions are reproduced in a standalone document which accompanies this report.¹⁴¹

Statutory matter	Where this is dealt with in the NOR	Where this is dealt with in the s 42A report
Part 2 of the RMA	AEE, Section 10.5 RMA Part 2	Section 7.2 and Section 9 as relevant
National Policy Statements	AEE, Section 10: Relevant Planning Framework	7.3.1 and Section 9 as relevant.
New Zealand Coastal Policy Statement	AEE, Section 10.1.3	Section 7.3.2
Regional Policy Statement	AEE, Section 10.1.5	Section 9 as relevant
Regional Plan	Not addressed	Section 9 as relevant
District Plan	AEE, Section 10.1.6	Section 9 as relevant
Adequate consideration of alternatives	AEE, Section 10.2 Consideration of Alternatives and Appendix F	Section 11
Reasonably necessary to achieve objectives	AEE, Section 10.3 The Necessity of the Work and the Designation	Section 12
Other reasonably necessary matters	AEE, Section 10.4 Any Other Matter	Section 8.4

¹⁴¹ Relevant Planning Instruments: KiwiRail Freight Hub Notice of Requirement.

8.2 Relevant Resource Management Act (RMA) 1991 Provisions

8.2.1 Part 2 of the RMA

161. We understand that consideration of the relevant matters under s 171 RMA are subject to the governing principles of Part 2 of the RMA, many of which are relevant to the Freight Hub and addressed in this report.

8.2.2 Part 8 of the RMA

162. Section 171 sets out the matters that the Council must have regard to when considering a requirement and any submissions received, and in coming to a recommendation on the requirement.

163. Section 176 sets out the effect of designation, including in relation to s 9(3) of the RMA (which does not apply to work undertaken under the designation), the restricted application of the district plan provisions (which apply only to the extent that land is used for a purpose other than the designated purpose) and the restriction on use of the land that would prevent or hinder the project to which the designation relates.

164. We note that under s 178, the restriction of the use of land takes interim effect from the date that KiwiRail gives notice of the requirement under s 168 to the Council. The restriction does not end until the requirement is either withdrawn, cancelled, or the designation is included in the district plan.

165. Section 176A sets out the requirement for an outline plan to be submitted to the territorial authority prior to construction, unless one of the exclusions in s 176A(2) prevails.

166. Section 177 provides that where land that is subject to a designation is already the subject of an earlier designation, the requiring authority responsible for the later designation may do anything that is in accordance with that designation, only if it first obtains the written consent of the authority responsible for the earlier designation. This is relevant to the existing roading designations within the proposed designation extent.

8.3 Consideration of the relevant statutory documents

167. Section 171(1)(a) of the RMA requires the recommending authority to have regard to any relevant provisions of planning instruments at the national, regional and district level.
168. KiwiRail identifies what it considers to be the relevant statutory documents for this assessment in Chapter 10 of the AEE. Chapter 10 of the AEE also includes KiwiRail's assessment against this statutory framework. KiwiRail provided a further assessment of relevant statutory provisions addressing natural character, network utilities, hazardous substances, contaminated land, water management zones and values, critical infrastructure and climate change, freshwater, urban development and electricity transmission in response to the December 2020 s 92 request¹⁴².
169. As directed by the Panel, the Council and KiwiRail have identified a definitive list of the relevant statutory provisions. That list is set out in a standalone document which accompanies this report¹⁴³.

8.3.1 National Policy Statements

170. The National Policy Statements relevant to this assessment are:
- a. the National Policy Statement on Freshwater Management 2020 (NPSFM),
 - b. the National Policy Statement on Electricity Transmission 2008 (NPS ET) and
 - c. the National Policy Statement on Urban Development (2020) (NPS UD).
171. The effects of the Freight Hub on the NPS FM are considered in detail in section 9.6 of this report. The effects of the Freight Hub in relation to the NPS ET are considered in section 9.13 of this report, including in response to a submission received from Transpower New Zealand Limited. The NPS UD is considered in section 9.15. All three documents have been considered by KiwiRail in their AEE: Section 10.

¹⁴² Attachment 11 s92 Response – Planning, 12 February 2021.

¹⁴³ Relevant Planning Instruments: KiwiRail Freight Hub Notice of Requirement.

8.3.2 New Zealand Coastal Policy Statement

172. The AEE notes that the Freight Hub is remote from the coastal environment (Foxton Beach is 40km downstream from the designation). KiwiRail anticipates that any effects on downstream coastal environments will be appropriately managed through the regional consent process, which will establish the appropriate erosion and sediment control measures for earthworks, and the required treatment for stormwater¹⁴⁴. We agree and do not provide any assessment of the New Zealand Coastal Policy Statement.

8.3.3 Regional and District provisions

173. The Horizons One Plan is the combined Regional Policy Statement and Regional Plan for the Manawatū-Whanganui region and the relevant statutory instrument under s171(1)(a). The Operative Palmerston North City District Plan (2018) ("the District Plan") is the relevant district plan. There are no relevant iwi management plans for the purposes of this assessment.

i. The North East Industrial Estate 'Permitted Baseline'

174. Approximately a third (50ha) of the land that the Freight Hub will occupy is in the North East Industrial Zone. As identified in the s92 response, several land uses are permitted in this zone under Rule R12A.4.1, including:

- a) Industrial Activities
- (b) Warehousing, storage and depots
- (c) Roads, walkways, railway access, and cycle ways
- (d) Ancillary Office and Retail Activities
- (e) Ancillary parking areas and buildings
- (f) Prepared Food & Beverage Outlets
- (g) Service Stations
- (h) Flood protection and soil conservation activities
- (i) Staff recreation facilities ancillary to a permitted use
- (j) Establishment and maintenance of planting areas

¹⁴⁴ Attachment 11 s92 Response – Planning, response to Q 173, pg 16.

(k) Water Attenuation Activities within Water Course Reserve Areas.

175. These activities are permitted activities in the NEIZ, provided they comply with the relevant performance standards, which address matters such as maximum building height, maximum building size, roading setbacks, landscape amenity, parking loading and access, lighting, signs, outdoor storage, noise, essential services, and glare.
176. KiwiRail's assessment is that industrial activities, warehousing, storage and depots, roads (including their construction) and railway access; and the nature of the effects of those activities, are envisaged by the zone, and we agree. KiwiRail determines that while some of the permitted activity performance standards will be met by the Freight Hub, others will not, including in relation to noise, size of buildings (limited to 500m²) and dimensions of the buildings (no side to be more than 50m in length).
177. KiwiRail's subsequent conclusion is that it is appropriate to disregard the effects of 13,000m² of building platform and the visual effects associated with 13,000m² of building floor area at 9m tall,¹⁴⁵ because this quantum of development could potentially be developed as a permitted activity if the area of land occupied by the Freight Hub was subdivided into individual allotments. We disagree with this conclusion.
178. While the 'permitted baseline' of those effects is relevant to the consideration of effects, the Freight Hub is at different scale. The effects of the proposed Freight Hub as a whole are not permitted by the District Plan (including because the freight forwarding facilities and container terminal will not comply with the permitted activity standards for buildings). Therefore, we do not consider it is correct or appropriate to treat the visual effects of the Freight Hub buildings as 'additive effects', whereby only those visual effects over and above a largely 'artificial' threshold of 13,000m² should be assessed.¹⁴⁶
179. With respect to a permitted baseline for traffic effects, we note that KiwiRail's assessment¹⁴⁷ does not take into consideration the applicable roading rules within the NEIZ Extension Area which include:

¹⁴⁵ Attachment 11 s92 Response – Planning, response to Q182.

¹⁴⁶ As would be generated by the theoretical subdivision of 26 lots, each with a 500m² building on each.

¹⁴⁷ S 92 Response – Planning, response to Q182.

- a. Rule R20.4.2 which establishes permitted activity standards for onsite loading, vehicle parking, vehicle crossing, onsite vehicle queueing facilities and service lanes. The Freight Hub will not comply with standard (vi) which permits a maximum of two accesses per site for sites fronting Major or Minor Arterial roads (noncompliance with the performance standards for permitted activities triggers Rule R20.5.1 restricted discretionary activity);
 - b. Restrictions on any activities, including roads, seeking access from Richardsons Line, Setters Line or Roberts Line (Rule 12A.7.2 - discretionary activity);
 - c. Activities in the NEIZ Extension Area seeking access onto Railway Road (Rule 12A.8.4 - non-complying activity);
 - d. The restriction on servicing and loading hours where on-site road access and manoeuvring areas, loading and unloading in the NEIZ Extension Area is located within 80m of an existing dwelling in a Rural Zone (Rule R12A.6.2(h) - restricted discretionary activity).
180. The “*effects of associated traffic generated by 13,000m² of building floor area*” is constrained, where applicable, by the above rules. As the Freight Hub, or any other activity proposing to locate in the NEIZ Extension Area may be caught by these rules, we consider that a permitted baseline of traffic effects is not a straightforward matter to determine.
181. In conclusion, we do not agree that a permitted baseline can be readily applied to Freight Hub activities located within the NEIZ.

8.4 Relevant Other Matters

182. Section 171(1)(d) of the RMA requires regard to be had to any other matter considered reasonably necessary in order to make a recommendation on the NOR.
183. Section 10.4 of the AEE addresses any other matters that may be relevant under the s 171(1)(d) assessment. We agree that the identified documents are relevant and reasonably necessary to have regard to. In response to the s 92 request, further assessment was provided by KiwiRail on the following documents:

- a. Government Policy Statement on Land Transport 2021 (GPS LT);
- b. the Draft New Zealand Rail Plan 2019;
- c. the Regional Land Transport Plan (2015-2025) 2018 Review;
- d. the Accelerate25 Regional Economic Development Strategy and Manawatū-Whanganui Growth Study Economic Action Plan 2016;
- e. the PNCC 10 Year Plan;
- f. the PNCC Economic Development Strategy 2018;
- g. the PNCC City Development Strategy 2018; and
- h. the PNCC Strategic Transport Plan 2018/2021.¹⁴⁸

184. Since the s92 response was received, the draft Regional Land Transport Plan 2021-2020 has been released for consultation, the New Zealand Rail Plan has been finalised¹⁴⁹ and Waka Kotahi has published the Palmerston North Integrated Transport Initiative (PNITI) Network Options Report.¹⁵⁰ We draw attention to the relevant elements of these documents below.¹⁵¹

8.4.1 Palmerston North Integrated Transport Initiative (PNITI) Network Options Report, January 2021

185. Waka Kotahi/NZTA is developing a business case for a package of roading interventions collectively known as the Palmerston North Integrated Transport improvement (PNITI) project.

186. The PNITI is a package of interventions designed to:

- a. improve amenity values in residential and city centre areas, by redirecting freight and general traffic around rather than through the city;

¹⁴⁸ Attachment 11 s92 Response – Planning, response to Q186.

¹⁴⁹ Accessed from: <https://www.transport.govt.nz/assets/Uploads/Report/The-New-Zealand-Rail-Plan.pdf>.

¹⁵⁰ January 2021.

¹⁵¹ The New Zealand Rail Plan is addressed in Section 4.1 of this report.

- b. support investment in the Council's Urban Cycle Network Masterplan to increase the attractiveness of active travel modes;
- c. reduce congestion and improve journey times on key freight routes;
- d. reduce deaths and serious injuries across the rural freight network;
- e. support economic development such as the KiwiRail Freight Hub and North East Industrial Zone, to enable land use changes within the city to better separate residential and industrial areas;
- f. improve safety and access for new housing developments at Whakarongo, Aokautere and Kakatangiata.¹⁵²

187. A Regional Freight Ring Road ("Ring Road") is a critical component of the PNITI package. The Ring Road is also critical to Council's aspirations to generate economic prosperity (through improvements in transport efficiency and safety) and improve the amenity of Palmerston North city. The Ring Road will utilise existing roads and new connections to link key industrial areas of the city, including the NEIZ, Feilding, state highways to the north of the city, Longburn and Linton Military Camp to the south, and the proposed Freight Hub. The Ring Road is also intended to enable significant investment projects in and around the city, including major greenfield housing developments (as listed above), development of non-aeronautical land at Palmerston North Airport, industrial growth at Longburn and in the NEIZ, regeneration projects at Linton Amy Camp, FoodHQ campus upgrades, Streets for People improvements to the city centre and implementation of the Urban Cycle Network Masterplan.¹⁵³

188. The Ring Road is intended to provide stimulus for additional investment in the distribution and logistics function of the city. The road and rail network infrastructure changes proposed as part of the Freight Hub are therefore seen as both a significant opportunity and a key dependency for the PNITI programme.¹⁵⁴ The Freight Hub is a "significant driver" for much of the PNITI programme, with many of the proposed interventions seen as essential to

¹⁵² PNITI Network Options Report, Executive Summary, pg iii.

¹⁵³ 'Impacts of PNITI on Key Regional Projects, Fresh Info, February 2021, Executive Summary, pg 1.

¹⁵⁴ PNITI Network Options Report, Section 12.3, pg 68.

support safe operation of the Freight Hub. The PNITI Network Options Report notes:

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 programme¹⁵⁵

189. As a result, the key delivery agencies, including Waka Kotahi and the Council, have recognised that close coordination is needed between the technical investigations and business case advancement of PNITI and progression of the Freight Hub through consenting stages and delivery. The Council has been working with Waka Kotahi to progress the delivery of PNITI. Further detail on this work is set out in the Mr van Bentum's s 42A report.

8.4.2 Draft Regional Land Transport Plan 2021-2020

190. The 2021-2020 version of the Regional Land Transport Plan is a draft document, and therefore limited weight can be placed on it in an assessment context. It lends weight however to the recognition of the Palmerston North-Manawatū sub-area:

as the hub of the growing freight distribution industry because of its location in the central part of the lower North Island, connecting to the surrounding regions of Taranaki, Hawke's Bay, Waikato and Wellington via the state highway, rail and air networks.

191. Palmerston North is recognised as a key staging point for two important commodity flows:
- a. high value imported and domestic freight travelling between Auckland and Wellington or between Auckland and the South Island; and
 - b. New Zealand export commodities produced in the hinterlands and exported via the ports in Napier, New Plymouth and Wellington, and possibly even Auckland and Tauranga.

¹⁵⁵ PNITI Network Options Report, Section 15.1.1 pg 114.

192. The Freight Hub is recognised in the Draft RLTP as one of the five big 'regional initiatives' for transport, serving one of the four key roles that the region plays (as the Central New Zealand distribution hub).
193. The draft RLTP notes that:
- the success of the Freight Hub will be heavily reliant on strong road connections to support the movement of freight to and from the hub, as well as safely moving other rail users around the site. The Palmerston North Integrated Transport Improvements project, incorporating the regional freight ring road will provide secure, safe and efficient connections from the key freight nodes such as the airport and Palmerston North City to the Freight Hub. Without these connections, freight to and from the hub, along with general commuter traffic will be compromised. Progression of these hubs and the roading infrastructure that supports them will be key to unlocking the rail freight potential for the region.
194. This commentary highlights the importance of the successful integration of these two major projects to the economic aspirations of the region.
195. The importance and relevance of the "other matters" documents listed in paragraph 164 above are addressed in greater detail in the evidence of Ms Fraser, Mr van Bentum and Mr Vuletich; and in a memorandum from Mr David Murphy, General manager – Strategy and Planning, PNCC, which sets out the history of the Council's strategic land use planning for this part of the city. That memorandum is addressed in our assessment of urban planning matters in Section 8.15 of the report, and is appended at Appendix 1.

8.5 Consideration of Alternatives

196. Section 171(1)(b) of the RMA directs the Council to consider whether adequate consideration has been given to alternative sites, routes and methods of undertaking the public work in specified circumstances. As KiwiRail does not have an interest in the land required (except for the existing NIMT corridor), and significant adverse effects are predicted, this assessment is required.
197. Policy 3-3 of the One Plan is also relevant to this assessment, as it directs the Council to take into account reasonably practicable alternative locations or designs for regionally significant infrastructure, where adverse effects are anticipated to be more than minor.

198. The assessment of alternatives in the AEE¹⁵⁶ describes the multi-criteria analysis process that KiwiRail followed to determine the site location, layout and spatial extent of the Freight Hub, informed by the high-level freight hub masterplan.
199. In brief, and as explained at section 5.2 of this report, this process has included:
- a. identification and MCA assessment of a long list of potential locations,
 - b. shortlisting and assessment of a short list of area options;
 - c. final short listing of site options, assessment and selection of a final option;
 - d. review of four potential site layout options and selection of the preferred layout ("G2");
 - e. confirmation of the final extent of the designation, incorporating land for noise and flood mitigation, landscaping, roading connections and taking into account the presence of existing infrastructure and utilities (such as transmission lines and the Council's water bore).
200. The investigation and evaluation of alternatives is set out in detail in Appendix F of the AEE. The assessment demonstrates that KiwiRail considered a number of options and sub-options before settling on the preferred site and layout.
201. Our assessment of whether adequate consideration has been given to alternative sites, routes or methods of undertaking the works is summarised in Section 11 of this report. However, we also address the assessment of alternatives in the context of individual topics issues in section 9 of this report.

8.6 Achieving Objectives of the Requiring Authority

202. Section 6.1 of the AEE identifies the objectives for the Freight Hub.
203. Under s 171(1)(c) of the RMA, when considering the adverse effects of the NOR, particular regard must be had to "whether the works and designation are reasonably necessary for achieving the objectives of the Requiring Authority for which the designation is sought". Our assessment of whether the

¹⁵⁶ AEE, Section 10.2 Consideration of Alternatives

works and designation are reasonably necessary for achieving the objectives for which the designation is sought are set out in Section 12 of our report.

9 Assessment of Effects

9.1 Assessment Context

204. Section 171(1) requires consideration, subject to Part 2, of the effects on the environment of allowing the requirement.

205. In this section of the report, we summarise and discuss the key environmental effects of allowing the Freight Hub. The discussion is informed by our review of the NOR documents, the public submissions received, the evidence of the experts who have supported us in preparing this report and the relevant provisions of the statutory and non-statutory documents.

9.2 Effects on the transport network

9.2.1 Key issues for assessment

206. The following issues are considered key issues for the purposes of this assessment:

- a. potential adverse effects of increased traffic and heavy vehicles on the safety and efficiency of the road network, including at the central Bunnythorpe “node” and more widely (in particular along Tremaine Avenue);
- b. effects of the change in road layout and traffic redistribution on the safety and efficiency of the road network;
- c. potential for a poorly integrated arterial road network in the vicinity of Bunnythorpe, if the Freight Hub and the ring road designs are not properly aligned and integrated;
- d. use of the Roding Network Integration Plan as a mechanism to achieve effective integration;
- e. uncertainty as to how the Freight Hub will accommodate safe, efficient and future proofed integration with the NEIZ, such as provision for a

dedicated freight corridor as demand for freight transport between the two 'nodes' increases.

- f. monitoring and management of traffic once the Freight Hub is operational;
- g. effects on access connections for individual properties, from minor roads and from the NEIZ;
- h. potential effects on cyclists, pedestrians and other vulnerable road users from road network changes, the increase in heavy vehicles and potential disruption to the Council's proposed Palmerston North to Feilding shared path during construction and operation;
- i. limited information on the scale and nature of construction traffic effects;
- j. reliability of the transport model;
- k. provision for infrastructure of national and regional importance.

9.2.2 Submissions received on this topic

207. The following submitters made submissions which relate to the road transport network. The following submissions have been considered in this evaluation:

1	Sonia & Neal Watson
2	Warren Bradley
3	Mason Durie on behalf of Aorangi Papakainga
4	Bruce M & Alison M Hill
6	Glen & Karen Woodfield
7	Rochelle & Rex McGill
9	Jim Jefferies
13	Tutaki 2019 Ltd
15	Maree Woods
17	Nicola Schreurs and Thomas Good
20	Horizons Regional Council
22	Fiona Hurly
23	Mike Tate
24	Zaneta Park

26	Peter Hurly
28	Katrina George
29	Tomas Burleigh Behrens
30	Bunnythorpe Community Committee
33	Linda Spearpoint
35	Robyn Curtis
36	Helen S Thompson
37	Ian Harvey
38	Logan Harvey
41	Warrick George
42	Matthew McKenzie
44	Mereti Taipana
47	Aaron P Fox
51	Manawatu District Council
52	Jeff Williams
55	Michael Sharp
57	John David Bryan Austin & Rosaleen Mary Wapp
58	Foodstuff North Island
61	Peter Gore & Dale O'Reilly
62	Mary A Chapman
63	Central New Zealand Distribution Hub Stakeholder Group
64	Sharon Lee Gore
65	Waka Kotahi NZ Transport Agency
66	Andrew Wotton
72	Danelle O'Keefe & Duane Butts
73	Horowhenua District Council
74	Arthur George Park
77	William J Bent
83	Gordon H Malcolm
84	Raewyn Carey
87	Mary & Michael Hurley
90	Justine Jensen
91	Steve M Kinane
92	Ministry of Education
93	Craig Forbes
98	David Odering

9.2.3 Analysis

i. Adverse effects of increased traffic, including heavy vehicles and potential safety effects

208. KiwiRail's Integrated Transport Assessment (ITA) used the Palmerston North Area Traffic Model (PNATM) to determine the amount of traffic likely to be generated when the Freight Hub starts operating (2030)¹⁵⁷ and when it is fully built out (2051).
209. The ITA predicts the Freight Hub will increase road traffic by 6900 vehicles per day (vpd) once fully operational, with a predicted split of 60:40 light to heavy vehicles. The ITA assumes the Freight Hub will displace 37.5% of the traffic that would have been generated by development of the NEIZ extension area (approximately 5,1000 vpd) and that the demand generated by the NEIZ has already been assumed (and accounted for) as future demand on the road network.¹⁵⁸
210. Although there will be increased traffic and a higher percentage of heavy vehicles, the ITA concludes that Freight Hub would not cause a deterioration to the functioning of the network beyond what would be anticipated from growth that would occur without the Freight Hub. The effect of the additional Freight Hub traffic is assessed as a minor negative effect on the road network¹⁵⁹.
211. The ITA identifies that a number of intersections will perform at unacceptable levels at opening year, although not all of these changes will be attributed to the Freight Hub. The ITA recommends upgrades to the Campbell Road/Kairanga Bunnythorpe Road intersection and the Railway Road/Kairanga Bunnythorpe Road intersection together with the Kairanga Bunnythorpe level crossing in the event that southern bypasses of Bunnythorpe are not in place by the time the Freight Hub opens.¹⁶⁰

¹⁵⁷ This is the point existing freight operations are transferred from the existing yard to the Freight Hub.

¹⁵⁸ Technical Report C: Integrated Transport Assessment, Section 10.1 Network Traffic Effects

¹⁵⁹ AEE, Section 9.3.2.1: Traffic Demand

¹⁶⁰ Technical Report C: Integrated Transport Assessment, Section 10.1.1.2 Intersections Performance

212. KiwiRail anticipates that the closure of the three level crossings will result in road safety benefits.¹⁶¹
213. Many submitters are concerned about the potential adverse effects of increased traffic (including heavy vehicles) on roads in and around Bunnythorpe, including on safety of the road network,¹⁶² access to community facilities such as schools (Taonui¹⁶³ and Bunnythorpe),¹⁶⁴ churches, bus stops, the Community Centre¹⁶⁵ and Aorangi Marae Papakainga,¹⁶⁶ the reduction in rural amenity¹⁶⁷ and quality of life/wellbeing¹⁶⁸. The Ministry of Education is concerned that traffic increases could affect safe travel to Bunnythorpe School and seeks the development of safe travel plans. Danelle O'Keefe & Duane Butts¹⁶⁹ request a review of the safety of level crossings, including for pedestrians and cyclists, and children travelling to school in Bunnythorpe through Stoney Creek and Kairanga-Bunnythorpe roads.
214. In contrast, some submitters¹⁷⁰ consider the Freight Hub proposals will improve safety of the local road network, as the Freight Hub will be a stimulus for construction of the regional ring road bypasses around Bunnythorpe¹⁷¹, facilitate a shift to rail freight transport and the closure of level crossings. One submitter considers there will be reduced wear on the road network as a result of the transition of freight from road to rail.¹⁷²
215. Provisions in the Land Transport Chapter of the PNCC District Plan direct that the adverse effects of increased traffic or changes in traffic type must be avoided, remedied or mitigated where these would compromise the safe and efficient operation of any road or level crossing, or the safe and convenient movement of pedestrians and cyclists on roads or at level crossings.¹⁷³ Adverse

¹⁶¹ AEE, Section 9.3.4.1: Level Crossing Closures.

¹⁶² Submission 22: Fiona Hurly, Submission 64 – Sharon Gore

¹⁶³ Submission 3: Mason Durie

¹⁶⁴ Submission 92: Ministry of Education

¹⁶⁵ Submission 30: Bunnythorpe Community Committee

¹⁶⁶ Submission 3: Mason Durie

¹⁶⁷ Submission 35: Robyn Curtis, Submission 66: Andrew Wotton, Submission 83: Gordon Malcolm, Submission 87: Mary & Michael Hurley,

¹⁶⁸ Submission 36: Helen Thompson, Submission 37: Ian Harvey, Submission 90: Justine Jensen, Submission 91: Steve Kinane, Submission 92: Craig Forbes, Submission 98: David Odering, Submission 38: Logan Harvey

¹⁶⁹ Submission 72.

¹⁷⁰ Submission 23: Mike Tate, Submission 24: Zaneta Park, Submission 55: Michael Sharp.

¹⁷¹ Submission 74: Arthur Park.

¹⁷² Submission 55: Michael Sharp.

¹⁷³ Chapter 20: Objective 1, Objective 3, Policy 3.1.

effects on the health and safety of people and communities from the land transport network must be avoided, remedied or mitigated.¹⁷⁴

216. Ms Fraser, the Council's transport expert, predicts that several intersections which will be required to accommodate Freight Hub traffic may be already operating at or over their operational capacity.¹⁷⁵ As a result, there could be significant adverse effects on the safety and efficiency of the road network, both at a localised and a wider network level, from the additional traffic and in particular heavy vehicles generated by the Freight Hub. Ms Fraser considers the transport effects may be underestimated by the traffic model and that further mitigation will be needed to address these.¹⁷⁶
217. Ms Fraser is particularly concerned about how the increase in traffic might affect the performance of several intersections and the level crossing in the centre of Bunnythorpe; as well as the safety of the level crossing (including for pedestrians and cyclists). No provision has been made for improvements at this crossing, despite KiwiRail's MCA assessment identifying that grade separation of this crossing may be warranted.¹⁷⁷ The land required to accommodate this type of improvement has not been included in the designation.
218. Ms Fraser's recommendation is that baseline information is collected at key locations within the network¹⁷⁸ (such at the Bunnythorpe 'node') to confirm the existing level of service and safety performance. These assessments should be repeated once the Freight Hub is operational.¹⁷⁹ KiwiRail should be required to maintain at least the same level of safe and efficient provision as exists now and the necessary mitigations should be identified from real time information, rather than predictions generated by the traffic model.
219. We agree with this recommendation and consider it is consistent with the statutory policy framework. It is also consistent with the strong safety focus set out in the RLTP and government policy on road safety.¹⁸⁰ We have

¹⁷⁴ Chapter 20: Objective 2, Policy 2.1, 2.2, Policy 2.4.

¹⁷⁵ S 42A Report: Traffic effects, Section 4: Existing traffic environment.

¹⁷⁶ S 42A Report: Traffic effects, Section 1.1: Assessment methodology.

¹⁷⁷ Appendix F2: MCA Connectivity Assessment, Section 5: Comparative Assessment.

¹⁷⁸ Including key intersections, road links and vehicle crossings.

¹⁷⁹ S 42A Report: Traffic effects, Section 1.7: Further.

¹⁸⁰ Such as the GPS LT and Road to Zero, Road Safety Strategy 2020-2030.

recommended conditions to provide for these pre and post development assessments.

ii. Changes in traffic flows on the road network

220. The Freight Hub will result in a number of changes to the existing road network. These include (but are not limited to) the closure of Railway Road, construction of a new perimeter road along the western boundary of the Freight Hub and three site accesses, changes to intersections to accommodate the perimeter road, and closure of three level crossings, private accesses, and several roads. This will change existing traffic flows, with the most significant change being the redirection of traffic from Railway Road onto the new perimeter Road (10,000 vpd).¹⁸¹ KiwiRail assess these changes to the road network as being minor negative effects.¹⁸²
221. Many submitters address the redistribution of traffic, including in, around and between Palmerston North, Feilding, Bunnythorpe and other towns and villages.¹⁸³ Submitters object to the potential rerouting of traffic onto more minor roads near Bunnythorpe, such as Parris Road, Tutaki Road, Clevely Line, Sangsters Road and Stoney Creek Road.¹⁸⁴ Submitters¹⁸⁵ are concerned these minor rural roads do not have adequate safety features to accommodate the increase in traffic, for example because they are narrow or do not have run-off verges or road markings. This will cause a hazard to cyclists, pedestrians and residents who live on these roads. The McGill's¹⁸⁶ request that improvements are made to these rural roads to accommodate the changes in traffic flows.
222. Danelle O'Keefe & Duane Butts¹⁸⁷ request a review of the impacts on local roads from heavy traffic and likely repair costs, if road upgrades in the PNCC

¹⁸¹ Technical Report C: Integrated Transport Assessment, Section 10.1.2.1 Total Traffic.

¹⁸² KiwiRail AEE, section 9.3.2.2: Traffic Distribution.

¹⁸³ Submission 4: Bruce & Alison Hill, Submission 36: Helen Thompson, Submission 37: Ian Harvey, Submission 44: Mereti Taipana, Submission 58: Foodstuffs North Island, Submission 62: Mary Chapman.

¹⁸⁴ Submission 1: Sonia & Neal Watson, Submission 28: Katrina George, Submission 41: Warrick George, Submission 52: Jeff Williams, Submission 84: Raewyn Carey, Submission 91: Steve Kinane, Submission 72: Danelle O'Keefe & Duane Butts.

¹⁸⁵ Submission 7: Rochelle & Rex McGill, Submission 26: Peter Hurly, Submission 44: Mereti Taipana, Submission 52: Jeff Williams, Submission 57: John Austin & Rosaleen Wapp.

¹⁸⁶ Submission 7.

¹⁸⁷ Submission 72.

10 Year Plan are not completed within the construction time-line for the Freight Hub. They question who will fund any additional repairs needed.

223. Mereti Taipana¹⁸⁸ requests that heavy vehicle traffic is redirected away from the Camerons Line and Waughs Road intersection to address safety risks for residents on Waughs Road.
224. Warrick George¹⁸⁹ is concerned that traffic will reroute via Kelvin Grove Road and that mitigation will be needed at the intersections of Kelvin Grove Road with Stoney Creek Road and Kelvin Grove Road with Tremaine Avenue. He would support Tutaki Road and Parris Road becoming dead end roads.
225. John Austin and Rosaleen Wapp¹⁹⁰ request that no heavy vehicle traffic access is provided to the Freight Hub from the eastern side.
226. Ms Fraser identifies a wide range of potential adverse effects from changes in traffic flows as a result of road network changes, which are set out in Section 7 of her s 42A report. These include effects on side roads and accesses, existing intersections and proposed new intersections.
227. KiwiRail's ITA identifies that increased traffic on Waughs Road and the intersection with Cameron Line will require an upgrade to a roundabout at this location, but that the need for this upgrade is not triggered by the Freight Hub¹⁹¹. Ms Fraser considers however that the Freight Hub will contribute to the worsening future level of service at this intersection, and that the upgrade to this intersection should be a joint matter for KiwiRail, Waka Kotahi and Manawatū District Council.¹⁹²
228. Ms Fraser anticipates further congestion along Tremaine Avenue, which will amplify the already unsatisfactory performance.¹⁹³ Again, KiwiRail's ITA identifies the need for improvements at the Tremaine Avenue/Milson Line intersection, but says that these are not triggered by the Freight Hub¹⁹⁴. Ms Fraser considers that Tremaine Avenue between SH3 Rangitiki Street and

¹⁸⁸ Submission 44.

¹⁸⁹ Submission 41.

¹⁹⁰ Submission 57.

¹⁹¹ Technical Report C: Integrated Transport Assessment, Section 10.1.1.2: Intersections Performance.

¹⁹² See Section 7.13: Wider Road Network Traffic Effects.

¹⁹³ See Section 7.13: Wider Road Network Traffic Effects.

¹⁹⁴ Technical Report C: Integrated Transport Assessment, Section 10.1.1.2: Intersections Performance.

Railway Road will require further mitigation because of traffic growth from the NEIZ and the Freight Hub, and that this issue should be resolved by KiwiRail, Waka Kotahi and the Council through the RNIP.

229. In response to the Wapp's submission, our understanding is that no vehicle access will be provided from that side of the Freight Hub once operational. Ms Fraser considers that if construction access is provided from the eastern side of the site, an assessment of traffic effects and resulting mitigation will be needed, to prevent adverse effects on residents along that boundary.¹⁹⁵
230. With respect to Danelle O'Keefe & Duane Butts submission regarding repair of local roads, we have recommended a condition requiring KiwiRail to repair any damage caused during construction of the Freight Hub. With respect to the timing of local road improvements and commencement of Freight Hub operations, we consider that the RNIP will provide a mechanism for coordination of Councils works with any works which KiwiRail will be required to undertake. We understand some of these issues are also likely to be addressed via a separate Project Agreement between the Council and KiwiRail, as set out in the s 42A report of Mr van Bentum.
231. We have recommended conditions to address these issues, including:
- a. baseline level of service and safety audits;
 - b. conditions requiring KiwiRail to demonstrate that the design of new road infrastructure and use of existing intersections will not decrease the level of service or safety beyond its pre-construction levels (through traffic modelling);
 - c. conditions requiring KiwiRail to confirm that levels of service and safety have been maintained once the Freight Hub is operational (post development resurvey);
 - d. amendments to the RNIP conditions to provide for future checks and updates, to ensure it is meeting its stated objectives;

¹⁹⁵ See section 8: Mitigation and environmental offsetting.

- e. a condition requiring the perimeter road to be fully formed and connected to the road network before Railway Road is closed.

iii. Interaction between the Freight Hub and proposed regional freight ring road

232. The ITA anticipates an 'ultimate road network' that includes future western and southern bypasses of Bunnythorpe, along with a regional freight ring road, but did not include these assumptions in its scenario testing and analysis because the route alignment and timelines for these strategic improvements "remain unclear".¹⁹⁶
233. Several submitters comment on the interaction between the Freight Hub and the proposed ring road. Peter Gore and Dale O'Reilly¹⁹⁷ and Aaron Fox¹⁹⁸ point out that the full benefits of the Hub depend on upgrading the roading infrastructure to unlock the distribution potential of the region. As the Freight Hub is being progressed by KiwiRail via a separate RMA process, it is not possible to properly assess whether these projects will successfully realise their respective (or collective) intended benefits. Aaron Fox, Danelle O'Keeffe and Duane Butts¹⁹⁹ consider that it would be premature to determine the NOR application until such time as details of the PNITI project are available and funding secured.
234. Several submitters²⁰⁰ are concerned about the cumulative effects of the Project with the regional ring road. While they recognise that delivery of the ring road is beyond the scope of the NOR, they are concerned that the cumulative effects of the two projects have not been assessed, and that these cumulative effects should be taken into consideration through the NOR.
235. Waka Kotahi²⁰¹ identifies that ongoing engagement with KiwiRail will be integral to the development and implementation of the PNITI programme and in particular the regional freight ring road. The PNITI programme will need to

¹⁹⁶ Technical Report C: Integrated Transport Assessment, Section 12.3: Ultimate Road Network.

¹⁹⁷ Submission 61.

¹⁹⁸ Submission 47.

¹⁹⁹ Submission 72.

²⁰⁰ Submission 4 - Bruce & Alison Hill, Submission 61 – Peter Gore & Dale O'Reilly, Submission 66 – Andrew Wotton.

²⁰¹ Submission 65.

be adjusted as developments such as the Freight Hub (along with other planned industrial developments) come to fruition.

236. The District Plan objectives for land transport focus on delivering a safe, convenient, and efficient land transport network, and one that maintains the amenity values and character of the City's environment.²⁰² Relevant non-statutory planning documents²⁰³ seek a regional transport network which is safe, resilient, effective and efficient, with less modal conflict.
237. Ms Fraser considers it is important that the proposed connection of the new perimeter road to Railway Road at the north does not obstruct delivery of the PNITI works, particularly the possible southern and western bypasses of central Bunnythorpe (in the event these are not constructed before the Freight Hub opens). In her opinion the bypasses are necessary to divert heavy vehicles and other vehicles away from the central Bunnythorpe node, where there is already multiple potential for adverse efficiency and safety effects.²⁰⁴
238. We agree with submitters and Ms Fraser that close coordination of these projects is needed. We appreciate the timing of delivery of the Freight Hub will significantly influence the PNITI programme. With respect to the potential cumulative effects raised by submitters, we recognise the relationship between the projects and the importance of successful and efficient integration between them. However it is not possible at this stage to assess the cumulative effects of this project with the regional ring road, as that project is not sufficiently advanced in project planning and its effects (cumulative or on their own) cannot be known.
239. To resolve the issue of uncertainty regarding the PNITI programme of works, KiwiRail proposes to use a RNIP to coordinate delivery of KiwiRail's changes to the road network with the various planned network improvements by PNCC and Waka Kotahi. This is discussed below.

²⁰² PNCC District Plan, Section 20: Land Transport, Objective 2.

²⁰³ Such as the Palmerston North Strategic Transport Plan 2018/21, Horizons Regional Land Transport Plan 2018 Review and Draft Regional Land Transport Plan 2021-2031.

²⁰⁴ See Section 7: Project Effects.

iv. Road Network Integration Plan (RNIP)

240. KiwiRail propose to prepare a RNIP as a means of ensuring the roading network for the Freight Hub is appropriately managed and integrated with the wider transport network.
241. The RNIP is supported by several submitters as a means of ensuring integration between the roading plans of KiwiRail, Waka Kotahi and PNCC,²⁰⁵ alongside ongoing engagement between the key parties responsible for the PNITI project²⁰⁶.
242. Horizons Regional Council²⁰⁷ request that the RNIP is regularly reviewed and updated throughout the design and construction phase (perhaps 3-6 monthly), to consider and incorporate any changes to the roading network, active transport network, local industrial area vehicle movements and public transport services. As part of the regular review and update, consultation should occur with Horizons, PNCC and Waka Kotahi. This will ensure ongoing and open lines of communication between the key parties. Updated copies of the amended RNIP should be provided to Horizons, PNCC and Waka Kotahi within one month of completion.
243. Waka Kotahi²⁰⁸ seek to strengthen the consultation elements of the RNIP even further. They note that beyond consultation, there is no requirement for KiwiRail to incorporate or deliver on the requests or outcomes discussed during that consultation. With the outline plan being the final statutory requirement for the RNIP, Waka Kotahi is concerned that the consultation process may not lead to outcomes necessary for the safe and efficient functioning of the road network. In a similar vein to the submission from the Horizons Regional Council, Waka Kotahi wishes to agree a process whereby the RNIP is endorsed by all parties prior to inclusion in the outline plan. Horowhenua District Council²⁰⁹ would also like to see this condition finalised in consultation with the existing network utility operators.

²⁰⁵ Submission 23 – Mike Tate, Submission 24 – Zaneta Park, Submission 20 – Horizons Regional Council.

²⁰⁶ Submission 20: Horizons Regional Council, Submission 51 - Manawatū District Council, Submission 65 – Waka Kotahi.

²⁰⁷ Submission 20: Horizons Regional Council.

²⁰⁸ Submission 65.

²⁰⁹ Submission 73.

244. Waka Kotahi considers preparation of the RNIP 12 months prior to construction commencing could result in insufficient time to plan and undertake necessary improvements to the road network. Given the variability in construction timeframes, the time between construction commencing and operational traffic using the road network is also unknown. Waka Kotahi seeks to work with KiwiRail, to agree an appropriate timeframe for preparation of the RNIP.
245. Ms Fraser agrees with many of the points made in these submissions and consequently makes a number of recommendations to amend the RNIP conditions.²¹⁰ We concur with many of the changes suggested by submitters and endorsed by Ms Fraser. In our opinion the RNIP should also be required to be peer reviewed and certified by the Council to confirm that it meets the objective of the RNIP and that it covers the matters specified, prior to inclusion in any Outline Plan.
246. In terms of the frequency of updates to the RNIP, we consider these could be triggered by vehicle movements generated by the Freight Hub, and have suggested, on the basis of Ms Fraser's advice, that appropriate milestones might be at 4,200 vpd and 8,000 vpd (measured as total combined movements over all three accesses). These milestones represent the point at which the Freight Hub is generating more traffic than the existing Tremaine Avenue yard (at 4,200 vpd), and a next interim step (at 8000 vpd) towards the ultimate forecast of 12,000 vpd. We expect these milestones will be discussed and refined through the exchange of evidence and the hearing process.
247. We set out our recommendations on this condition at Section 9.2.4 below.

v. Level of integration with other elements of the Central New Zealand Distribution Hub

248. KiwiRail proposes to provide a roundabout at the intersection of Richardsons Line and Roberts Line. This roundabout will be the main access point for vehicles travelling between the NEIZ and the Freight Hub.
249. The Central New Zealand Distribution Hub Stakeholder Group²¹¹ comprises of a range of stakeholders with an interest in facilitating the future development

²¹⁰ S 42A Report Traffic effects, Section 7: Project effects and Section 10: Draft Requirement conditions.

²¹¹ Submission 63 - For the purposes of the submission, the parties in this Group include the Central Distribution Agency, PNCC, Horizons Regional Council, Waka Kotahi, Palmerston North Airport Ltd, DKSH and PMB Landco Ltd.

of this area of the city. The Group's submission explains that a master planning process is being initiated to coordinate the various development aspirations. It is anticipated that the master plan will address a wide range of issues, including from a transport perspective, integrated transport connections, delivery of PNITL, connections to the airport, and delivery of infrastructure to enable closer integration between customers in the NEIZ and the Rail Hub.

250. The Group considers integrated transport connections and infrastructure to enable the "Level 2 User" to access the KiwiRail rail infrastructure is particularly important. That means "*developing the NOR in a way which does not restrict future opportunities for those connections to occur and for the infrastructure to adjust and be upgraded as freight movements between the NEIZ, Airport and KiwiRail Freight Hub increase*".
251. Connectivity with the NEIZ is also raised by Nicola Schreurs and Thomas Good²¹², who question the level of integration between the Freight Hub, the NEIZ and the airport, given the reliance placed on this proximity to realise the benefits of the Freight Hub (such as removing trucks from roads). They question why rail connectivity into the NEIZ has not been provided and consider that without this, the interaction of traffic moving to and from these traffic generating nodes via the proposed roundabout on Roberts Line, will create friction with traffic moving between Palmerston North and townships to the north.
252. Provisions in the District Plan seek to enable the industrial use and development of the NEIZ, taking into account the servicing needs of future industry and the ability for people and vehicles to move safely and efficiently through the area²¹³. City View Objective 3 seeks to achieve the integrated and efficient provision of, and access to, infrastructure, network utilities and local services.²¹⁴
253. Ms Fraser notes that as currently proposed, the only transport benefit from the location of the Freight Hub for NEIZ businesses is the proximity of the two areas to each other. Conversely, NEIZ businesses that rely on vehicle access to the

²¹² Submission 17.

²¹³ PNCC District Plan, Section 12A: North East Industrial Zone, Objective 2.

²¹⁴ PNCC District Plan, Section 2.5 City View Objectives, Objective 3.

City via Railway Road to the south could be adversely affected by worsening congestion from the additional trips associated with the Freight Hub.²¹⁵

254. We agree with Ms Fraser and submitters that the potential integration benefits of locating the Freight Hub in proximity to the NEIZ and the airport will not be readily facilitated by KiwiRail's current roading proposals. We note this issue is discussed in greater depth in the s 42A report of Mr Vuletich at section 4.3. The current design risks inconsistency with the provisions in the District Plan that seek to enable the industrial use and development of the NEIZ²¹⁶ and provide for safe and efficient movement of people and goods, and with the City View objective to achieve the integrated and efficient provision of infrastructure and services.
255. In our view, the optimum outcome is that the design of the Freight Hub and the associated roading infrastructure takes into account the potential need for future direct integration with the NEIZ. It may not be necessary to provide that physical integration now, but the Freight Hub design should not preclude that happening in the future. Allowance made for future physical integration should align with the Central NZ Distribution Hub master planning process. The Freight Hub should be designed in such a way that it can be modified to allow for that physical integration if it is required.
256. Accordingly, we recommend a condition requiring that KiwiRail demonstrates in the detailed design how the Freight Hub could be integrated with the NEIZ, in a manner consistent with any master plan for the Central NZ Distribution Hub. This information should be provided with the Outline Plan(s).
257. In response to the potential for increased congestion to affect NEIZ occupiers who access their sites directly via Railway Road, we agree and adopt Ms Fraser's recommendation that pre and post safety and level of service audits should be undertaken along this part of Railway Road; and that KiwiRail should be required to maintain the same level of service and safety that currently exists.

²¹⁵ S 42A Report: Traffic Effects, Section 7: Project Effects.

²¹⁶ PNCC District Plan, Section 12A: North East Industrial Zone, Objective 2.

vi. Increase in commuting times and reduction in accessibility

258. The closure of the Roberts Line and Richards Line level crossings and other roading changes will remove roading connections with Railway Road²¹⁷ and increase travel times for residents (calculated by KiwiRail as a maximum increase of six minutes for travel to Bunnythorpe) and vehicles travelling between Kelvin Grove and the NEIZ²¹⁸. Longer trains may also increase delays at the Kairanga-Bunnythorpe Road level crossing.²¹⁹
259. Many submitters are concerned about the increase in commuting times and reduction in accessibility between Feilding, Bunnythorpe and Palmerston North, including due to closure of Railway Road²²⁰. These smaller communities rely on access to larger centres for access to healthcare, emergency services, employment and education.²²¹ The closure of Railway Road will also impact on the public bus service between Feilding, Bunnythorpe and Palmerston North. Horizons Regional Council advise that a minimum of 12-18 months is required to ensure Horizons can effectively plan for and consult on route and infrastructure changes for this bus service. They request that public transport services are referenced in the RNIP condition.²²²
260. District Plan provisions require that the land transport network is safe, convenient, and efficient.²²³ The provision of public transport should be supported and encouraged, as an integral part of the transportation system²²⁴.
261. Ms Fraser considers the additional traffic within the road network generated by the Freight Hub is likely to result in significant increases in travel times (because intersections on the network will be unable to operate effectively). She expects the delay to be predominantly attributed to increased traffic, rather than changes to the road layout²²⁵. As mentioned previously, Ms Fraser has recommended conditions to mitigate the additional traffic generated by

²¹⁷ Roberts Line East, Richardson Line west, Clevely Line, Te Ngaio Road, Sangster Road.

²¹⁸ Calculated as an increase of 4.2 minutes. See Section 9.3.3.2 - Route Travel Time, in the AEE.

²¹⁹ Ibid. Increases in travel time range from 68-108 seconds.

²²⁰ Submission 1 – Sonia & Neal Watson, Submission 15 – Maree Woods, Submission 28 – Katrina George, Submission 30 – Bunnythorpe Community Committee, Submission 58 – Foodstuffs North Island, Submission 77 – William Bent, Submission 87 – Mary & Michael Hurley.

²²¹ Submission 20 – Horizons Regional Council, Submission 33 – Linda Spearpoint, Submission 51 – Manawatū District Council.

²²² Appendix C: Notice of Requirement conditions (updated S92) condition 46 (h) (Network Integration Plan).

²²³ PNCC District Plan: Section 20: Land Transport, Objective 2.

²²⁴ PNCC District Plan: Section 20: Land Transport, Policy 1.7.

²²⁵ S 42A Report – Traffic Effects: Section 7: Project effects.

the Freight Hub, through a post-review of service levels at specified intersections and a requirement that KiwiRail undertake the works necessary to maintain the pre-development level of service. We have adopted those recommendations.

262. Ms Fraser deals with effects on the bus network at Section 7.14 of her report, largely agreeing with KiwiRail's assessment that adverse effects will be limited but notes that service reliability may be affected by increased congestion within the immediate and wider road network.
263. In response to the Regional Council's submission, we note that KiwiRail has proposed amendments to the RNIP condition²²⁶ to include details around changes to public transport facilities, including bus stops. We support those amendments. We also recommend a condition that the RNIP is prepared prior to completion of detailed design and lodgement of the first Outline Plan, which should allow ample time for the Regional Council to plan for any bus route changes.

vii. Operational Traffic Management Plan and operational traffic monitoring

264. KiwiRail proposes to prepare an Operational Traffic Management Plan to manage changes to traffic flows and volumes.
265. Waka Kotahi²²⁷ have concerns that the condition does not require consultation or approval from the road controlling authorities prior to inclusion in the outline plan, and therefore a consultation and endorsement process is required, including for any subsequent reviews and updates.
266. In addition, Waka Kotahi considers that traffic generation monitoring and reporting would provide valuable data to compare modelled outputs with real time information, which could then be used to plan, design and construct interventions to manage adverse effects. The submission outlines the range of data that should be monitored and how this should be reported.

²²⁶ In the February 2021 s92 response.

²²⁷ Submission 65.

267. Ms Fraser also considers that traffic monitoring and review of effects would be appropriate, given the uncertainty as to the potential extent and scale of effects and therefore the mitigation needed²²⁸.
268. We agree that it will be important to obtain traffic data from operation of the Freight Hub to support any collective response to the need for traffic mitigation. We have made recommendations for conditions to require KiwiRail to undertake annual traffic monitoring and for the results of that monitoring to be included in the Operational Traffic Management Plan.
269. We agree that it would be appropriate for KiwiRail to consult with the relevant road controlling authorities in preparing this plan and that similar to the RNIP, the feedback from any consultation and how that feedback has been responded to, should be included in the Operational Traffic Management Plan. We have recommended conditions to address this.

viii. Changes to access for individual properties

270. As a result of the closure of the Richardsons Line level crossing, alternative access will need to be provided to properties who currently access Railway Road from this level crossing (by forming Sangsters Road to Roberts Line)²²⁹. Closure of Roberts Line crossing and removal of existing road connections with Railway Road (Roberts Line East, Richardsons Line west, Clevely Line, Te Ngaio Road and Sangsters Road) will affect property access for residents on these roads²³⁰.
271. Tutaki 2019 Ltd²³¹ objects to the closure of the Roberts Line level crossing and considers that the alternative access proposed is substandard and remote and will result in a considerable loss of service for its suppliers, customers, employees and logistics operators. Tutaki also submit that if Sangsters Road is to be formed in this vicinity, it must include sufficient carriageway width to provide safe access for trucks, with safe north and south connections to Clevely and Roberts Lines respectively.

²²⁸ S 42A Report: Traffic Effects, section 7.

²²⁹ AEE, Section 9.3.3.1 – Property Access.

²³⁰ AEE, Section 9.3.3.1 – Property Access.

²³¹ Submission 13.

272. Warren Bradley²³² is concerned about the loss of the safe and highly visible access he currently enjoys to his property, and whether a suitable alternative will be provided. The design appears to position his driveway on the apex of a new corner on Roberts Line.
273. Glen & Karen Woodfield are concerned about the impacts on residents of Maple Street from the new roading layout, including construction and operation accesses adjacent to 9 and 9a Maple Street.²³³
274. Foodstuffs North Island²³⁴ own and operate a distribution centre at 703 Roberts Line. They seek assurance that the existing accesses on Roberts Line are not restricted in any way, that changes to Railway Road will not impact on traffic gaining access/egress to the FSNI distribution centre; and that opportunities for alternative access from other parts of the site (i.e., the frontage with Richardsons Line) will not be restricted/limited either. Foodstuffs also consider there is insufficient information in the NOR to confirm whether the proposed land takes from their site are necessary to deliver an efficient road network.
275. Provisions in the Land Transport chapter of the PNCC require all new roads and vehicle accesses to meet performance standards that relate to the safety and efficiency of vehicle movement²³⁵. Vehicle crossings should be designed to be appropriate for the expected traffic volume and speed environment²³⁶. Adverse effects of increased traffic or changes in traffic type which would compromise the safe and efficient operation of any road or level crossing are to be avoided, remedied, or mitigated.²³⁷
276. With respect to Tutaki's submission, Ms Fraser notes that no indication is provided regarding the nature of any upgrade to accommodate access to Roberts Line, and that this must be of sufficient standard to accommodate their needs, including the movement of agricultural vehicles and plant while safely accommodating existing traffic associated with 684 Roberts Line.²³⁸ We

²³² Submission 2.

²³³ Submission 6: Glen & Karen Woodfield.

²³⁴ Submission 58.

²³⁵ See Policy 1.5.

²³⁶ Policy 3.2.

²³⁷ Policy 3.1.

²³⁸ S 42A Report: Traffic and Transportation, Section 7.7.

agree with her assessment and the need for a condition setting out how safe access will be provided, to meet the practical needs of the various properties.

277. We understand that the Council is progressing the closure of the Roberts Line level crossing for safety reasons and therefore this closure will be implemented whether or not the Freight Hub is designated.²³⁹ Ms Fraser deals with the access implications for properties because of closure of the three level crossings and from increases in traffic flow on the frontage of properties at Section 7.6 and 7.7 of her report. No assessment has been undertaken of construction or operational effects on properties on Roberts Line from increases in frontage traffic flow and proximity to the new intersection between the Perimeter Road and Roberts Line.
278. Ms Fraser addresses potential impacts on Maple Street at Section 7.7 and 7.8 of her report. Ms Fraser is concerned about the safety of the intersection with a realigned Railway Road, given existing restricted sightlines and increases in traffic, and how this intersection might be affected during construction, which is currently unclear. She has proposed conditions requiring KiwiRail to assess and mitigate safety and level of service effects, which we support and adopt.
279. Ms Fraser addresses access issues for Foodstuffs distribution centre at Section 7.4 of her report. She considers that further work is needed to demonstrate how vehicle activity associated with the Foodstuffs operation will be accommodated during construction and operation of the Freight Hub and whether the designation is sufficient in this part of the network to accommodate any necessary mitigation. We expect this issue will be addressed in more detail in KiwiRail's evidence.
280. In light of the submissions, Ms Fraser's assessment and the policy context, the NOR does not demonstrate that KiwiRail has given sufficient attention to assessing the impacts on private accessways or how these are to be mitigated. We therefore adopt Ms Fraser's recommendations that KiwiRail undertake pre and post assessments of safety and level of service at specified accessways and have proposed conditions to cover this.

²³⁹ S 42A Report: Traffic and Transportation, Section 7.6.

ix. Impacts on cyclists, pedestrians and other vulnerable road users

281. KiwiRail's AEE states that effects on walking and cycling will be negative but minor but does not explain why²⁴⁰. The ITA assesses the impacts as positive but minor, on the basis that there is an opportunity for potential improvements along portions of the Te Araroa Trail on the eastern side of the site.²⁴¹
282. The Horizons Regional Council²⁴², Tomas Behrens²⁴³, Matthew McKenzie²⁴⁴ and Jim Jefferies²⁴⁵ consider it is important that the Freight Hub does not prevent the completion of the planned cycle path between Bunnythorpe and Palmerston North. They consider separated provision for cyclists is necessary to provide for safe multimodal travel and to mitigate effects of the increase in trucks and traffic generally and changes to the road network.
283. As the cycle path between Palmerston North and Feilding is already under construction, Jim Jefferies is concerned that there could be significant delays in completing this pathway. He considers designation conditions should specify a requirement to facilitate the pathway, including any temporary linkages until construction of the Hub is complete.
284. Tomas Behrens seeks that a separated shared path is provided along the new perimeter road and the section of Roberts Line joining the new road with Railway Road, along with additional/upgraded crossings at intersections that will access the shared path. Horowhenua District Council²⁴⁶ also supports investigation of further improvements and opportunities for active transport in the immediate area or wider catchment.
285. Horowhenua District Council strongly supports more detailed design work on the re-alignment of the Te Araroa Trail, to ensure a high-quality user experience. These investigations should include ongoing community engagement with neighbours, stakeholder interest groups and users of the Te Araroa Trail.

²⁴⁰ AEE, Section 9.3.6 Walking and Cycling Effects.

²⁴¹ Technical Report C: Integrated Transport Assessment, Section 10.6 Walking and Cycling.

²⁴² Submission 20.

²⁴³ Submission 29.

²⁴⁴ Submission 42.

²⁴⁵ Submission 9.

²⁴⁶ Submission 73.

286. Policy 3-7(c) of the RPS states that territorial authority decisions must ensure that sustainable transport options such as public transport, walking and cycling can be integrated into land use development. PNCC City View Objective 24 has a similar requirement, and this objective is expanded on within the Land Transport provisions, which support and encourage public transport, walking and cycling, including through the development of safe and accessible pedestrian paths and cycleways.²⁴⁷ Adverse effects of increased traffic or changes in traffic type on the safe and convenient movement of cyclists on roads²⁴⁸ are to be avoided, remedied, or mitigated.
287. Submitters, Ms Fraser²⁴⁹ and Council's Chief Engineer, Mr van Bentum²⁵⁰, seek an outcome that does not adversely affect the Council's plans for construction of the shared pathway. We agree that it is important that this pathway is able to be constructed as programmed by the Council, and that it continues to be available to cyclists throughout the construction and operation of the Freight Hub. We agree and adopt Ms Fraser's recommendations on this issue, that this should be secured by conditions on the designation.
288. Ms Fraser and Mr van Bentum agree with submitters that the new perimeter road will not provide a safe environment for cyclists. Mr van Bentum²⁵¹ and Ms Fraser²⁵² both recommend that separated provision should be made along the full length of this road, including along the section of Roberts Line. In light of the policy framework set out in the District Plan, we agree that this provision should be secured via conditions on the designation.
289. In response to the Horowhenua District Council's submission, we agree with KiwiRail that the appropriate mechanism to determine an appropriate alignment this is through the RNIP, in consultation with the relevant parties.

x. Effects of construction traffic

290. Construction of the Freight Hub, and in particular the earthworks phase, will require a significant volume of truck movements. KiwiRail does not yet know

²⁴⁷ PNCC District Plan, Chapter 20: Policy 1.6, Policy 1.7.

²⁴⁸ PNCC District Plan, Chapter 20: Objective 3, Policy 3.1.

²⁴⁹ S 42A Report: Traffic and Transport, Section 7.10.

²⁵⁰ S 42A Report: Palmerston North City Council Infrastructure Assets, Section 5.

²⁵¹ S 42A Report: Palmerston North City Council Infrastructure Assets, Section 5.

²⁵² S 42A Report: Traffic and Transportation, Section 10.

the location of haul routes or where such movements might be concentrated on site, as disposal sites and sources of fill are not yet known. KiwiRail state that these effects can be appropriately through a Construction Traffic Management Plan and that therefore these effects are expected to be less than minor²⁵³. Conditions 54 – 57 require KiwiRail to prepare a Construction Traffic Management Plan (CTMP) prior to commencement of construction.

291. Submitters raise a number of concerns about construction traffic and the CTMP condition. There is no requirement in the CTMP conditions to consult with or seek approval from PNCC or Waka Kotahi during preparation of the CTMP. Waka Kotahi is concerned this could lead to adverse effects on the safe and efficient functioning of the road network, so seeks a consultation and endorsement process prior to inclusion of the CTMP in the Outline Plan. In addition they consider construction traffic monitoring should be included in the CTMP.²⁵⁴
292. The Ministry of Education²⁵⁵ is concerned that construction and operational traffic could affect safe travel to Bunnythorpe School and would like to work with the Council and KiwiRail to develop appropriate travel plans. The Ministry requests that it is consulted during the preparation of the Construction Traffic Management Plan and any future traffic management plans, in particular in relation to the establishment of safe pedestrian crossing facilities and footpaths or cycleways within the school's catchment.²⁵⁶
293. Mason Durie²⁵⁷ does not want the Hub to proceed unless dedicated roads have been first constructed to accommodate construction workers and other Hub traffic. Likewise, Bruce & Alison Hill²⁵⁸ consider completion of the perimeter road must take place before construction of the Freight Hub commences and Danelle O'Keeffe & Duane Butts²⁵⁹ consider the regional ring road and upgrades to other parts of the network (such as widening and inclusion of bike lanes, upgrading weight limited bridges) should be under construction before designation and preliminary construction begins.

²⁵³ See section 9.2.2 – Transport Effects, in the AEE.

²⁵⁴ Submission 67.

²⁵⁵ Submission 92.

²⁵⁶ Submission 92 – Ministry of Education.

²⁵⁷ Submission 3.

²⁵⁸ Submission 4.

²⁵⁹ Submission 72.

294. Ms Fraser recommends a number of construction phase conditions, including that the new perimeter road must be fully formed and connected before Railway Road is closed, and to provide more specificity within the CTMP, particularly with respect to safe and continued access for affected properties²⁶⁰. Her recommendations largely address the concerns raised by submitters and we have proposed conditions to address these. Our recommended conditions also cover the points raised by Waka Kotahi and the Ministry of Education.

xi. Use of the Palmerston North Area Transport Model to assess effects

295. KiwiRail's ITA used the PNATM as the means for predicting effects of the Freight Hub on the road network.

296. Danelle O'Keeffe & Duane Butts²⁶¹ question the reliance placed in the ITA on the transport model, with no on-the-ground assessment or consultation with road users travelling from further afield (ie freight and distribution businesses, schools and commuters) to determine the suitability of these routes for increased heavy traffic volumes. They request that a review is undertaken, including consultation with businesses in the NEIZ, Tremaine Avenue, Airport Drive and Kelvin Grove), and covering a wider area than the immediate area examined, including links to outer roads.

297. During her review of the ITA, Ms Fraser raised concerns about whether the PNATM, which was built in 2013, was fit for purpose for assessment of this specific proposal. Ms Fraser recommended undertaking checks against the 2021 future year model, to see whether it accurately reflects existing traffic conditions. Ms Fraser also queried various details around validation of the model with respect to travel time validation, zone sizes and loading points, modelling of key intersection performance and anticipated changes in traffic flow and direction and treatment of heavy vehicles in the model. In response to these discussions, KiwiRail issued a technical memorandum demonstrating that the model is broadly fit for the purposes of the assessment.

²⁶⁰ S 42A report – Traffic and Transportation, Section 7 and 10.

²⁶¹ Submission 72.

298. To ensure the effects are in line with the modelled outcomes, Ms Fraser recommends pre and post development traffic surveys and subsequent level of service assessments/safety audits, which we support.

xii. A network utility of national and regional importance

299. KiwiRail identify that the Freight Hub is expected to qualify as a network utility of national and regional importance.²⁶²

300. Horizons Regional Council²⁶³ and Horowhenua District Council²⁶⁴ support the proposed designation from a transport perspective, given the importance of the rail network as a network utility of regional and national importance, and given the alignment with the current RLTP and proposed regional investment priorities in the Draft Regional Land Transport Plan 2021-31. While not yet recognised as regionally significant infrastructure through the process outlined in the RPS, Horizons Regional Council consider that the designation process is a sensible and appropriate mechanism to give effect to the intent of the RPS Objective 3-1 and supporting policies.²⁶⁵

301. Provisions in Chapter 3 of the One Plan²⁶⁶ require decision makers to recognise the importance and benefits derived from regional or national infrastructure²⁶⁷, to provide for their establishment, operation, maintenance and upgrading, including through avoidance of adverse effects on this infrastructure, as far as this is reasonably practicable and to ensure the effective integration of transport and land use planning²⁶⁸. Minor adverse effects arising from the establishment of new regionally significant infrastructure must be allowed, with any effects which are more than minor, avoided, remedied, or mitigated – taking into account any functional, operational or technical constraints, reasonably practicable alternatives and whether any adverse effects that cannot be adequately avoided, remedied or mitigated, can be appropriately offset²⁶⁹. PNCC City View Objective 23 has similar requirements and seeks to maintain the safe and efficient operation of such infrastructure.

²⁶² AEE, Section 10.1.5: Horizons Regional Policy Statement.

²⁶³ Submission 20.

²⁶⁴ Submission 73.

²⁶⁵ Policies 3-2 and 3-3.

²⁶⁶ Objective 3-1, Policy 3-1, Policy 3-2.

²⁶⁷ Which includes both State Highways and the rail network.

²⁶⁸ RPS Policy 3-2.

²⁶⁹ RPS Policy 3-3.

302. We agree with these submitters that the Freight Hub NOR is strongly aligned to these relevant statutory provisions and non-statutory regional transport policy. We also note that minor adverse effects from the establishment of such infrastructure should be allowed. Therefore, we consider that minor adverse effects on the road network may be "allowable", where it is difficult to attribute adverse effects directly to trips generated by the Freight Hub. However, such effects should not impede the safe and efficient operation of the land transport network. For this reason, we have recommended conditions requiring ongoing monitoring of traffic effects, to ensure that the level of effects remain at a level which is consistent with other statutory provisions which require the safe and efficient functioning of the transport network.

9.2.4 Recommendation

303. We recommend the following amendments to/or additional conditions. The full set of recommendations is set out in the Summary of Effects and Recommendations document.

- a. Changes to the RNIP condition to require this to be updated when the vehicle movements associated with the Freight Hub exceed 4,200 vpd and again when they exceed 8,000 vpd, to be more specific regarding the objective (safe and efficient operation of the network) and to require the RNIP to be peer reviewed and certified. The first RNIP should be prepared prior to completion of detailed design.
- b. Conditions to ensure the shared path can be constructed prior to Freight Hub construction and will be maintained throughout Freight Hub development and operation.
- c. Safe and separated provision is made for cyclists along the new perimeter road, with safe connections to the off-road shared path being constructed by the Council.
- d. Safety audits and level of service assessments are undertaken both pre and post development at the intersections and vehicle crossings identified by Ms Fraser and KiwiRail must demonstrate that the existing level of safe provision and level of service as at pre-development stage, will be maintained when the Freight Hub is operational. Operation is not to commence until this has been demonstrated.

- e. Additional matters to be addressed in the CTMP and OTMP, as recommended by Ms Fraser.
- f. Preparation of a safe travel plan for schools in consultation with the Ministry for Education and with the road controlling authorities.
- g. The CTMP and OTMP are subject to a consultation process prior to inclusion in any outline plan, and that the outcomes of consultation and how this is taken on board, is included in the plans.
- h. Conditions to require KiwiRail to undertake traffic monitoring during both construction and operational periods, with the results used to refine and update the traffic management plans.
- i. The perimeter road must be formed and joined to the existing network prior to closure of Railway Road.

9.3 Noise and Vibration effects

9.3.1 Key issues for assessment

304. The following issues are considered key issues for the purposes of this assessment:
- a. The Freight Hub will emit noise comparable with a major industrial development into an existing environment that currently has low ambient noise levels. Noise-generating activities could occur at any time within a 24 hour period, 7 days a week. Noise from the Freight Hub will exceed criteria for reasonable noise at existing dwellings close to the Freight Hub.
 - b. There is a high degree of uncertainty about the noise generated by the Freight Hub at each of the future operational stages because the details of what is to occur in those future stages is not yet known. Noise has been modelled for a particular scenario in the Acoustic Assessment, but this is only a placeholder.
 - c. KiwiRail proposes a noise and vibration management plan as the primary means to manage future noise and vibration emissions. However, KiwiRail has not proposed noise emission limits. In our view, a future management plan on its own does not provide sufficient

certainty that noise emissions will be acceptable, nor whether mitigations for noise effects are likely to be effective and appropriate.

- d. The cost of mitigating significant adverse noise effects on sensitive receivers beyond the Freight Hub boundary are not provided for in the NOR. Therefore, the costs of undertaking mitigation works to existing buildings, adapting peoples' way of life or relocating away from the effects will be the responsibility of those receiving the effects rather than KiwiRail.
- e. Development of future noise-sensitive activities on surrounding land outside the proposed designation will not be controlled. New or existing landowners may, unaware of the nature and extent of noise effects prior to the Freight Hub becoming fully operational, establish new noise-sensitive activities that will later be subject to unmitigated Freight Hub noise.
- f. There is a high level of uncertainty as to the extent of adverse effects associated with road traffic noise and the exact location of these effects, including the potential for adverse cumulative effects of road traffic associated with the future regional freight ring road.
- g. The site establishment period is long (at least three years) and will involve heavy earthmoving equipment working over a large area. Mitigation of construction noise will be required for nearby dwellings. This may include off-site mitigation, although it is not clear what that off-site mitigation might entail, when this would be determined or put in place and who would be responsible for its implementation.
- h. Uncertainty as to the extent and timing of noise mitigation measures for neighbouring dwellings, including timing of the construction of the proposed noise mitigation barriers.

9.3.2 Submissions received on this topic

305. The following submitters made submissions on the effects of noise and vibration. The following submissions have been considered in this evaluation:

1	Sonia & Neal Watson
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2	Warren Bradley
3	Mason Durie on behalf of Aorangi Papakainga
4	Bruce M & Alison M Hill
6	Glen & Karen Woodfield
7	Rochelle & Rex McGill
10	Timothy Brennon Tewake
15	Maree Woods
16	Martin Jones
17	Nicola Schreurs and Thomas Good
18	Kevin and Yvonne Stafford
21	Ian Alexander Shaw
22	Fiona Hurly
23	Mike Tate
24	Zaneta Park
25	Andreas Johannes Hofman
26	Peter Hurly
27	Helen and Pita Kinaston
28	Katrina George
31	Courtney Meredith Kibby
33	Linda Spearpoint
34	Stuart Robinson
35	Robyn Curtis
36	Helen S Thompson
37	Ian Harvey
38	Logan Harvey

40	Gerry Rose & Gill Frampton
41	Warrick George
44	Mereti Taipana
47	Aaron P Fox
50	Kevin and Erina Carroll
53	Raewyn M Eastwood
57	John David Bryan Austin & Rosaleen Mary Wapp
59	Joanne K Whittle
61	Peter Gore & Dale O'Reilly
62	Mary A Chapman
64	Sharon Lee Gore
68	Friederike Lugt
70	Renee Louise Thomas
71	Darren Green
72	Danelle O'Keefe & Duane Butts
74	Arthur George Park
75	Ian & Andrea Ritchie
76	Athol & Florence Gibson
80	Riana Carroll
84	Raewyn Carey
85	Carole Ann & Anthony Booth
86	June I Hurly
87	Mary & Michael Hurley
88	Corinne J Dingwall
90	Justine Jensen

91	Steve M Kinane
92	Ministry of Education
93	Craig Forbes
94	MidCentral District Health Board (MDHB) Public Health Service
95	Owen Leonard Reid
98	David Odering

9.3.3 Analysis

i. Accuracy of the acoustic model and assessment

306. KiwiRail has undertaken computer modelling of potential noise generated by operation of the Freight Hub to predict indicative sound levels at nearby properties. This modelling underpins KiwiRail's assessment of noise effects.
307. The MidCentral District Health Board²⁷⁰ is concerned that the noise modelling may under-estimate the extent of noise effects because it has modified standard noise assessment methodologies and excluded adjustments for special audible characteristics, in particular impulsive events associated with night-time operations such as log handling or shunting coupling, which might cause sleep disturbance. They seek that Condition 72(e) - Operational Noise and Vibration Management Plan is amended to state: "and shall include assessment of sound in accordance with NZS 6802:2008 including consideration of adjustments for special audible characteristics".
308. One submitter is concerned that the noise monitoring used to inform the acoustic assessment included a period of time during which the Government mandated Covid-19 lockdown was in place and so may not represent a true indication of current noise levels and transmission.²⁷¹
309. Nicola Schreurs and Thomas Good²⁷² are concerned that effects associated with future increases in railway traffic on the NIMT have not been assessed in the acoustic report because KiwiRail states that "these could occur regardless

²⁷⁰ Submission 94: MidCentral District Health Board Public Health Service. Also raised in Submission 61.

²⁷¹ Submission 7: Rochelle & Rex McGill.

²⁷² Submission 17: Nicola Schreurs & Thomas Good.

of whether the Freight Hub is located in the proposed location, or somewhere else in the region". Ms Schreurs and Mr Good consider that this ignores the cumulative effects of the proposed changes in intensity of use as a result of longer and heavier trains on the NIMT, in combination with train marshalling activity within the Freight Hub (shunting, accelerating and decelerating). As a result, the submitter is concerned that the proposed mitigation measures may be insufficient.

310. Other submitters are concerned that the prevailing wind has not been factored into the acoustic assessment,²⁷³ or that it does not account for the quieter noise environment at night,²⁷⁴ or the predominantly rural setting.²⁷⁵
311. Aaron Fox²⁷⁶ is concerned that the acoustic report has adopted an LAeq (1hr) measure, which he considers averages out (without duration adjustment) the peaks and troughs of noise associated with the movement of trains and vehicles and the loading and unloading of containers and logs.
312. He also raises several issues which he considers are not accounted for in the assessment, namely: future forecasts of train movements, heavy vehicle routes and forecast volumes, future configuration of the arterial road network, existing building types and uses, unexercised resource consents for future noise-sensitive development, and lots where future dwellings could be built as permitted activities.²⁷⁷ He considers the acoustic assessment should be revisited to address these considerations.
313. Friederike Lugt²⁷⁸ requests that the acoustic assessment is revisited to cover additional operational scenarios and fully detailed noise mitigation strategies which can then be evaluated for their adequacy. The submitter also considers that decision-making should take into account the significant body of knowledge on the impact of night-time noise on health and wellbeing. Danelle O'Keefe and Duane Butts consider that the levels and type of

²⁷³ Submission 72: Danelle O'Keefe & Duane Butts.

²⁷⁴ Submission 26: Peter Hurly.

²⁷⁵ Submission 72: Danelle O'Keefe & Duane Butts.

²⁷⁶ Submission 47.

²⁷⁷ This concern is also raised in Submission 61.

²⁷⁸ Submission 68: Friederike Lugt.

operational noise for particular activities should be known based on current operational activities and should be applied in the modelling.²⁷⁹

314. Mr Lloyd, Council's acoustic and vibration expert, provides a comprehensive analysis of the Freight Hub proposal, its potential noise effects, the adequacy of the acoustic assessment, and his recommendations for addressing potential adverse effects. Our analysis provides a summary of his recommendations, supplemented by our planning analysis and recommendations.
315. Mr Lloyd, addresses the technical issues raised by the above submissions in his report at Section 7, and we rely on his assessment. In summary, Mr Lloyd agrees with submitters that the acoustic assessment provides no certainty as to the full extent of adverse noise effects. He considers that the noise predictions are potentially underestimated (one reason being that adjustments have not been made in the model for special audible characteristics, as required by NZS 6802:2008).
316. Mr Lloyd considers the contour map included in the NOR material will require updating once the Freight Hub's design is confirmed and further modelling has been undertaken to reflect and understand the confirmed design. Mr Lloyd observes that the noise modelling undertaken to inform KiwiRail's acoustic assessment did not provide for the special audible characteristics of the activity. If those special audible characteristics were included, Mr Lloyd's advice is that they would add 5 decibels to each of the predicted noise contours.²⁸⁰ Mr Lloyd considers that an updated noise contour map (accounting for special audible characteristics and the confirmed design) should inform the establishment of a Noise Management Boundary, which he recommends for use in the designation conditions, tied to enforceable standards²⁸¹.
317. We agree with Mr Lloyd's recommendations, including for conditions imposing noise standards in reliance on the Noise Management Boundary. The updated map showing the Noise Management Boundary should also be included in the Operational Noise and Vibration Management Plan.

²⁷⁹ Submission 72: Danelle O'Keefe & Duane Butts.

²⁸⁰ Section 42A Report: Noise, Section 7.

²⁸¹ Section 22A Report: Noise, Section 7.

ii. Operational noise and vibration effects

318. KiwiRail has undertaken an acoustic assessment²⁸² of potential noise and vibration generated during operation of the Freight Hub, with an acoustics computer model used to predict the level of noise emissions. Without mitigation, the model predicts “a relatively large noise footprint with predicted levels exceeding the recommended noise criteria”. The recommended noise criteria that KiwiRail adopt in the model are based on the NEIZ standards in the District Plan, which permit higher levels of noise than the noise limits in the Rural or Residential zones. The AEE states that the daytime activity would be:

clearly audible and potentially disturbing at houses to the east, north and west of the Freight Hub and would likely cause sleep disturbance for residents²⁸³

319. At night, with unconstrained continuous operations, the night criterion adopted by KiwiRail in the model (45 dBLAeq(1h) would be “exceeded over a wide area”.²⁸⁴

320. To mitigate noise, KiwiRail propose to construct noise barriers to the east, north and west of the Freight Hub, which will reduce predicted levels “at most locations”.²⁸⁵ However, KiwiRail acknowledge that further off-site mitigation may be needed and that additional noise modelling will need to be undertaken at each stage of the Freight Hub development to refine/optimize noise barrier heights.

321. Many submitters are concerned that KiwiRail propose to operate the Freight Hub on a 24-hour, 7 day a week basis. They are concerned that noise and vibration generated by operations will likely adversely affect the amenity, health and wellbeing of nearby residents,²⁸⁶ and property values,²⁸⁷ especially

²⁸² Technical Report D.

²⁸³ See AEE, Section 9.4.1: On-Site Operational Noise.

²⁸⁴ Technical Report D: Section 7, Pg 37.

²⁸⁵ AEE, Section 9.4.1.

²⁸⁶ Submission 1: Sonia & Neal Watson, Submission 7: Rochelle & Rex McGill, Submission 10: Timothy Tewake, Submission 15: Maree Woods, Submission 22: Fiona Hurly, Submission 26: Peter Hurly, Submission 28: Katrina George, Submission 33: Linda Spearpoint, Submission 36: Helen Thompson, Submission 40: Gerry Rose & Gill Frampton, Submission 47: Aaron Fox, Submission 50: Kevin & Erina Carroll, Submission 57: John Austin & Rosaleen Wapp, Submission 62: Mary Chapman, Submission 64: Sharon Gore, Submission 75: Ian & Andrea Ritchie, Submission 86: June Hurly, Submission 87 – Mary & Michael Hurley, Submission 88: Corinee Dingwall, Submission 90: Justine Jensen, Submission 91: Steve Kinane.

²⁸⁷ Submission 21: Ian Shaw, Submission 26: Peter Hurly, Submission 36: Helen Thompson, Submission 37: Ian Harvey, Submission 38: Logan Harvey.

given the quiet rural and residential environments that residents currently enjoy.²⁸⁸

322. Submitters have struggled to identify what the noise impact will be on their particular property. Issues covered by submitters include an increase in road traffic noise²⁸⁹ and how this noise should be appropriately managed,²⁹⁰ for example, through an iterative process to identify and address adverse effects at each stage of the process.²⁹¹ Some submitters consider that KiwiRail's investigation and identification of appropriate mitigations should proceed on an individual property basis,²⁹² include an investigation of potential adverse health effects,²⁹³ and be subject to an independent investigation and verification.²⁹⁴ One submitter requests that the marshalling yards be retained as far as possible from dwellings on Maple Street,²⁹⁵ while another supports the proposal to locate larger buildings away from Bunnythorpe village to reduce noise effects.²⁹⁶ One submitter is concerned noise mitigation strategies may be insufficient given the potential height of container stacking and that noise mitigation within the Freight Hub may not be situated close enough to the source to adequately reduce noise emissions.²⁹⁷
323. In terms of the planning framework for considering noise effects, the objectives and policies in the District Plan direct that:
- a. adverse environmental effects from uncontrolled urban expansion (including residential, industrial, commercial and rural-residential growth) into the rural zone are avoided;²⁹⁸

²⁸⁸ Submission 27: Helen & Pita Kinaston, Submission 34: Stuart Robinson, Submission 35: Robyn Curtis, Submission 53: Raewyn Eastwood, Submission 59: Joanne Whittle, Submission 70: Renee Thomas-Crowther, Submission 84: Raewyn Carey.

²⁸⁹ Submission 40: Gerry Rose & Gill Frampton, Submission 41: Warrick George, Submission 57: John Austin & Rosaleen Wapp, Submission 76: Athol & Florence Gibson, Submission 93: Craig Forbes.

²⁹⁰ Submission 2: Warren Bradley, Submission 7: Rochelle & Rex McGill, Submission 31: Courtney Kibby, Submission 59: Joanne Whittle, Submission 68: Friederike Lugt.

²⁹¹ Submission 6: Glen & Karen Woodfield.

²⁹² Submission 7: Rochelle & Rex McGill, Submission 76: Athol & Florence Gibson.

²⁹³ Submission 72: Danelle O'Keeffe & Duane Butts.

²⁹⁴ Submission 26: Peter Hurly, Submission 72: Danelle O'Keeffe & Duane Butts.

²⁹⁵ Submission 6: Glen & Karen Woodfield.

²⁹⁶ Submission 24: Zaneta Park.

²⁹⁷ Submission 68: Friederike Lugt.

²⁹⁸ PNCC District Plan, Section 2: City View Objectives, Objective 1.

- a. the provision of infrastructure is to be environmentally sensitive;²⁹⁹
- b. the distinctive rural and urban character of the City is recognised;³⁰⁰
- c. development is designed and constructed to promote a coordinated, healthy and safe environment, including by establishing specific noise limits for the rural area and protecting the ambient acoustic standards of the residential environment;³⁰¹ and
- d. the quality of the rural environment is to be maintained or enhanced.³⁰²

324. Mr Lloyd considers that the noise from the Freight Hub will inevitably exceed reasonable noise criteria for the nearest dwellings to the Freight Hub (when assessed against the established noise limits in the District Plan). He considers that "the adverse noise impacts of the project need to be understood as part of the NOR process, appropriately mitigated, and provision made for noise management in respect of surrounding land".³⁰³ For this reason, Mr Lloyd does not support KiwiRail's proposition that noise controls can be established once the Freight Hub is operational, through a yet-to-be-developed noise management plan.

325. Mr Lloyd concludes that it is important to establish daytime and night-time noise limits as designation conditions, which are to be achieved at a set noise boundary location around the site (rather than at the boundary of the Freight Hub itself) and guided by appropriate reference noise criteria. He also proposes that a maximum noise standard is required that applies everywhere outside the designation. The maximum noise standard would reflect a noise level above which physical mitigation measures would not adequately reduce internal noise levels within nearby dwellings to an acceptable level³⁰⁴.

326. In our view, adopting the noise limits recommended by Mr Lloyd as designation conditions provides an appropriate noise effects envelope, to

²⁹⁹ PNCC District Plan, Section 2: City View Objectives, Objective 2.

³⁰⁰ PNCC District Plan, Section 2: City View Objectives, Objective 8.

³⁰¹ PNCC District Plan, Section 2: City View Objectives, Objective 9 and Objective 22, Section 10: Residential Zone Policy 2.5, Section 9: Rural Zone, Policy 3.1.

³⁰² PNCC District Plan, Section 9: Rural Zone, Objective 3 and Section 10 Residential Zone: Objective 2, Policy 4.4.

³⁰³ Section 42A Report: Noise, Operational noise effects, Section 5.8.

³⁰⁴ Section 42A Report: Noise, Executive Summary.

give certainty to affected landowners, KiwiRail and the Council. Noise limits also define the parameters for future noise management plans. We agree with Mr Lloyd's recommended approach of defining a set of noise limits and the noise boundary location and, thereafter, managing noise impacts through a process that includes the following key components:³⁰⁵

- a. establish likely maximum noise emissions through noise modelling;
- a. identify appropriate noise mitigation measures at the Freight Hub boundaries (i.e. noise walls or bunds);
- b. identify which areas of the surrounding land remain affected by noise which exceeds the noise limits;
- c. identify and provide the necessary off-site mitigation to achieve the noise limits within these properties (such as internal noise insulation and mechanical ventilation).

327. We understand that although a management plan can provide information about how effects parameters can and will be met, it is inappropriate for effects parameters or limits to be left to be determined as part of a future management plan; these parameters must instead be set in the conditions themselves.³⁰⁶ Setting noise limits in the NOR conditions is consistent with the management approach signalled in the District Plan objectives and policies. Therefore, we agree with Mr Lloyd that noise limits should be established as NOR conditions (the critical elements for these conditions are set out in Mr Lloyd's s42A report³⁰⁷ and in the Effects and Recommendations Summary Table), and that the future noise management plans are to describe the means by which those limits will be achieved. Management plans provide for flexibility to adapt how the noise limits are achieved over time as the Freight Hub develops and evolves.

328. Mr Lloyd has identified that noise-sensitive activities that are sensitive to the Freight Hub's noise effects could be established after the designation is in place but before it is implemented. Without some form of land use control or advisory mechanism, landowners may unknowingly establish new noise-

³⁰⁵ Section 42A Report: Noise, Section 5.

³⁰⁶ *Wellington Fish and Game Council v Manawatu-Wanganui Regional Council* [2017] NZEnvC 37.

³⁰⁷ Section 42A Report: Noise, Section 8 and Appendix A.

sensitive activities within the area where Freight Hub noise emissions would otherwise require mitigation to achieve acceptable noise levels³⁰⁸. We note that Rule R9.11.3 Noise Insulation: Rail Noise in the District Plan requires noise insulation standards to be met for new or relocated buildings with habitable rooms within 100m of the nearest edge of a railway track, however we understand that the noise effects Mr Lloyd is concerned about extend substantially further than 100m from the railway track locations envisaged within the Freight Hub. Also, we do not consider that Rule R9.11.3 applies to parts of the Freight Hub that are not railway track but might nevertheless generate significant noise.

329. We anticipate that the mitigation response described above will effectively address adverse effects on future development. Where the Requiring Authority does not, through its own initiative, ensure that adequate noise mitigation is incorporated into new development on surrounding properties, it may need to put in place further on-site noise reduction measures in order to meet the noise limit conditions we recommend for the NOR. In reaching this conclusion, we considered the following alternative options:

- a. KiwiRail applies for a private plan change to put in place the noise management boundary and associated land use controls for new development in the District Plan. This would be in addition to the existing requirements of Rule R9.11.3: Noise Insulation: Rail Noise, which applies to habitable rooms constructed within 100m of the edge of a railway track.
- b. KiwiRail amends the designation to include the area within the noise management boundary so it must first approve any new development that may affect the designation (s176(1)(b), RMA).

330. In relation to option a, this option would not be effective as a mitigation measure until the plan change has legal effect (assuming the plan change was approved). A plan change application may not be approved. Furthermore, district plan provisions restricting the use of land would effectively transfer the responsibility and cost for the management and mitigation of noise effects to other people, when in our opinion this should be at KiwiRail's expense. This option would not require KiwiRail itself to avoid, remedy or

³⁰⁸ Section 42A Report: Noise, Section 6.

mitigate the adverse effects they are generating. While a district plan regulatory approach is often appropriate when dealing with effects from long-established existing infrastructure where the effects are established and generally observable (such as Palmerston North Airport), we do not consider that approach is appropriate for a new infrastructure activity establishing itself in an existing sensitive receiving environment.

331. With respect to option b, we note that KiwiRail considered extending the designation boundary to encompass the most adversely affected properties at the MCA stage. It is not clear from the NOR documentation why KiwiRail did not adopt this approach. If the designation was extended, KiwiRail would have the ability under s176(1)(b) RMA to restrict or prevent new land use activities within the designation that may be sensitive to noise. This would protect KiwiRail's interests, but also impact on the use and development rights that affected landowners would otherwise enjoy. Affected landowners would, importantly, have had recourse under s 185 RMA to ask the Environment Court to require KiwiRail to acquire their land, an option that is not currently available to them on the existing designated boundaries. In our view, the benefits to KiwiRail of extending the designation over the most affected surrounding land, coupled with the acquisition rights or opportunities in the RMA, would improve the certainty and equity in addressing off-site Freight Hub effects. The benefits of a wider designation would apply to dealing with effects on existing noise sensitive activities as well as potential future noise sensitive activities, as those potentially significant effects cannot be internalised within the current NOR boundaries.

332. We recommend adding a set of noise limits and associated management measures to the designation conditions to address off-site adverse noise effects. However we also consider that KiwiRail should provide further explanation or consideration of an alternative configuration of the designation boundaries. That alternative configuration would extend over properties likely to be the most significantly affected by adverse noise effects to the extent they may be inconsistent with residential use. We consider this warrants investigation as an alternative method in accordance with s 171(1)(b).

iii. Noise and vibration effects during construction

333. KiwiRail summarises the noise and vibration effects during construction in Section 9.2.1 of the AEE. KiwiRail identifies that mitigation is likely to be required

in several locations within 50m of the Freight Hub boundary³⁰⁹ to maintain compliance with the identified construction noise and vibration criteria. KiwiRail state that significant night-time construction works are not likely, other than short-term activity such as connections to existing roads and rail networks.

334. KiwiRail anticipates that the noise and vibration effects of construction will be minor, with mitigation in place. KiwiRail has proposed a Construction Noise and Vibration Management Plan as a means of detailing the methods to be used to achieve compliance with the noise and vibration criteria.
335. Many submitters are concerned at the length of the construction period and subsequent generation of noise and vibration that will be experienced by nearby residents,³¹⁰ including those in Maple Street³¹¹ and along Sangsters Road.³¹² Submitters are concerned this will have adverse effects on their health and wellbeing, including where submitters already experience sensory sensitivity.³¹³
336. Several submitters request the establishment of noise mitigation measures such as the earth bunds, noise walls and planting before construction commences, or at least as early as possible in the site development phase.³¹⁴ Submitters also request that dedicated construction haul routes are established early to avoid the adverse impacts of noise on residents³¹⁵ and that heavy construction traffic is directed away from residential areas.³¹⁶
337. As set out above, the District Plan direction is to protect noise sensitive activities from the adverse effects of noise and to maintain the expected levels of amenity established by the Plan in rural and residential environments. The relevant noise standard for construction noise is New Zealand Standard NZS

³⁰⁹ Including Maple Street, Te Ngaio Road, along the eastern boundary and around the stormwater ponds on the western boundary.

³¹⁰ Submission 2: Warren Bradley, Submission 4: Bruce & Alison Hill, Submission 10: Timothy Tewake, Submission 18: Kevin & Yvonne Stafford, Submission 27: Helen & Pita Kinaston, Submission 75: Ian & Andrea Ritchie.

³¹¹ Submission 6: Glen & Karen Woodfield.

³¹² Submission 7: Rochelle & Rex McGill, Submission 84: Raewyn Carey.

³¹³ Submission 6: Glen & Karen Woodfield, Submission 22: Fiona Hurly, Submission 25: Andreas Hofman, Submission 50: Kevin & Erina Carroll, Submission 80: Riana Carroll.

³¹⁴ Submission 4: Bruce & Alison Hill, Submission 18: Kevin & Yvonne Stafford, Submission 23: Mike Tate, Submission 57: John Austin & Rosaleen Wapp.

³¹⁵ Submission 3: Mason Durie.

³¹⁶ Submission 44: Mereti Taipana.

6803:1999 Acoustics – Construction Noise, as adopted in KiwiRail's draft Construction Noise and Vibration Management Plan ("CNVMP") condition.

338. We note that Mr Lloyd has raised doubts about the relevance of KiwiRail's alternative proposal to use Waka Kotahi's State Highway Construction Noise guide³¹⁷. We therefore recommend the highway construction guide is excluded from the condition unless KiwiRail can demonstrate the guide's appropriateness.³¹⁸ We support KiwiRail's inclusion of New Zealand Standard NZS 6803:1999 Acoustics – Construction Noise in the CNVMP condition, but we agree with Mr Lloyd that the relevant construction noise and vibration limits should also be included as standalone conditions on the designation to provide certainty.
339. Mr Lloyd provides his assessment of the dwellings likely to be affected by construction noise at Section 6 of his report and notes that adverse effects may extend beyond the 50m 'buffer area' assessed by KiwiRail – these could extend up to 200m from the designation boundary. Mr Lloyd is also concerned about the length of time that nearby dwellings may be subjected to construction noise (which is not typical or anticipated by the NZ Standard for construction noise). No information is provided in the NOR documentation as to the full extent of mitigation measures potentially necessary to mitigate construction noise within the surrounding area, when these mitigation measures would be determined, and who would be responsible for their implementation. The current conditions do not provide for further investigation into additional mitigation measures.
340. We recommend that KiwiRail provide further information to identify what "enhanced mitigation measures"³¹⁹ will be required if construction noise and vibration limits cannot be achieved at nearby noise sensitive activities. KiwiRail has stated that they may not meet these standards but has not described how they will mitigate the resultant adverse effects.
341. We also recommend, in line with Mr Lloyd's recommendation, that a condition is added to specify that, prior to construction commencing, a noise barrier is

³¹⁷ S 42A Report: Noise, Section 8.1.

³¹⁸ It is possible that KiwiRail intend the Waka Kotahi, State Highway Construction and Maintenance Noise and Vibration Guide, 2019, to apply only to the road construction aspects of the project.

³¹⁹ Technical Report D: Acoustic Assessment, pg 31.

in place between the Freight Hub construction works and specified existing dwellings close to the designation boundary (including the dwellings identified in the Construction Noise Mitigation (section 6.1) of Mr Lloyd's s42A report). That barrier could be a temporary or a permanent one, provided it will achieve the construction noise standards (as recommended by Mr Lloyd) when assessed at those dwellings.

342. Given the scale of the proposed works, Mr Lloyd considers it is likely that night-time construction works may be required above and beyond the short-term activities that KiwiRail suggests. To provide for this eventuality, Mr Lloyd recommends that the CNVMP condition be amended to account for night-time construction works, with any night-time works complying with the NZS 6803 noise criteria.³²⁰ The addition of this condition is consistent with the amenity and health outcomes of the District Plan's objectives and policies and would assist in addressing concerns raised by submitters.
343. With respect to noise generated by construction traffic, KiwiRail proposes to manage noise generated by construction traffic via a Construction Traffic Management Plan, which will include limitations on heavy vehicle movements through "key areas" during the night and peak times, as well as construction noise vehicle limits and any requirements for effective noise suppression. We support this condition (Condition 57) but consider it would benefit from further specificity to identify the areas where such limits should be applied and to define what night time and peak times are. We recommend amendments be made to this condition to address this.

iv. Noise and vibration mitigation measures

344. KiwiRail's proposed mitigation includes continuous noise barriers (comprised of a combination of earth bunds and concrete walls established along the eastern and northern boundaries of the site, and a timber or concrete wall along the western boundary). The Acoustic Assessment states that further optimisation of barrier locations and heights will be required during detailed design.³²¹ In addition, off-site mitigation in the form of acoustic treatment will be needed for some pre-existing dwellings, although the acoustic assessment does not identify which dwellings this will need to be applied to.

³²⁰ Section 42A Report: Noise, Section 6.2.

³²¹ Technical Report D, Section 7, pg 37.

345. A number of submissions have been received which address noise mitigation. Some submitters request that KiwiRail install double or triple glazing,³²² sound proofing or roof insulation and provide financial compensation for the devaluation of properties.³²³
346. The MidCentral District Health Board³²⁴ considers that the proposed noise management plan conditions are inadequate in obliging the Requiring Authority to meet the costs of necessary off-site noise mitigation works (including ventilation where necessary). It suggests the imposition of a condition similar to those imposed on airport related designations³²⁵ and/or associated District Plan rules. The submitter requests that the condition prescribe the basis for off-site noise mitigation packages being offered at the cost of the Requiring Authority, to owners of classes of buildings used for noise-sensitive activities, e.g. dwellings. Such a condition would require KiwiRail to meet in whole or part, costs associated with a defined level of noise mitigation works, including defined levels of ventilation works and operation. The submitter explains that a standard agreement between the parties is normal and, upon acceptance of such an offer, the Requiring Authority arranges for the predefined works to be undertaken. They suggest that mitigation packages may be predefined as appropriate for any particular class of buildings and type of construction.
347. The Ministry of Education³²⁶ request KiwiRail further assess the potential adverse effects on Bunnythorpe School from road traffic noise and noise from the maintenance of trains/carriages. They request that appropriate conditions are placed on the NOR to manage noise and vibration associated with the construction and operation of the Freight Hub on the school, including potentially through the establishment of noise boundaries to protect the existing noise environment.
348. On-site forms of mitigation suggested by other submitters include a requirement for the detailed design to incorporate noise/vibration dampers on all tracks, all new carriages/engines to be fitted with dampening couplers,

³²² Submission 57: John Austin & Rosaleen Wapp.

³²³ Submission 18: Kevin & Yvonne Stafford.

³²⁴ Submission 94.

³²⁵ The submission suggests the Auckland or Wellington Airport designations.

³²⁶ Submission 92: Ministry of Education.

with such features retrofitted to all stock following refurbishment or servicing, and use of electric vehicles for all yard movements.³²⁷

349. One submitter requests that the noise mitigation wall, which is proposed to be located between the new perimeter road and the Freight Hub, is relocated to afford noise mitigation to their property which will be directly adjacent to the new road. This would be consistent with the positioning of this wall at the northern end of the NOR, near Bunnythorpe, where it lies between the road and neighbouring properties. Without such mitigation, this property will receive significantly greater traffic noise than it currently experiences.³²⁸ Other submitters raise similar concerns regarding the adverse effects of the increase in road traffic noise from the new perimeter road on their properties.³²⁹
350. Many submitters request that an alternative location is chosen for the Freight Hub. Others request that residents are given the option to sell their properties and relocate.³³⁰
351. We agree with submission 27 that the location of the noise mitigation wall could be better positioned to provide some protection for this property and other dwellings along the western boundary. We have recommended that conditions require the noise barrier on the western side of the Freight Hub be located between the Perimeter Road and dwellings wherever this is practical.
352. Mr Lloyd addresses off-site mitigation at section 8 and makes recommendations for internal noise standards that must be achieved, including through acoustic insulation.
353. Mr Lloyd considers that in some potential circumstances, KiwiRail should be offering to purchase affected properties if noise continually exceeds category C criteria, indicating an incompatibility with reasonable use.³³¹ Rather than requiring KiwiRail to purchase those properties, it is more appropriate to focus on the acceptable level of noise as an outcome and require KiwiRail to either achieve that outcome as a minimum standard or to take further voluntary steps which might include purchase. We have suggested requirements for a noise insulation condition apply only to dwellings that are not owned by

³²⁷ Submission 72: Danelle O’Keeffe & Duane Butts.

³²⁸ Submission 27: Helen & Pita Kinaston.

³²⁹ Submission 70: Renee Thomas-Crowther.

³³⁰ Submission 22: Fiona Hurly, Submission 40: Gerry Rose & Gill Frampton.

³³¹ S 42A Report: Noise, Section 8.2.

KiwiRail. This leaves it open to KiwiRail to purchase the properties to resolve noise effects if parties wish to do so by agreement.

354. Mr Lloyd advises that at noise levels greater than 65 dB LAeq(1h) or 95 dB LAmax noise becomes impracticable for noise insulation to meet the proposed internal noise standards.³³²
355. In these circumstances, if they were to arise, KiwiRail may need to look at ceasing the operations that are causing noise to that level, or reach some alternative arrangement with property owners, such as purchase or alternative compensation. These measures would fall outside of conditions, which is appropriate.
356. For the reasons above, we recommend a condition that within the 45 dB LAeq(1hr) contour, any noise emitted from the Freight Hub shall not cause the internal noise levels specified in Tables ZZ1 and ZZ2333 to be exceeded. The condition should include an advice note that noise exceedance may be measured or predicted.
357. We recommend a further condition that where the condition above is not met, noise insulation and/or ventilation shall be installed (where accepted by the property owner) at KiwiRail's cost, to achieve the internal noise levels in Tables ZZ1 and ZZ2334. The noise insulation shall assume maximum noise levels from either the current or any future Freight Hub operational noise contour map and the noise characteristic shall be that of a representative locomotive.
358. We also recommend that KiwiRail provide further information regarding the design criteria that will be applied (such as how height is to be determined) when designing the noise barriers; specific criteria should address situations where nearby dwellings are on elevated ground. Mr Lloyd discusses these matters in the Operational Noise Mitigation section of his s42A report,³³⁵ particularly in relation to specific existing dwellings located close to the designation boundary on Sangsters Road and Maple Street. We recommend, based on Mr Lloyd's advice, that appropriate design criteria are incorporated

³³² Section 42A Report: Noise, Section 8.2.

³³³ S 42A Report: Noise and Vibration, Appendix A.

³³⁴ S 42A Report: Noise and Vibration, Appendix A.

³³⁵ Section 42A Report: Noise, Section 8.2.

into conditions to provide certainty that effects on higher-risk properties are properly addressed.

359. We note that the indicative layout of the site has been arranged to assist with mitigating noise and vibration emissions. In line with Mr Lloyd's recommendations, we recommend that the following elements of the indicative layout are retained:

- a. noisiest activities are established as far south (marshalling yards and container terminal) and west (log yard) on the site as possible;
- b. the freight forwarders warehouse buildings are designed as one continuous building, providing noise screening to the west;
- c. the Perimeter Road is located to reconnect to Railway Road and is screened by the perimeter noise barrier (at Maple Street).

360. As these are broader design matters rather than enforceable standards, we recommend these outcomes are developed as outcomes for inclusion in the Design Framework, as recommended elsewhere in this report³³⁶.

v. Noise limits and standards

361. KiwiRail proposes Freight Hub noise criteria in the Acoustic Assessment in Table 5 and explains the rationale for those criteria in Section 4 of the report.

362. Some submitters suggest that an operational noise restriction should be applied to night-time noise emissions from the Freight Hub³³⁷, for example, the NEIZ noise limit standard (which limits noise between the hours of 10pm and 7am to 45 dB LAeq(15mins) with an Lmax of 75dBA Lmax³³⁸) which applies to activities generating the noise, and that the Rural zone noise limits should apply outside the designation.³³⁹ These submitters ask that noise monitoring be established to monitor and report on breaches, particularly at night. One submitter requests that high noise generating activities are limited to daylight hours.³⁴⁰ Friederike Lugt³⁴¹ considers that upper noise limits should be set, with

³³⁶ See our recommendations in the Landscape and Visual Effects section.

³³⁷ Submission 71: Darren Green.

³³⁸ Rule 12A.10.1.

³³⁹ Submission 72: Danelle O'Keeffe & Duane Butts.

³⁴⁰ Submission 72: Danelle O'Keeffe & Duane Butts.

³⁴¹ Submission 68: Friederike Lugt.

consequences for breaches specified and a fast-track system established for dealing with complaints. Danelle O’Keeffe & Duane Butts³⁴² request that complaints are reviewed at minimum on a six-monthly basis, with findings and follow-up actions to be advised to the complainant and local authority to enable on-going monitoring and assessment.

363. Other submitters request that construction and operational hours are reduced,³⁴³ for example, to 8am – 5pm³⁴⁴ or 8am – 6pm during weekdays³⁴⁵ to reduce adverse effects. Joanne Whittle³⁴⁶ considers there is insufficient justification in the AEE for a 24 hour operation and that this would be inconsistent with any other large industrial complex in the district.
364. Martin Jones³⁴⁷ considers the acoustic assessment is flawed because it uses a Norwegian standard relevant to airport operations. Instead, he submits that the correct standard is ISO14837 and ISO3095. In addition, he says the assessment assumes hours and times of operation that are not relevant to a 24 hour operation. He is concerned that additional properties may experience noise in the range of 55 – 60dBA and requests that further reporting is undertaken to rectify these issues.
365. Submitters³⁴⁸ are concerned that KiwiRail has reserved the right to not only determine its noise standards once future operational requirements are known but to determine how these standards will be applied, monitored, and enforced through a future noise management plan. In response, they request that Council identify specific, measurable and monitorable conditions to provide a level of certainty for the community that adverse effects will be appropriately managed.
366. The MidCentral District Health Board³⁴⁹ is concerned at the absence of a specific obligation for the Requiring Authority to avoid, remedy or mitigate unreasonable noise. It requests conditions for both construction and

³⁴² Submission 72: Danelle O’Keeffe & Duane Butts.

³⁴³ Submission 27: Helen & Pita Kinaston, Submission 88: Corinee Dingwall.

³⁴⁴ Submission 28: Katrina George, Submission 47: Aaron Fox, Submission 75: Ian & Andrea Ritchie.

³⁴⁵ Submission 59: Joanne Whittle, Submission 86: June Hurly, Submission 61: Peter Gore & Dale O’Reilly.

³⁴⁶ Submission 59: Joanne Whittle.

³⁴⁷ Submission 16.

³⁴⁸ Submission 59: Joanne Whittle, Submission 47: Aaron Fox.

³⁴⁹ Submission 94.

operational noise be added to state: “The requiring authority shall adopt the best practical option to ensure that the emission of noise from the area subject to Designation does not exceed a reasonable level at any point within the notional boundary of any building used for residential purposes outside the land area subject to the Designation.’ The Health Board notes that this would be consistent with the Environment Court decision in *Dunedin CC v Tranz Rail Ltd* C214/00.

367. Joanne Whittle³⁵⁰ submits that the Community Liaison Forum should have been established in advance of the NOR to ensure that the community fully understood the potential effects and could work with KiwiRail to ensure appropriate mitigation measures were in place.
368. Based on submissions received and Mr Lloyd's expert evidence, we consider that it is appropriate for specific, measurable and monitorable conditions to be adopted in this NOR. The conditions can set maximum noise standards and allow KiwiRail to determine the method of complying with the standards through management plans, providing certainty to the community that adverse effects will be appropriately managed.
369. We agree with submissions and Mr Lloyd's evidence that night-time noise limits should be established to ensure that night-time operations and construction do not adversely affect peoples' health or amenity. We adopt Mr Lloyd's recommendations for noise limits for night-time (and daytime) operations at the noise management boundary. We also agree with Mr Lloyd that a maximum noise level should be put in place that applies everywhere outside the designation boundary. The requirements for the recommended conditions are included in the Effects and Recommendations Summary Table.

vi. Noise and vibration effects from changes to the road network and increases in road traffic, including heavy vehicles

370. KiwiRail's Acoustic Assessment Report predicts that road traffic noise levels at the nearest house to the new perimeter road will be within the most stringent NZS 6806 Category A. The Acoustic Assessment observes that new road traffic will be clearly audible at the nearest houses and will represent a significant change from the existing environment. However, KiwiRail's assessment concludes that compliance with the recommended criteria indicates the

³⁵⁰ Submission 59: Joanne Whittle.

resulting levels will be reasonable and that people should still be able to continue normal domestic activities without undue disturbance.³⁵¹

371. The Acoustic Assessment notes that most traffic generated by the Freight Hub will distribute on roads that are already forecast to be busy in the future, including Campbell Road to the north, Railway Road to the south, Ashhurst Road to the east and Richardsons Line to the west. The assessment concludes that the traffic generated should not cause a significant increase in noise. Three sections of road will experience a material increase, being Kairanga-Bunnythorpe Road, Stoney Creek Road and Roberts Line. The Acoustic Assessment considers these increases are acceptable on the basis of their existing and future level in the road hierarchy. No mitigation is proposed for road traffic effects.
372. Many submitters are concerned about the impacts of increased road traffic noise caused by, for example, greater numbers of heavy vehicles operating in the area. Two submitters³⁵² are particularly concerned about noise associated with heavy vehicle traffic in the vicinity of Waughs Road and Camerons Line and the subsequent impact on the Aorangi Marae and Papakainga and other dwellings along Waughs Road. Mereti Taipana requests that noise mitigation buffers are extended to address the effects on the Aorangi Marae and residences along that side of Waughs Road as a mitigation jointly funded by other road controlling authorities.³⁵³ John Austin & Rosaleen Wapp object to any heavy vehicle traffic accessing the Freight Hub from the eastern side or anywhere along the existing Railway Road area due to noise disturbance.³⁵⁴
373. Two submitters support the closure of Railway Road as this will benefit residents to the east of the NIMT by reducing their exposure to noise and vibration.³⁵⁵
374. The District Plan excludes the noise from vehicles driven on the road from compliance with the noise control rules in the Plan.³⁵⁶ The District Plan requires that any new habitable room in a building used by a noise sensitive activity be protected from road traffic noise from State Highways (where the noise

³⁵¹ Technical Report D, pg 35.

³⁵² Submission 3: Mason Durie on behalf of Aorangi Papakainga; Submission 44: Mereti Taipana.

³⁵³ Submission 44: Mereti Taipana.

³⁵⁴ Submission 57: John Austin & Rosaleen Wapp.

³⁵⁵ Submission 23: Mike Tate, Submission 24: Zaneta Park.

³⁵⁶ See PNCC District Plan, Section 6: General Rules, Rule R6.2.6.2.

sensitive activity is within 80m) or from railway noise (where the noise sensitive activity is within 100m) by compliance with certain standards, as set out in Rule R9.11.2 and R9.11.3.

375. Although the Acoustic Assessment refers to the inclusion of a stone mastic asphalt road surface within the noise modelling, KiwiRail has not committed to any mitigation for road traffic noise effects (including use of such a low noise road surface). Mr Lloyd notes that no consideration has been given to heavy vehicles' high night-time use of the road at locations that currently receive little (if any) road noise. Mr Lloyd therefore recommends a condition that the noise barrier on the western side of the Freight Hub is located between the Perimeter Road and dwellings wherever this is practical, so that it provides noise attenuation for traffic noise. As a stone mastic asphalt surface has been assumed in the modelling, Mr Lloyd recommends that this road surface is required by a condition.³⁵⁷
376. We note that the District Plan effectively excludes road traffic noise from compliance with noise standards. However, the Freight Hub will result in changes to the existing roading alignment and will generate additional traffic specific to the Freight Hub (thereby causing additional traffic noise to be generated in existing locations and traffic noise to be created in locations where there is little or none currently). Therefore, we agree that the noise barrier on the western side of the site should be relocated to provide noise mitigation from traffic for the dwellings nearest to this boundary, where this is practical. We also agree with Mr Lloyd's recommendation for a condition requiring a stone mastic asphalt surface for the perimeter road, subject to confirmation from the Council who would receive the vesting of the road, that this surface is suitable in that location.

vii. Vibration effects from changes to use of the NIMT

377. KiwiRail has assessed the adverse effects of operational vibration from trains as being minor, on the basis that houses in all directions will be 60m or more from the new tracks in the Freight Hub (excluding the NIMT). While the assessment says that vibration will be felt by many people, it states that vibration should comply with the 0.3mm/s vw,95 criterion that KiwiRail has

³⁵⁷ Section 42A Report: Noise, Section 6.4.

adopted for operational rail vibration³⁵⁸ at existing houses. The NIMT will be shifted to the west by around 20m, which the assessment says should reduce vibration effects for those houses to the east of the site which are closest to the tracks.³⁵⁹ KiwiRail has not undertaken any baseline vibration modelling, and the reference distance adopted (60m) is based on experience elsewhere.

378. Due to the increase in volume, weight and length of trains proposed, along with shunting and marshalling activities, submitters are concerned that their properties will receive adverse effects from vibration, even with the NIMT being shifted westward.³⁶⁰ Several submitters³⁶¹ request that vibration monitoring is undertaken, and one submitter³⁶² requests that remedial actions or constraints are applied when certain levels are breached, in particular, where these can be attributed to certain operational activities. Three submitters strongly support the proposal to shift the NIMT to the west as they consider this will considerably ease existing noise and vibration.³⁶³

379. Mr Lloyd considers that the operational vibration criteria identified by KiwiRail should be adopted as a condition on the designation³⁶⁴, and we agree. We have made a recommendation to this effect.

viii. Cumulative effects

380. Some submitters are concerned about the cumulative effects of noise and vibration from increased heavy vehicle and rail traffic, including in combination with existing levels of traffic. This is a particular concern along Waughs Road, Cameron Line,³⁶⁵ and Maple Street.³⁶⁶

³⁵⁸ This criterion is based on a Norwegian Standard, NS 8176, see Technical Report D, pg 20.

³⁵⁹ Technical Report D, pg 35.

³⁶⁰ Submission 22: Fiona Hurly, Submission 25: Andreas Hofman, Submission 26: Peter Hurly, Submission 33: Linda Spearpoint, Submission 36: Helen Thompson, Submission 37: Ian Harvey, Submission 38: Logan Harvey, Submission 84: Raewyn Carey, Submission 85: Carole & Anthony Booth, Submission 88: Corinee Dingwall, Submission 90: Justine Jensen.

³⁶¹ Submission 7: Rochelle & Rex McGill, Submission 72: Danelle O'Keeffe & Duane Butts.

³⁶² Submission 72: Danelle O'Keeffe & Duane Butts.

³⁶³ Submission 23: Mike Tate, Submission 24: Zaneta Park, Submission 74: Arthur Park.

³⁶⁴ Section 42A Report: Noise, Section 5.11.

³⁶⁵ Submission 3: Mason Durie.

³⁶⁶ Submission 6: Glen & Karen Woodfield.

381. Submitters are also concerned about the cumulative effects of road traffic noise from the Freight Hub in conjunction with the proposed regional freight ring road.³⁶⁷
382. As set out in Section 9.2 above, noise effects from traffic generated from the Freight Hub are predicted. We have recommended a number of new conditions and amendments to existing conditions, with the intention of providing a clear set of standards and management responses, some of which will address broader cumulative noise effects. However as stated above, it is problematic to apply controls on the existing road network via the designation. It may be appropriate for the Council as the road controlling authority to control traffic use of minor roads but existing state highways are intended to carry large volumes and heavy vehicles.
383. It is not possible to evaluate or assess the potential cumulative noise effects of the Freight Hub and proposed ring road due to the preliminary nature of the ring road proposal. The combined effects of both pieces of infrastructure will be a relevant consideration if the ring road proposal is considered through a notice of requirement process.

9.3.4 Recommendation

384. We recommend adopting the operational noise and vibration limits (noise and vibration emissions from the Freight Hub) identified by Mr Lloyd as set out in his report in Appendix A.
385. We recommend adding and amending the conditions consistent with those set out in Appendix A of Mr Lloyd's s 42A report.
386. We recommend that KiwiRail is required to update the operational noise contour map once the design is confirmed. The updated map should be used to determine the relevant contours in the noise measurement boundary referred to in the above recommendations. The updated map should also be included in the Operational Noise and Vibration Management Plan.
387. We recommend that KiwiRail considers modifying the designation to include the land where additional off-site mitigation will be required to avoid, remedy, or mitigate adverse effects. This would provide both KiwiRail and landowners

³⁶⁷ Submission 6: Glen & Karen Woodfield.

with potential relief (under s 185 and s176(1)(b) and, therefore, certainty that their rights will be protected.

388. We recommend that the noise barrier on the western side of the Freight Hub be located between the Perimeter Road and dwellings wherever this is practical.
389. We recommend that a stone mastic asphalt surface is applied to the perimeter road, subject to confirmation from the Council that such a surface is suitable in this location.
390. We recommend amending the Construction Noise and Vibration Management Plan and Construction Traffic Management Plan conditions in line with Mr Lloyd's recommendations, which include:
 - a. Adopting the construction noise criteria: NZS 6803:1999 Acoustics – Construction Noise set out in Condition 59 (a) within the CNVMP.
 - b. Not adopting the Waka Kotahi Guide in (b), as the relevance of this document is not clear.
 - c. Including construction vibration criteria for vibration control.
 - d. Providing more specificity regarding limitations on heavy vehicle construction traffic routes during night and peak times.
391. We recommend that KiwiRail provide further information to identify what “enhanced mitigation measures” will be required if construction noise and vibration limits cannot be achieved at nearby noise sensitive activities. KiwiRail has stated that they may not meet these standards but has not described how they will mitigate the resultant adverse effects.
392. We recommend a standalone condition is included to ensure the further investigation of neighbouring dwellings to determine whether Category A noise criteria would be exceeded and whether acoustic treatment is required is undertaken. The condition should specify at what stage the noise investigation should be undertaken and by whom.
393. We support KiwiRail's proposed amendments to Condition 72 that require the outcome of the investigations and the acoustic treatment necessary to be included in the ONVMP.

394. We recommend that KiwiRail provides further information regarding the design criteria that will be applied (including how height is to be determined) when designing the noise barriers, including criteria that will be applied where nearby dwellings are on elevated ground.
395. We recommend a condition is added to specify that a noise barrier is in place prior to construction at the locations identified in Mr Lloyd's s42A report. That barrier could be a temporary or a permanent one, as long as it achieves the criteria to be advised by KiwiRail.

9.4 Visual and Landscape effects

9.4.1 Key issues for assessment

396. The following issues are considered key issues for the purposes of this assessment:
- a. There are likely to be long term moderate-high to high adverse effects on visual amenity and landscape character arising from the construction staging and operation of the Freight Hub.
 - b. There will be a fundamental change to the predominantly rural character of much of the designation extent. This is downplayed in KiwiRail's landscape and visual assessment, with an overreliance placed on the NEIZ design guide to achieve appropriate landscape and visual integration.

It is not clear whether mitigation planting can be established early enough to provide mitigation during the site establishment and construction phase. The practicalities of early planting are likely to be particularly problematic on the eastern boundary with Sangsters Road.

9.4.2 Submissions received on this topic

397. The following submitters made submissions on visual effects, landscape effects or effects on natural character. The following submissions have been considered in this evaluation:

1	Sonia & Neal Watson
6	Glen & Karen Woodfield

21	Ian Alexander Shaw
23	Mike Tate
24	Zaneta Park
36	Helen S Thompson
37	Ian Harvey
38	Logan Harvey
57	John David Bryan Austin & Rosaleen Mary Wapp
61	Peter Gore & Dale O'Reilly
70	Renee Louise Thomas
72	Danelle O'Keeffe & Duane Butts
73	Horowhenua District Council
74	Arthur George Park
82	Christina J Holdaway
90	Justine Jensen
92	Ministry of Education

9.4.3 Analysis

i. Effects on landscape character and visual amenity

398. KiwiRail identify potential for adverse landscape and visual effects due to flattening of the currently undulating landforms, culverting of streams, removal of vegetation, and construction of the proposed buildings and structures, including mitigation walls³⁶⁸. Natural landscape effects are assessed by KiwiRail as moderate-high adverse, with potential for effects of the Freight Hub buildings to be mitigated through design, quality of finish and adherence to the NEIZ design guide³⁶⁹. KiwiRail consider this will assist to manipulate perceptions of scale and fit. KiwiRail also relies on mitigation planting to help integrate "*the extensive built forms*" into the surrounding environment³⁷⁰.

³⁶⁸ Technical Report E: Landscape and Visual Effects Assessment.

³⁶⁹ See Section 9.5.2: Natural Landscape in the AEE.

³⁷⁰ Technical Report E: Landscape and Visual Effects Assessment: pg 41, para 6.53.

399. Urban landscape effects³⁷¹ are described as low-moderate adverse, due to the contrasting scale and character of the Freight Hub with the surrounding environment, the introduction of noise mitigation walls and the change in roading connections.³⁷² KiwiRail rely on planting noise bunds and the edges of the vertical noise walls (where this is possible) and mitigation planting areas to reduce effects (along with realignment of the NIMT to provide greater separation from residential properties on the eastern side).³⁷³
400. KiwiRail identify a series of streets and properties which will potentially experience high adverse visual amenity effects (in particular, properties which currently have unobstructed, open views in close proximity to the site).³⁷⁴
401. A number of submitters are concerned about the adverse impacts of the Freight Hub on their visual amenity and the rural landscape.³⁷⁵ Submitters consider the effects will be inappropriate in the context of the residential, rural and rural-residential character of the area³⁷⁶ and are concerned that even with mitigation, the effects may remain high.³⁷⁷ Submitters consider the fundamental change in the area's character and amenity has not been adequately addressed in KiwiRail's Landscape and Visual Assessment (LVA),³⁷⁸ giving no assurance that the effects will be appropriately addressed.³⁷⁹
402. The District Plan seeks to control adverse visual effects on rural dwellers from the introduction of buildings³⁸⁰ and adverse effects of the scale and character of non-residential activities and buildings in the Residential zone.³⁸¹ The District Plan requires amenity at the interface between the NEIZ and other zones to

³⁷¹ Which are described by KiwiRail as the overall fit with existing urban patterns such as existing and future land use, the grain of existing development and existing road and rail connections.

³⁷² See Section 9.5.3 – Urban Landscape, in the AEE.

³⁷³ Technical Report E: Landscape and Visual Effects Assessment: pg 42, para 6.53.

³⁷⁴ AEE, Table 9-3 Visual Amenity Effects – Residents.

³⁷⁵ Submitter 1: Sonia and Neal Watson, Submitter 4: Bruce M and Alison M Hill, Submitter 15: Maree Woods, Submitter 57: John David Bryan Austin and Rosealeen Mary Wapp, Submitter 59: Joanne K Whittle, Submitter 70: Renee Louise Thomas-Crowther, Submitter 72: Danelle O'Keefe and Duane Butts, and Submitter 84: Raewyn Carey.

³⁷⁶ Submitter 59: Joanne K Whittle.

³⁷⁷ Submission 61: Peter Gore & Dale O'Reilly.

³⁷⁹ Submission 61: Peter Gore & Dale O'Reilly.

³⁸⁰ PNCC District Plan, Section 9: Rural Zone, Policy 3.3.

³⁸¹ PNCC District Plan: Section 10: Residential Zone, Policy 4.2.

be addressed by avoiding, remedying, or mitigating the adverse effects of large buildings.³⁸²

403. Council's landscape expert, Ms Whitby considers the effects on landscape and visual amenity will be high to moderate high during both construction and operation of the Freight Hub, due to the fundamental change to the existing rural character, and the permanent and extensive impacts on visual amenity for numerous houses.³⁸³ In her view, this highlights the importance of early mitigation planting where practicable, although the practicalities of achieving early planting along Sangsters Road is not clear, given that this will not be able to occur until the NIMT is relocated, and that the NIMT cannot be relocated until other major earthworks are completed.³⁸⁴
404. We agree with KiwiRail that configuration of the site will assist to some degree with addressing interface effects, such as locating some of the larger scale buildings³⁸⁵ towards the south of the site and within the area currently zoned NEIZ. We note that the maintenance facilities buildings will be 16m high and that these are located further north.³⁸⁶ We agree with Ms Whitby that the extent to which mitigation planting will be able to assist to "integrate the proposed buildings into the surrounding environment"³⁸⁷ is unclear, given that some of the proposed buildings and structures are very large in scale, bulk and height, even when compared with existing buildings in the NEIZ.
405. KiwiRail relies heavily on a future Landscape Management Plan to identify mitigation to address the more than moderate residual adverse effects on landscape and visual amenity.³⁸⁸ Production of that plan does not provide for input or consultation with those properties most adversely affected. We agree with submitters that this provides little assurance that these effects will be adequately addressed.
406. We consider it would be beneficial if the community had an opportunity to influence the detailed design and mitigation of landscape and visual effects.

³⁸² PNCC District Plan: Section 12A: North East Industrial Zone, Objective 5 and Policy 5.1.

³⁸³ S S 42A Report: Landscape and visual effects, Section 6.2.

³⁸⁴ Including excavation of the stormwater ponds, construction of the perimeter road and construction of a formation on which to relocate the NIMT – see Technical Report A - Design Construction and Operation Report, Section 1.3.3.2.

³⁸⁵ Freight Forwarders Depot and Rai Distribution Centres.

³⁸⁶ Technical Report E: Landscape and Visual Assessment, para 1.6.

³⁸⁷ AEE: Section 9.5.2.

³⁸⁸ AEE: Section 9.5.6: Summary of Visual and Landscape Effects.

A design framework developed with input from the community, as proposed by Ms Whitby and Ms Linzey, could be a means to achieve this. This is discussed in more detail below.

ii. Adequacy of the NEI Design Guide as a design framework

407. KiwiRail propose to prepare a Landscape Plan that demonstrates how the design will align with the industrial and rural values highlighted in the North East Industrial (NEI) Design Guide.³⁸⁹
408. As set out above, many submitters are concerned about the change to the character of the receiving environment. Some submitters consider that KiwiRail has overstated the NEIZ as being representative of the existing environment when this “covers less than a third of the site on its western edge”³⁹⁰.
409. The District Plan seeks to protect the existing character and amenity which the Rural and Residential zones currently enjoy.³⁹¹ Residents in the village of Bunnythorpe should enjoy the same amenity standards as those living in the main urban areas, and development standards should not diminish the specific local character of these areas.³⁹² The distinctive rural and urban character of different parts of the city is recognised, and a clear differentiation should be provided when undertaking development.³⁹³ The District Plan requires that principles of good urban design should be given effect to when urban intensification and major building developments are undertaken, particularly where these will front key transportation routes.³⁹⁴
410. Ms Whitby considers there are useful standards within the NEI Design Guide, but that further standards may be necessary to address the interface between industrial and residential areas at the northern end of the site, reflecting the greater sensitivity and difference in character and amenity of the receiving environment at that end.³⁹⁵

³⁸⁹ See Condition 50(a) of the revised conditions, Appendix B, 1st s92 response.

³⁹⁰ Submission 72: Danelle O’Keeffe and Duane Butts.

³⁹¹ Section 9: Rural Zone: Objective 3.

³⁹² PNCC District Plan: Section 10: Residential Zone, 10.1 – Introduction.

³⁹³ PNCC District Plan: Section 2: City View Objectives, Objective 8.

³⁹⁴ PNCC District Plan: Section 2: City Objectives, Objective 11.

³⁹⁵ S 42A Report: Landscape and Visual Effects, section 7.2.

411. Ms Whitby also considers that a design framework would be helpful to establish the high-level design principles and outcomes the design should seek to achieve³⁹⁶. We agree with Ms Whitby that a design framework would provide an opportunity to address the particular design challenges of this development, and to specify clear principles and desired outcomes at an early stage that will be accepted as informing the subsequent detailed design.
412. We agree with submitters that the level of information and specificity around future design of the Freight Hub is very limited and provides no certainty as to the outcomes for the community or the Council. The design will have a major influence on the management of potential effects, including how mitigations for multiple effects will be integrated and resolved and benefits enhanced. It is also arguably too difficult a challenge to prescribe individual conditions on the designation for appropriate visual and landscape integration of the design and mitigations – and development of a design framework will help with this.
413. We agree with Ms Whitby and Ms Linzey that it would be appropriate to establish a process requiring the preparation of a set of overarching design principles and outcomes that the design must achieve and to which conditions of the designation can be focused. These principles and outcomes should inform the development of a more detailed design framework which will guide how the detailed design, RMA outline plan processes and construction of the Freight Hub should respond to the design principles and outcomes. The design framework should also document the contextual landscape, cultural and environmental matters that are specific to the Freight Hub project area. Ideally there would be two steps to this process:
- i. Design principles and outcomes are drafted and agreed;
 - ii. A design framework is drafted and agreed.
414. We would prefer for step 1 to happen as part of the evidence exchange in the current process, prior to a hearing, with step 2 to be directed by way of conditions. As set out in the s 42A report of Ms Linzey,³⁹⁷ it would be appropriate for the community and mana whenua to participate in this process, and (time

³⁹⁶ Ibid.

³⁹⁷ S 42A Report: Social impacts, Section 6.1.

permitting) the best means of allowing participation is if those principles and outcomes can be developed through the hearing process.

415. Our recommendation about this process is partly informed by our recent experience with the Te Ahu a Turanga Project. Our experience through the hearing and the outline approvals stage is that the Cultural and Environmental Design Framework (CEDF) developed for that project subsequently evolved into a meaningful and useful tool, that allowed the design to evolve within a shared understanding of what it was trying to achieve.³⁹⁸ We note that the CEDF was endorsed by iwi in the Te Ahu a Turanga Project.
416. We also consider a design guide approach would be consistent with the District Plan provisions which seek to retain the local character and amenity and the direction that good urban design principles should guide major developments.

iii. Proposed mitigation planting

417. The AEE notes that the visual and landscape effects of the large-scale earthworks and building works are assessed as potentially moderate-high to high, with mitigation reliant on early establishment of planting to help reduce the visual impact of construction.³⁹⁹
418. The proposed mitigation planting has attracted support from some submitters, who welcome the planting of native species and the benefits this will bring in terms of improving visual amenity and improving biodiversity⁴⁰⁰. Horowhenua District Council is supportive of the use of the NEI Design Guide to guide site plantings to integrate the Freight Hub into its surroundings, to add natural character and encourage local biodiversity.⁴⁰¹ Several submitters are supportive of the potential for improvement of the immediate environment of the Te Araroa Trail from the proposed planting.
419. Other submitters are concerned that the mitigation planting may be ineffective in providing sufficient screening⁴⁰² and consider that to give

³⁹⁸ <https://www.nzta.govt.nz/assets/projects/te-ahu-a-turanga/te-ahu-a-turanga-cultural-and-environmental-design-framework.pdf>

³⁹⁹ AEE, Section 9.2.4 Visual Effects.

⁴⁰⁰ Submission 57: John Austin & Rosaleen Wapp, Submission 23: Mike Tate, Submission 74: Arthur Park, Submission 24: Zaneta Park.

⁴⁰¹ Submitter 73: Horowhenua District Council.

⁴⁰² Submission 82: Christina Holdaway.

planting sufficient time to become sufficiently established (enough to be an effective mitigation), planting should take place “long before construction starts”.⁴⁰³

420. District Plan Policy 3.3 in the Rural Zone requires control of activities that disturb the land surface, introduce buildings and remove natural material, in order to manage adverse effects on the rural environment (including effects on rural dwellers). Policy 5.6 in the NEIZ requires planting and landscaping for buffer and amenity setback areas to be undertaken prior to commencement of industrial use.
421. KiwiRail has assessed the visual effects of construction on landscape and visual amenity as being high to moderate high, even with early mitigation planting.⁴⁰⁴ As set out above, Ms Whitby is not convinced that early mitigation planting will be practical or that it could occur early enough to effectively mitigate the adverse construction effects (particularly along Sangsters Road).⁴⁰⁵ She recommends a condition requiring a planting establishment plan to be prepared, to ensure mitigation planting takes place as early as possible.⁴⁰⁶
422. As early mitigation planting is being heavily relied on to reduce adverse effects at the construction phase, we agree with Ms Whitby that careful planting conditions are required to ensure this planting will be effective. Early planting would be consistent with the direction in Policy 5.6 in the NEIZ. We recommend conditions to require a planting establishment plan to be prepared.

9.4.4 Recommendation

423. We recommend conditions:
- a. To adopt a number of design standards as conditions on the designation;
 - b. To require KiwiRail to prepare a Design Framework prior to detailed design, which sets out the design principles and design outcomes

⁴⁰³ Submission 57: John Austin & Rosaleen Wapp.

⁴⁰⁴ Paragraph 6.100 Technical Report E.

⁴⁰⁵ S 42A Report: Landscape and Visual Effects, Section 7.1.

⁴⁰⁶ S 42A Report: Landscape and Visual Effects, Section 9.3.

that the design, construction and operation of the Freight Hub is to achieve.

- c. To make provision for community and mana whenua input to the development of the design framework.
- d. That the detailed design must achieve the detail principles and design outcomes and demonstrate this, including through the management plans and the Landscape Plan.
- e. To include a number of additional matters within the scope of the Landscape Plan, as set out in section 8 of the s 42A Report of Ms Whitby.
- f. Requiring the preparation of a Planting Establishment Plan, to address the matters set out in section 8 of the s 42A report of Ms Whitby.

9.5 Effects on Cultural Values

424. The relationship of Māori and their culture and traditions with their ancestral lands, water, sites, waahi tapu, and other taonga is a matter of national importance that needs to be recognised and provided for⁴⁰⁷ when considering and deciding on the Freight Hub NOR. The RMA also directs that all persons exercising functions and powers under it shall, among other things, have particular regard to kaitiakitanga, and take into account the principles of the Treaty of Waitangi. We understand the obligations of these sections of the Act apply to both the Hearing Panel (in relation to its functions and powers under s171, RMA) and to the Requiring Authority (including in relation to its functions and powers as a requiring authority and its decision-making role under s172, RMA).
425. The NOR did not include a cultural values assessment (CVA) when it was lodged with the Council. We understand from advice received from KiwiRail that conversations and hui between KiwiRail and iwi/hapu who have identified an interest in the project are ongoing. The Reporting officers have not participated in those conversations.

⁴⁰⁷ Section 6(e), RMA.

426. At the time of preparing this report, no cultural values assessment was available to inform our understanding of the effects of the Freight Hub on cultural values. The assessment in this section is therefore restricted to consideration of the limited information available in the AEE and KiwiRail's s92 responses, submissions received from iwi and submitters representing Māori interests, and the summary of the cultural heritage of the area (including Maori occupation of the area)⁴⁰⁸ in the Archaeology Report.⁴⁰⁹

9.5.1 Key issues for assessment

427. The following issues are considered key issues for the purposes of this assessment:

- a. No cultural values assessment is available to inform the assessment of the NOR in relation to effects on Māori cultural and traditional relationships with the area.
- b. Iwi and other submitters have identified a wide range of potential impacts on their values through submissions and call for a partnership approach to development and decision making on the Project.
- c. Iwi are concerned about the potential adverse effects on whenua and wai from sediment discharges and erosion, stormwater discharges (on water quality and quantity), freshwater ecology, landscape, design, flooding and the relationship of mana whenua and their culture and traditions with land, water, sites, wāhi tapu and other taonga.
- d. The high level of modification, in particular the culverting of existing watercourses, appears to conflict with the objective of the NPS FM2020 in terms of prioritising the values of waterbodies and freshwater ecosystems and likely to be inconsistent with Policy 1 in relation to giving effect to Te Mana o Te Wai.

9.5.2 Submissions received on this topic

428. The following submitters made submissions on the cultural effects of the Freight Hub and have been considered in this evaluation:

⁴⁰⁸ and associated freshwater fisheries, hunting, trapping and collection of forest resources.

⁴⁰⁹ See Technical Report H, Pre-1984 – The Maori Landscape.

14	Nga Kaitiaki O Ngati Kauwhata Incorporated
49	Ngati Turanga
51	Manawatu District Council
64	Sharon Lee Gore
66	Andrew Wotton
69	Te Ao Turoa Environmental Centre/Bestcare Whakapai Hauora Charitable Trust Mandated Iwi Authority for Rangitāne o Manawatū
81	Dianne M C Tipene
96	Te Runanga o Raukawa

9.5.3 Analysis

i. Assessment of effects on Māori cultural values and relationships

429. KiwiRail has not provided a Cultural Values Assessment or Cultural Impact Assessment as part of the NOR.

430. As set out above, there are several sections of Part 2 of the RMA that are specifically focussed on outcomes for Māori relationships, values and participation. Part 1 of the One Plan (RPS) includes Chapter 2: Te Ao Māori, which includes objectives, policies and explanations relating to the participation of iwi and hapū in resource management processes, and the outcomes to be achieved to provide for the matters set out in Part 2 of the Act. The One Plan Te Ao Māori chapter recognises the concept of Kaitiakitanga, explaining it in the following way:

The concept of kaitiakitanga is based on spiritual and physical guardianship met within the social norms and everyday practices of tikanga Māori. Recognition of the **mauri*** held by particular resources also necessitates communication with the spiritual kaitiaki (guardian) to whom that resource is dedicated. The physical responsibility of kaitiakitanga is met by the recognition of the interconnectedness of all elements - **mauri*** and wairua, tapu and noa, **mana*** and tikanga Māori. Therefore, the ethics that underpin **hapū* and iwi*** responsibility to practise kaitiakitanga are based on spiritual and cultural practices and wise resource management to ensure a healthy environment for future generations.

431. The District Plan also includes provisions that direct and support involvement of tangata whenua in planning and decision-making.⁴¹⁰
432. It is our view that the design and mitigations for the Freight Hub should be informed by a comprehensive understanding and consideration of the cultural values and relationships iwi and hapū have with the site, the water bodies that pass through the site, and the wider area. We consider that can only be achieved if tangata whenua are provided with a genuine opportunity to participate in the process. In our opinion, it is not sufficient to expect iwi and hapū to fulfil their kaitiakitanga obligations solely as submitters within the NOR process.
433. Without the benefit of fully-informed guidance from tangata whenua, we are not currently in a sufficiently informed position in relation to potential effects on cultural values to make our own assessment of those effects, or whether the proposed mitigation measures offered by KiwiRail insofar as they affect Māori relationships and values are appropriate.
434. In our opinion, any assessments of Māori cultural values and impacts need to be undertaken by mana whenua or a person endorsed by mana whenua. We also note that each mana whenua entity may wish to prepare their own CVA and/or CIA rather than participate in a single combined assessment. However, at this stage, we have not recommended conditions requiring CVAs and CIAs to be developed because those conditions cannot oblige the respective tangata whenua to endorse or engage in those processes. We would be concerned that the Treaty principles of active protection and informed decision-making in particular would not be reflected if conditions purporting to resolve effects on mana whenua's relationships and values were put in place without certainty that mana whenua were going to be active participants.

ii. Mana whenua requests for greater involvement in Project decision making

435. All submissions received from iwi or parties representing iwi interests request a greater role in decision making with respect to matters of Māori cultural concern. Ngāti Kauwhata⁴¹¹ notes that the iwi is currently negotiating a

⁴¹⁰ PNCC District Plan: Section 3: Tangata Whenua and Resource Management.

⁴¹¹ Submission 14.

Kawenata-Relationship Agreement with KiwiRail and recommends that the NOR is withdrawn to enable positive and conducive dialogue and discussions to continue. Alternatively, Ngāti Kauwhata request that the conditions are modified to create a decision-making panel similar to the Te Ahu a Turanga Rooding Alliance, stipulating that Ngāti Kauwhata hold jurisdiction and mana whenua status, but in collaboration with neighbouring iwi participation (Rangitāne O Manawatu and Ngati Raukawa-ki-te-Tonga). The submission notes that Ngāti Kauwhata is currently providing evidence and submission to the Waitangi Tribunal, and does not want to agree to any conditions or terms which might undermine its claims and settlement process.

436. Ngati Turanga⁴¹² raise similar concerns⁴¹³ and states that they hold mana whenua over the receiving environment. Ngati Turanga request that a 'reference panel' is established as a means for participation in the decision-making process, which should be secured through conditions.
437. The submission from Ngati Raukawa notes that the process undertaken by KiwiRail to date has been cursory at best and has excluded Kauwhata and nga hapu o Ngati Raukawa from decision making regarding natural and physical resources on te taiao in its rohe. Te Runanga o Ngati Raukawa oppose the proposal and seek that its tikanga be reflected in the Freight Hub's objectives and design. Ngati Raukawa also seek a condition that creates a reference panel, as described by Ngati Turanga. The submission notes that Ngati Raukawa supports Ngati Kauwhata's leadership and will work with and alongside them to protect their environment⁴¹⁴.
438. The submission from Rangitāne notes that the Panel have an obligation to prioritise this evidence and to ensure that the designation is not granted without firm assurance that the relationship of Rangitāne and their culture and traditions with their ancestral lands, water, sites, waahi tapu, and other taonga will be protected. It states that s 6(e), s 7(a) and s 8 of the RMA exist because

⁴¹² Submission 49.

⁴¹³ Which are recorded as: acquisition and alienation of ancestral lands; reclamation of water bodies; discharge of stormwater and effects on Te Mana o te Wai; modification and destruction of wahi tapu; effects on the mauri and hauora of our people; contamination of soils and whenua; impacts on significant ecological habitats; restrictions on public access to waterbodies; impacts on mahinga kai.

⁴¹⁴ Submission 96.

we cannot have sustainable management without indigenous partnership and protection of culture.

439. Rangitāne says that since the MCA process, there has been a concerning lack of consultation and engagement, which has resulted in an inability to contribute to properly addressing the risks they raise in their submission.
440. Rangitāne recommend that an Iwi Working Group is set up to provide oversight of these issues and to ensure effects are managed in a culturally appropriate manner, reflecting Rangitānenui-a-rawa.⁴¹⁵ They also request that Rangitāne o Manawatū sit on the Governance Committee for the Project, in accordance with a Treaty-led approach.
441. Andrew Wotton identifies in his submission that local iwi interests appear to have been pushed aside, with the original indigenous land owners appearing to have little say in the building of the Freight Hub on their ancestral land. He requests longer and more honest consultation, and that partnership with iwi needs to be honoured.⁴¹⁶
442. Section 3 – Objective 1 in the District Plan requires the acknowledgement of Rangitāne o Manawatū as Tangata Whenua within Palmerston North City. Policy 1.4 states that the Council must follow Rangitānenui-a-rawa in resource management processes which Rangitāne o Manawatū are involved in.
443. KiwiRail has stated its commitment to ongoing engagement with iwi in order to propose mitigation measures and identify opportunities for iwi to participate in environmental enhancement activities and landscape restoration.⁴¹⁷
444. However, this approach is at odds with iwi aspirations to have an ongoing role in the design and implementation of this project. Those iwi and hapū who made submissions all seek a role in a decision-making panel or reference group, similar to that established by Waka Kotahi in the Te Ahu a Turanga: Manawatu:Tararua Highway project. We agree that establishing such a panel or group would assist in giving effect to s6, s7 and s8 of the RMA and recommend that KiwiRail gives further consideration to such an approach. However, we do not consider it would be appropriate to recommend the

⁴¹⁵ PNCC District Plan: Section 3 Objective 1 and Policy 1.4.

⁴¹⁶ Submission 66.

⁴¹⁷ AEE, Section 9.10 Effects on Cultural Values.

imposition of designation conditions that could potentially limit the powers of the requiring authority to implement its designation, without KiwiRail's endorsement.

445. We understand from the s 92 response that KiwiRail is progressing a working relationship agreement, like that established for the Te Ahu a Turanga Project⁴¹⁸. We consider that progressing the relationship with the interested and affected iwi and hapū groups is important, and consider that this is an opportunity for KiwiRail to meet, at least to some extent, the relief sought by the submissions from Rangitāne o Manawatū, Ngāti Kauwhata, Ngāti Turanga and Ngāti Raukawa. We invite and expect further information as to progress on these matters to be provided with evidence from KiwiRail and through submitters' evidence.

iii. KiwiRail's proposed condition to establish a mana whenua engagement framework

446. KiwiRail identify that the purpose of the mana whenua engagement framework is to recognise and provide for mana whenua values, develop mechanisms to avoid or mitigate effects on these values and provide opportunities for expression of those values.⁴¹⁹
447. While it is stated that this should provide for incorporation of values "from the design, through to implementation", the proposed condition (and s92 response) identifies that the framework is to be prepared "prior to commencement of construction".
448. The lack of specificity regarding timing of these processes affects the clarity of this condition, and we suggest that a framework should be developed and in place sufficiently in advance of the detailed design so that it can be used to inform the detailed design. We recommend that the condition is amended to require this. We also note this condition may require further consideration and refinement depending on the outcome of any cultural values assessments or agreements reached between KiwiRail and tangata whenua.

⁴¹⁸ Appendix A – s92 response table, response to Q97.

⁴¹⁹ Attachment 11 – S92 Response, Planning, response to Q177.

iv. Effects on Te Mana o te Wai

449. KiwiRail considers the Freight Hub gives effect to Te Mana o te Wai and that the outcome of the Regional Council's future determination of how Te Mana o te Wai applies to the Manawatū will inform the regional consent applications, with further engagement with mana whenua to inform this process⁴²⁰.
450. Ngati Turanga⁴²¹ consider the Freight Hub will have significant adverse effects on Te Mana o te Wai and Ngati Turanga mana whenua, including because it alienates and excludes them from their ancestral wai, excludes them from decision making regarding natural and physical resources, and due to the discharge of contaminants and take and use of water. They consider the NOR is therefore contrary to Te Tiriti o Waitangi and the One Plan.
451. The submission from Ngati Raukawa⁴²² identifies similar effects to Ngati Turanga (and Ngati Kauwhata).
452. The submission from Rangitāne o Manawatū⁴²³ notes that this collective of six hapū⁴²⁴ have been mana whenua for hundreds of years and that they hold a statutory acknowledgement over the Manawatū River and its tributaries, including the Mangaone Stream⁴²⁵. The submission states that the Freight Hub will have significant impacts on Rangitāne o Manawatū, in particular due to sediment discharges and erosion, stormwater discharges (on water quality and quantity), freshwater ecology, flooding and the relationship of Rangitāne o Manawatū and their culture and traditions with water.
453. Rangitāne consider that the Freight Hub is a form of urban development and therefore the NPS FM objective of Te Mana o te Wai and sub-part 3.5(4) of the NPS FM provides direction to territorial authorities to ensure integrated management of freshwater. The Rangitāne submission points to the hierarchy of obligations in the NPS FM and the clear direction that the health and

⁴²⁰ Ibid.

⁴²¹ Submission 49.

⁴²² Submission 96.

⁴²³ Submission 69.

⁴²⁴ Each hapū has a place on the Rangitāne o Manawatū Treaty Settlement Trust.

⁴²⁵ Rangitane o Manawatu have a statutory acknowledgement over the Manawatu River and its tributaries (OTS – 182-20), which extends over the Freight Hub site and requires the Council to consult the iwi, where it has identified an interest, on all resource consents applications that it receives within this area.

wellbeing of the Mangaone Stream must be prioritised over the ability for KiwiRail to provide for their social and economic priorities.

454. Rangitāne's submission identifies that the Freight Hub will result in the destruction of two tributaries of the Mangaone Stream. These tributaries have mauri and support life and are the headwaters and life blood of the Mangaone Stream, which has great significance to Rangitāne o Manawatū for mahinga kai, ceremonies and bathing. These waterways have the potential to be restored to high ecological value in the future, a potential which will be lost as a result of the project. Rangitāne would like to see the Hub re-designed to avoid major modifications to these tributaries, or alternatively, the impacts must be comprehensively offset. If off-setting is not possible, residual effects should be compensated for, in consultation with the iwi. A robust habitat and biodiversity accounting model should be used.
455. Rangitāne o Manawatū consider that the effects on water quality are "*a critical part of the overall design of the proposal and effective integrated management and shouldn't be left as a future regional consenting consideration*". They are concerned the project could result in unnatural levels of sedimentation in the Mangaone Stream and that disturbance of agricultural soils could result in high levels of nutrients in the stream, resulting in anoxic events and algal blooms. Rangitāne request a series of conditions to address these issues including baseline surveys, water quality and cultural monitoring, standards, and the installation of treatment devices.
456. Rangitāne are concerned that the quality of water discharged from the Freight Hub site will impact on the downstream tuna fishery in the Mangaone Stream, with the potential to severely impact water quality, contaminate tuna and alienate Rangitāne o Manawatū from their absolute taonga. Rangitāne requests a range of conditions to address these issues including macro and micro plastic filters, treatment drains, monitoring, as well as ecological treatment wetlands to restore mauri to the treated water, prior to discharge to the Mangaone Stream.
457. Policy 2.4 in the One Plan is relevant to many of Rangitāne's concerns and we note that Rangitāne o Manawatū have a statutory acknowledgement over these waterways. The submission from Rangitāne indicates that they are not satisfied that there is sufficient evidence that the proposed Freight Hub design will give effect to Te Mana o te Wai.

458. Submissions, particularly from tangata whenua, provide an indication as to aspects of Te Mana o te Wai in this setting, and clear concern that Te Mana o te Wai will not be upheld due to the extensive modification to the local catchment and the removal of some water bodies.
459. For example, the biophysical impacts on water bodies as a result of the proposed Freight Hub are well described in Ms Quinn's s 42A report on ecology⁴²⁶. In that context, Ms Quinn also provides useful commentary from an ecological perspective on the direction of the NPS FM and Te Mana o te Wai at section 9 of her evidence. She concludes that the loss of stream length necessary to accommodate the Freight Hub and the associated loss of mauri and mana is such that presently offered mitigation measures for this project are unlikely to sufficiently mitigate the effects on mauri and Te Mana o te Wai.
460. We acknowledge that any future consents applications in relation to the management of freshwater activities, including the fulsome evaluation of effects and relevant policy (including the objectives of the NPS FM), will need to be determined by the appropriate decision maker at the appropriate time, and this will be the Regional Council. With that said, we also observe that cl 3.4 of the NPS FM provides for every local authority to actively involve tangata whenua in freshwater management.
461. Rangitāne notes that two tributaries of the Mangaone Stream will be destroyed by the Freight Hub, and seeks relief asking for the Freight Hub to be redesigned to avoid major modifications to the Mangaone Stream tributaries, noting that *"the waterways are not simple low-value degraded farm drains but the headwaters and life blood of the Mangaone Stream, which has great significance to Rangitāne o Manawatū for mahinga kai, ceremonies and bathing."*
462. Given the significant loss of natural waterways on which this proposal depends it is not likely to give effect to Te Mana o te Wai. In the current absence of a clearly articulated regional consenting pathway through challenging policy requirements, we recommend that:

⁴²⁶ S 42A Report: Ecology, Section 7.4: Natural Character.

- a. KiwiRail provide further clarity in evidence as to its proposed consenting approach / pathway, including identifying any potentially viable opportunities for offset or compensation.
 - b. KiwiRail to undertake further examination of alternative designs that limit or avoid the loss of natural waterways within the Freight Hub designation.
 - c. KiwiRail to seek the involvement of tangata whenua in determining how Te Mana o te Wai is expressed in the local context.
463. Other recommendations we have made elsewhere in our report are also relevant, including inviting iwi to participate in the Design Framework and undertaking a comprehensive baseline ecological survey with the involvement of iwi.

v. Effects on waahi tapu archaeological sites associated with site establishment and construction

464. No cultural effects or effects on mana whenua values at the construction phase have been specifically identified in KiwiRail's AEE. The Preliminary Archaeology Analysis states that no registered historic places, recorded or known archaeological sites associated with pre-1864 Maori occupation are expected to be affected. However archaeological sites associated with the Mangaone and Makahika streams and their tributaries may be located within the designation extent, as the streams and the land in their vicinity were focal points for Maori occupation within the forest⁴²⁷, and small cultivations and seasonally occupied settlements are also a possibility⁴²⁸. The Archaeological Report assesses adverse effects to archaeological sites associated with the pre-1864 Māori landscape to be no more than low⁴²⁹.
465. Rangitāne o Manawatū consider the Freight Hub will have significant impacts on Rangitāne o Manawatū, in particular due to archaeological management and the relationship of Rangitāne o Manawatū and their culture and traditions with wāhi tapu and other taonga. Rangitāne identify the potential for archaeological evidence to be uncovered as the Freight Hub progresses, due

⁴²⁷ For eel and other freshwater fisheries, bird hunting and rat snaring.

⁴²⁸ Technical Report H – Preliminary Analysis of Archaeological Potential, Executive Summary, pg v.

⁴²⁹ Technical Report H – Preliminary Analysis of Archaeological Potential, Executive Summary, pg vi.

to the history of Māori settlement of the Mangaone Stream banks and connecting trails through the forest, including the Awahuri track, which went directly through the site area.

466. Rangitāne seek that iwi leaders are notified of accidental finds and can participate in management processes of those finds, including safe keeping, the provision of cultural monitors to oversee earthworks, and use of native plantings to recognise the visual impact of the Rail Hub on the iwi's use of the wider cultural landscape. Sharen Gore notes that the proposal is disrespectful, as her ancestors are buried in the Bunnythorpe cemetery⁴³⁰.
467. The AEE notes that an accidental discovery protocol will be used to ensure there are appropriate processes in place in the event archaeological sites are discovered during initial site investigations, including specific procedures in the event that any kōiwi tangata or taonga are discovered⁴³¹. The proposed designation conditions (31 and 32) provide for such a protocol. The proposed condition (32) provides for the protocol to be prepared in collaboration with mana whenua, and for specific procedures in the event that kōiwi tangata or taonga are discovered, which would provide an opportunity for the specific notification request made in the Rangitāne submission. Rangitāne o Manawatū also request that kaitiaki (cultural monitors) are required to oversee earthworks and archaeology.
468. We consider that the proposed accidental discovery protocol is an appropriate mechanism to address concerns about accidental finds. In the event that kōiwi tangata or taonga are discovered, we consider that the condition should also address:
- a. Details of contractor training regarding the skills necessary to be aware of the possible presence of cultural or archaeological sites or material;
 - b. General procedures following the accidental discovery of possible archaeological sites, kōiwi tangata, wāhi tapu or wāhi taonga, including the requirement to immediately cease enabling or construction works activities in the vicinity of the discovery and the

⁴³⁰ Submission 64.

⁴³¹ AEE, Section 10.5.1 – Section 6 Assessment.

requirement to notify parties including, but not limited to, Heritage New Zealand Pouhere Taonga;

- c. Procedures for the custody of taonga (excluding kōiwi tangata) or material found at an archaeological site;

469. The following words, or words of similar effect, should also be inserted in the condition:

In the event of kōiwi tangata being discovered, work must cease immediately in the vicinity of the remains and mana whenua, Heritage New Zealand Pouhere Taonga, New Zealand Police and the Council must be contacted.

470. We would also support the appointment of kaitiaki as cultural monitors and consider this would be best addressed through the Mana Whenua Engagement Framework.

vi. Effects on the cultural landscape

471. KiwiRail proposes to use native plants for landscape mitigation planting.
472. Rangitāne seek the use of native plantings to recognise the visual impact of the Freight Hub on the iwi's use of the wider cultural landscape.
473. We have set out previously our concerns with the lack of cultural input into the Freight Hub process to date and rely on the guidance provided in submissions from iwi and hapū. We therefore support the request from Rangitāne in relation to using indigenous species for landscape planting to help address adverse cultural effects. We recommend that mana whenua are provided with the opportunity to have input into the preparation of the Landscape Plan. This requirement could be included in the Landscape Plan or Mana Whenua Engagement framework conditions.
474. Ideally, mana whenua should also be involved at a more strategic level in the development of a Design Framework to inform development of the Landscape Plan, as set out in the s 42A report of Ms Linzey⁴³². If the Design Framework model is adopted for the project, we would expect that to be an appropriate document to include a range of outcomes and principles to

⁴³² S 42A Report: Social Impacts, Section 6.1 Design Framework.

address Māori cultural matters, including in relation to plant species to be used. We have made a recommendation in the Social Effects section of this report (also summarised in the Effects and Recommendations Summary Table) in relation to the Design Framework.

vii. Effects on taonga species

475. In their role as kaitiaki of their rohe, water and indigenous taonga species, Rangitāne are concerned that thorough ecological investigations have not been undertaken across the entire project area, and assert that comprehensive ecological surveys⁴³³ must be undertaken in order to identify what taonga and endangered indigenous species are using the project area for all or parts of their lifecycles. Rangitāne consider that all impacts on taonga species must subsequently be properly reduced, mitigated, offset and, where appropriate, compensated for, in consultation with Rangitāne o Manawatū, using a robust habitat and biodiversity accounting model. Pre-works wildlife surveys for nesting birds⁴³⁴ and onsite wildlife salvage⁴³⁵ under the supervision of a suitably qualified person must take place to avoid accidental wildlife deaths, with aquatic wildlife translocated to the Mangaone Stream, and terrestrial wildlife removed to a similar habitat which is safe from predators.
476. Rangitāne are supportive of the location chosen for the Freight Hub but are concerned that the mauri of the area and ecology has not been properly assessed, protections and long-term monitoring imposed, and sufficient ecological offset and compensation provided.
477. Ms Quinn, the Council's ecology expert, shares similar concerns about the lack of comprehensive surveys of the ecological values within and around the designation. She considers these surveys should be undertaken and an ecological management plan prepared before any works commence on the site.⁴³⁶
478. We have recommended a condition to this effect.

⁴³³ For all types of native lizards, birds, bats, terrestrial invertebrates, freshwater communities, wetlands and indigenous vegetation.

⁴³⁴ In areas of rank grass, woody vegetation or within 20 metres of riparian areas of streams and wetlands, within wetlands.

⁴³⁵ Where work will affect freshwater bodies, including wetlands and woody vegetation removal.

⁴³⁶ S 42A Report: Ecology, Section 10: Draft Requirement Conditions.

viii. Adverse effects of flooding

479. To avoid increasing flood risk in Palmerston North, Rangitāne request that the Freight Hub is hydraulically neutral and that stormwater is not discharged at a greater rate than natural, with stormwater buffering provided over and above natural levels.
480. Our understanding, based on Mr Arseneau and Ms Baugham's s42A report, is that the stormwater management framework will be required to demonstrate that hydraulic neutrality is achieved.⁴³⁷

ix. Effects on mahinga kai

481. Sharen Gore notes that there are Māori kai gathering grounds in the site area, and that, as her ancestors are buried in the Bunnythorpe cemetery, the proposal is very disrespectful⁴³⁸. Dianne Tipene requests that her land (located at 68 Clevely Line included within the designation extent), is developed as a wetland and habitat for eels. She explains that her land is a natural wetland and one of the three last remaining sources of eel, harvested by Ngati Kauwhata and considered waahi tapu by them⁴³⁹.
482. The submission from Rangitāne identifies the relevance of s 6(e), s 7(a), s 8 of the RMA and Chapter 2, Objective 2-1. of the One Plan. Providing for mahinga kai both in terms of the species that are harvested and the practice of harvesting kai are both aspects of Māori culture and traditions relevant to those provisions.
483. Objective 2-1 of the One Plan is "to have regard to the mauri of natural and physical resources to enable hapū and iwi to provide for their social, economic and cultural wellbeing" and b) states that "*kaitiakitanga must be given particular regard and the relationship of hapū and iwi with their ancestral lands, water, sites, wāhi tapu and other taonga (including wāhi tūpuna) must be recognised and provided for through resource management processes*".

⁴³⁷ S 42A Report: Stormwater and Flooding, Section 10: Draft Requirement Conditions.

⁴³⁸ S64.

⁴³⁹ S81.

484. Objective 4 – To actively protect sites of cultural, historic and natural significance to Tangata Whenua in the District Plan is also relevant to consideration of these submission points.
485. Ms Quinn considers the potential for loss of natural wetlands from an ecological perspective in her evidence⁴⁴⁰. She observes that the KiwiRail ecological assessment did not identify wetlands within the proposed designation site however her own observations and those of submitters such as Ms Tipene suggest that there are wetlands present. Ms Quinn also notes that the NPS FM directs that natural wetland habitats are to be protected. We address the loss of stream and wetland habitat in more detail in the Ecological Effects section of this report.
486. Reiterating the opinion we express earlier in this section, it is our view that further advice from tangata whenua on the cultural effects of the proposed Freight Hub are necessary to more fully understand its implications, including on the value of mahinga kai.

9.5.4 Recommendation

487. In the absence of a cultural impact assessment and/or the comprehensive advice of mana whenua, it would be premature to jump ahead and presume what the cultural effects on mana whenua might be. In the preceding sections we have attempted to grapple with the issues raised in submissions, but our ability to do so has been severely limited by gaps in understanding of cultural values, and the disjunctive approach adopted by KiwiRail to apply for regional resource consents separately.
488. We note that it may be desirable or necessary for updated reporting on cultural impact matters, depending on information that might become available through the evidence of KiwiRail and submitters.
489. While we support iwi aspirations that KiwiRail establish a partnership approach with iwi, we consider that approach requires KiwiRail's endorsement, given its potential ability to limit the legislated powers of the requiring authority.
490. We would commend to KiwiRail the establishment of an Iwi Working Group to ensure effects are managed in a culturally appropriate manner, as proposed

⁴⁴⁰ S 42A Report: Ecology, Section 7.1: Project Effects – Wetlands.

by Rangitāne. Our understanding, based on our role as processing officers for the Councils on the Te Ahu a Turanga project, is that this can be an effective working model. The details and structure of that working group should be developed in conjunction with iwi and hapū.

491. In our opinion the design and mitigations should be informed by a cultural values assessment or an alternative means of guidance from tangata whenua. We also consider that the design and mitigations once developed should be assessed by tangata whenua, potentially through a cultural impact assessment. Both of these assessments need to be undertaken by mana whenua or a person endorsed by mana whenua. We also note that each mana whenua entity may wish to prepare their own CVA and CIA rather than participate in a single combined assessment.
492. We are of the view that we should not recommend conditions requiring CVAs and CIAs to be developed because such conditions would need to be supported by iwi submitters. CVAs would need to be either undertaken or endorsed by mana whenua (KiwiRail cannot independently evaluate the effects on cultural values when they do not hold the knowledge of what those values are). This would be consistent with partnership arrangements requested by iwi submitters.
493. We support the appointment of kaitiaki as cultural monitors, and consider this would be best addressed through the Mana Whenua Engagement Framework proposed by KiwiRail. We recommend that the Mana Whenua Engagement Framework should be prepared well in advance of commencement of construction.
494. We recommend that mana whenua are invited to contribute to the development of the Design Framework and the Landscape Plan and that this is included in the conditions.
495. We agree that the proposed accidental discovery protocol in Condition 31 and 32 is an appropriate mechanism to address iwi concerns about accidental finds. In the event that kōiwi tangata or taonga are discovered, we recommend amendments to Condition 32.

9.6 Ecological effects

9.6.1 Key issues for assessment

496. The following issues are considered key issues for the purposes of this assessment:
497. There are potential effects on fauna that have not been assessed. During construction there could be effects on fauna through disturbance, injury and mortality. During operation, there could be effects from noise, lighting or vibration on terrestrial fauna values.
498. There may be significant adverse effects on the values of the waterbodies within the site, including substantial loss of natural form of streams and loss of wetlands, which will require mitigation and / or offsetting or compensation to address these effects.
499. During construction, there is the potential for discharges of sediment laden water to enter the receiving environment (streams and/or wetlands). Suspended sediments can affect water clarity and be an irritant to fauna, while deposited sediments can alter in-stream habitat and communities.
500. There are uncertainties as to the feasibility of fish passage through the extensive culverts proposed.
501. No protection is in place for wildlife within existing habitats in the event of vegetation clearance.

9.6.2 Submissions received on this topic

502. The following submitters made submissions on ecological effects and have been considered in this evaluation:

4	Bruce M & Alison M Hill
7	Rochelle & Rex McGill
18	Kevin and Yvonne Stafford
20	Horizons Regional Council
22	Fiona Hurly

23	Mike Tate
24	Zaneta Park
36	Helen S Thompson
37	Ian Harvey
38	Logan Harvey
57	John David Bryan Austin & Rosaleen Mary Wapp
61	Peter Gore & Dale O'Reilly
70	Renee Louise Thomas
74	Arthur George Park
81	Dianne M C Tipene

9.6.3 Analysis

503. The analysis set out below draws significantly from the s42A report of Justine Quinn, the Council's ecology expert. Ms Quinn's report should be read in conjunction with this section of our report.

i. **Lack of investigation of existing or potential ecological values**

504. KiwiRail has undertaken a preliminary assessment of ecological values. The Assessment of Ecological Values and Effects included with the NOR application states that the assessment was consistent with the Environmental Institute of Australia and New Zealand (EIANZ) guidelines. Information used to assess existing ecological significance and values of the designation extent included information gathered from desktop investigations and field investigations. Not all properties were visited during the field investigations because the intent of the investigations was to get a general sense of the environment, not all properties could be accessed, and the full extent of the designation was not confirmed at the time.

505. One submitter notes that, contrary to KiwiRail's assertion that the site does not provide suitable habitat for the black-fronted dotterel, an 'at-risk' species, this

species does frequent the Bunnythorpe farmlands⁴⁴¹. Horizons Regional Council⁴⁴² notes that further assessment will be required to inform the regional consents once detailed design has confirmed the area of disturbance.

506. Ms Quinn, the Council's ecological expert is concerned that the ecological effects of the Freight Hub are understated in the NOR documentation; and consequently that the measures required to appropriately apply the effects management hierarchy (primarily at resource consenting stage) are also understated. She raises a number of concerns about the conclusions drawn in the NOR documentation based only on a partial ecological assessment of the site. Ms Quinn considers that the limitations of the assessment have not been acknowledged with an appropriate degree of conservatism applied to the conclusions drawn. She also observes that one risk of underestimating the ecological impacts at the NOR stage is that effects management responses necessary to obtain regional consents may not be possible to achieve within the designation extent⁴⁴³.

507. We agree with the concerns and possible implications raised by Ms Quinn in relation to the ecological assessment undertaken to date. In our opinion, a more comprehensive understanding of the existing environment and of the potential effects of the Freight Hub proposal is necessary. Some of the ecological assessment shortcomings can be resolved by requiring additional studies prior to detailed design and construction of the Freight Hub through conditions, as a measured response that recognises the primary role of the Regional Council in relation to freshwater and terrestrial ecology matters.

ii. Loss of existing or potential freshwater values associated with streams and wetlands

508. In relation to its assessment of the proposal against the NPS FM 2020, KiwiRail concludes that, though there is a loss of stream bed, the existing ecological values will be negligible to low and therefore avoidance of effects arising from aquatic habitat loss is not warranted. The AEE explains that the health and well-being of the streams is such that the effects of bed loss because of culverting will be low. KiwiRail estimates that the impacts of culverting on fish

⁴⁴¹ Submission 61: Peter Gore & Dale O'Reilly

⁴⁴² Submission 20

⁴⁴³ S 42A Report: Ecology, Executive Summary

passage will likely be low. KiwiRail considers that the installation of suitable treatment of stormwater runoff from the site will result in very low adverse effects, and may result in positive effects⁴⁴⁴. No further assessment of the proposal against the NPS FM 2020 is included in the AEE.

509. The KiwiRail Assessment of Ecological Values and Effects states that *“Aquatic habitat loss, given the values present and the magnitude of the effect, in and of itself does not warrant avoidance. The replacement of equal or better value/quality open channel aquatic habitats is not required (by effect level One Plan policy, or NPS-FW policy) to offset the loss (assumed by piping) of 3,777 m of negligible to low value/quality aquatic habitat”*.
510. Several submitters consider the proposals to provide wetland planting of detention ponds, mitigation planting along noise bunds and walls, and a recreated open stream channel at the north of the site will be positive in providing corridors and habitat for wildlife⁴⁴⁵. One submitter notes that the current ponding of floodwaters during winter provides feeding habitat for birds, such as Royal Spoonbill⁴⁴⁶ and several are concerned at the loss of waterways and wetlands within the designation extent⁴⁴⁷. One submitter would like to see the wetland on her land retained so that it can continue to provide a habitat for eels and mahinga kai gathering area for local iwi⁴⁴⁸.
511. Horizons Regional Council⁴⁴⁹ recommends that reduction of effects on waterways will be important in reducing the level of adverse effects on aquatic ecosystems, and that the appropriateness and technical merit of proposed remedies and mitigations will be assessed separately at the regional consenting stage. Horizons notes the relevance of the NPS FM and NES F, in particular the provisions which relate to loss of waterways and wetland extents or quality, and fish passage considerations with respect to culverts and stormwater detention dams. Horizons note that this best considered early in

⁴⁴⁴ AEE, Section 10.1.2, KiwiRail Regional Freight Hub

⁴⁴⁵ Submission 7: Rochelle & Rex McGill, Submission 74: Arthur Park, Submission 23: Mike Tate, Submission 24: Zaneta Park

⁴⁴⁶ Submission 18: Kevin & Yvonne Stafford

⁴⁴⁷ Submission 70: Renee Thomas-Crowther, Submission 81: Dianne Tipene

⁴⁴⁸ Submission 81: Dianne Tipene

⁴⁴⁹ Submission 20

the process as consenting pathways have become considerably more difficult. Horizons further notes that the NPS FM has a wider definition of wetland than the One Plan regulatory framework, and that putative wetland areas will need to be assessed against the NPS FM definition, in addition to the One Plan.

512. The NPS FM is relevant to this assessment. It includes provisions directed at local authorities generally (not just regional councils), in particular the need for integrated management of use and development of land and to avoid, remedy, or mitigate adverse effects (including cumulative effects), of urban development on the health and well-being of water bodies, freshwater ecosystems, and receiving environments⁴⁵⁰. Much of the responsibility for implementing the NPS FM falls to the Regional Council due to its functions around freshwater management set out in s30, RMA. However, the 2020 version of the NPS places much greater emphasis on integrated planning for freshwater outcomes across both levels of local government and on management of the use and development of land that falls within the scope of the City Council's responsibilities. This is particularly emphasised in Section 3.5 of the NPS FM.
513. There is a strong direction in the NPS FM that there is to be no further loss of extent of natural inland wetlands in Policy 6, that their values are protected and restoration is promoted. The loss of river extent and values is also to be avoided to the extent practicable (Policy 7). Where freshwater is degraded, action is to be taken to reverse deteriorating trends (Policy 13). Policy 15 gives guidance that provision for social, economic and cultural wellbeing is to be enabled in a way that is consistent with the NPS.
514. Ms Quinn's assessment of the extent of water body loss and modification raises questions as to the consistency of the proposal with the NPS FM⁴⁵¹. There are certainly policy pathways within the NPS for specified infrastructure (which the Freight Hub would be characterised as), however these are not unfettered. The NPS still expects the effects management hierarchy to be diligently

⁴⁵⁰ NPS FM 2020, Policy 3 and Section 3.5: Integrated management

⁴⁵¹ S 42A Report: Ecology, Section 9

followed⁴⁵². The primary focus of the NPS on Te Mana o te Wai should be a consideration when evaluating the appropriateness of the NOR. Based on the preliminary level of analysis in the AEE, and the limited involvement of tangata whenua in the NOR design process to date, it appears the Freight Hub's overall implications for Te Mana o te Wai have not been adequately considered by KiwiRail.

515. In relation to regional council consent decision-making on the loss of wetlands where the exception for specified infrastructure applies, the NPS FM sets out requirements to be included in regional plans to ensure that an application is not granted unless, among other matters, "the council is satisfied that the applicant has demonstrated how each step of the effects management hierarchy will be applied to any loss of extent or values of the wetland (including cumulative effects and loss of potential value), particularly (without limitation) in relation to the values of: ecosystem health, indigenous biodiversity, hydrological functioning, Māori freshwater values, and amenity values".
516. While, again, we acknowledge that regional resource consent applications are not being considered as part of this process, our opinion is that an analysis of the water body effects against the NPS FM effects management hierarchy is a relevant consideration when evaluating the NOR. In our view, it would:
- a. support a more complete assessment of the effects of the proposal;
 - b. highlight alternative effect avoidance and mitigation options available; and
 - c. assist in determining the appropriateness of the designation extent and Freight Hub design, in light of additional mitigations and offsets that might need to be incorporated.
517. In our opinion, further assessment and analysis of the existing environment is required before robust conclusions can be drawn as to the potential

⁴⁵² Subparts 3.21 and 3.22

ecological effects of the proposal. The NPS FM establishes a high policy bar for activities that propose to highly modify or remove natural rivers and wetlands, which will influence whether regional council consents for those modification works will be granted. Our view is that a cautious approach should be taken when evaluating the NOR, and further information should be provided by KiwiRail to enable a more complete understanding of the potential effects of the proposal on freshwater and freshwater bodies.

518. If the Panel is of a mind to recommend approving the designation based on the ecological information currently available, Ms Quinn has recommended some conditions that could act as 'fail safes' to protect ecological values that remain at the site until such time a regional council consents are determined. This includes a condition requiring that no works can take place on the site until more comprehensive ecological surveys are undertaken to fully understand the values of the site⁴⁵³.

iii. Effects on fish passage

519. The Freight Hub will require large culverts that will effectively replace the existing watercourses on the site, including one in excess of 600 metres in length.
520. KiwiRail consider the Freight Hub will provide "an opportunity to incorporate measures to improve opportunities for fish passage through the site to upstream watercourses"⁴⁵⁴ because existing culverts were unlikely to have been designed to provide for fish passage.
521. With respect of fish passage, this is to be maintained or improved by instream structures, with the matters to be considered in consent applications set out at clause 3.26(4) of the NPS FM. These matters include the physical and hydraulic conditions necessary for the passage of fish.
522. The Resource Management (National Environmental Standards for Freshwater) Regulations 2020 require that fish passage is provided in accordance with 'stream simulation' culvert requirements as detailed in the

⁴⁵³ S 42A Report: Ecology, Section 9 Draft requirement conditions

⁴⁵⁴ Technical Report G: Stormwater Flooding Assessment, Section 5.1 Positive effects, pg 9

New Zealand Fish Passage Guidelines in order to be considered a permitted activity.

523. Ms Quinn considers that if the NZ Fish Passage Guidelines can be met, the potential adverse effects of the stream modifications can be adequately mitigated. However, she observes that some species potentially present in the catchment are poor swimmers. Ms Quinn states that to provide for the variety of fish passage requirements along culverts upwards of 100m long 'will be challenging and may, in fact, not be possible for all species'⁴⁵⁵. Ms Quinn does not agree with the KiwiRail proposition that construction of the proposed culverts will result in a positive effect on fish passage⁴⁵⁶.
524. Mr Arseneau and Ms Baugham identify a number of challenges for achieving fish passage in accordance with the Guidelines, in particular because of the length and therefore darkness of the culverts, difficulties in accessing the culverts for maintenance, and the costs of accommodating the entire bankful channel of the existing water courses with an appropriate amount of substrate embedment or open culvert bottom is likely to be very costly⁴⁵⁷.
525. While again we understand that this issue will need to be addressed at regional consenting stage, we consider it is premature to attribute a positive benefit to fish passage at this stage, given the issues raised by Mr Arseneau and Ms Baugham, along with Ms Quinn.

iv. Effects on water quality

526. There is potential for the water quality of nearby waterways to be affected by uncontrolled release of sediment from earthworks. KiwiRail assesses this effect to be very low, on the basis that the watercourses are already in poor condition⁴⁵⁸. The AEE also notes that streams within the site are likely to be piped prior to substantial earthworks, and with implementation of suitable erosion and sediment control measures, effects will be effectively managed. These measures are to be set out in the regional resource consent application.

⁴⁵⁵ S 42A Report Ecology, 6.2.4 Fish passage

⁴⁵⁶ S 42A Report: Ecology, Section 6.3: Fish passage

⁴⁵⁷ S 42A Report Stormwater and Flooding Effects, Section 7.4

⁴⁵⁸ AEE, Section 9.2.3.1 Erosion and Sedimentation

527. Horizons Regional Council⁴⁵⁹ note in their submission that KiwiRail will need to consider the management of freshwater and stormwater quality in terms of the direction set out in the NPS FM, including the effects on receiving environments.
528. Ms Quinn, considers that there are likely to be two main contributors to water quality effects associated with the Freight Hub: discharges of sediment-laden water during construction, and changes to stormwater runoff during construction and operation. Ms Quinn disagrees with the Ecology Report included with the NOR documentation where it suggests that a substantial amount of sediment would have a low magnitude of ecological effect. She explains that sediment can fundamentally alter the in-stream conditions both in the short and long term. Ms Quinn is also concerned that the KiwiRail position does not appear to consider existing or potential ecological values downstream⁴⁶⁰.
529. In relation to operational stormwater discharges, Ms Quinn along with Mr Arseneau and Ms Baugham (the Council's stormwater experts), consider that stormwater management measures proposed by KiwiRail are likely to provide for the potential adverse effects of stormwater discharges to be managed.⁴⁶¹ This issue is covered in more detail in the Stormwater Management and Flooding section of our report. Overall, Ms Quinn considers that the effects of both construction and operational sediment and stormwater discharges can be managed through best practice stormwater management approaches.

v. Loss of terrestrial habitat

530. Potential effects on vegetation, avifauna, lizards have been considered in the NOR ecological assessment. Due to the limitations of site access, there may be additional values which are not yet understood. The ecological assessment recommends the use of management plans for fauna management, however these plans are not currently referenced in the proposed conditions. The ecological assessment assessed the magnitude of terrestrial ecology effects as being 'low'.

⁴⁵⁹ Submission 20

⁴⁶⁰ S 42A Report: Ecology, Section 6.2.1 Discharges of sediment laden water during construction

⁴⁶¹ S 42A Report: Stormwater and Flooding, Section 6.2

531. A number of submitters are concerned about the loss of private gardens and existing vegetation which provide habitat for native birds⁴⁶² and other wildlife⁴⁶³ and retention of floodwaters⁴⁶⁴. Horizons Regional Council suggest that avoiding areas of indigenous vegetation would assist in reducing the level of adverse effects on terrestrial ecosystems⁴⁶⁵.
532. Ms Quinn, the Council's ecological expert, does not agree with the 'low' level of potential terrestrial ecological effects estimated by NOR assessment. In her opinion, the magnitude of effects are more likely 'moderate' and that mitigation measures are appropriate to address potential adverse effects⁴⁶⁶.
533. Ms Quinn also observes that there has been no assessment of potential long-term operational noise, vibration and lighting effects on terrestrial fauna values. Her opinion is that until such time as the values of the site and surrounding area are understood, the effects of those aspects of the proposal are uncertain⁴⁶⁷.
534. Ms Quinn recommends the management plans referred to in the NOR ecological assessment are committed to in conditions. These are to ensure that no works take place (such as vegetation clearance) until such time as a management plan is in place to prevent accidental death or injury to wildlife residing within those habitats⁴⁶⁸. We support this recommendation.

vi. Pest control

535. Two submitters⁴⁶⁹ are concerned that the proposals do not include any consideration of pest control. The provision of planted stormwater detention ponds and mitigation planting has the potential to increase pest movements and habitation, especially when combined with storage, transport and handling of goods, such as logs. The submitters request that KiwiRail prepare a pest management plan for the Freight Hub, which is then implemented across the full site and along the site perimeter.

⁴⁶² Submission 4: Bruce & Alison Hill

⁴⁶³ Submission 36: Helen Thompson, Submission 37: Ian Harvey, Submission 38: Logan Harvey,

⁴⁶⁴ Submission 22: Fiona Hurly

⁴⁶⁵ Submission 20

⁴⁶⁶ S 42A Report: Ecology, Section 6.3 Terrestrial ecology

⁴⁶⁷ S 42A Report: Ecology: Section 7

⁴⁶⁸ 42A Report: Ecology: Section 10

⁴⁶⁹ Submission 7: Rochelle & Rex McGill, Submission 57: John Austin & Rosaleen Wapp

536. Ms Quinn supports pest control being undertaken along planted corridors and within and around the designation⁴⁷⁰. We agree with submitter that pest management is likely to be a relevant consideration for KiwiRail in the management of the Freight Hub.
537. We support a condition that provides for on-going management of animal pests in and around the Freight Hub. This may be a matter for KiwiRail to consider should environmental compensation be necessary to address the ecological effects of the proposal.

9.6.4 Recommendation

538. We recommend the following to address the potential ecological effects of the proposal:
539. That no works should be undertaken until full ecological surveys have been undertaken of the entire designation extent, in order to fully understand the values of the site and confirm the presence or absence of ecological values.
540. Following the completion of the site surveys an Ecology Management Plan (EMP) should be prepared for certification. The EMP should be comprehensive and should address all affected habitat and fauna values in recognition of their amenity, cultural and intrinsic values (One Plan Policy 6-1 (b) and (c)). This should be prepared with mana whenua to enable them to contribute to the appropriate management of taonga species and in line with the intention of Te Mana o te Wai.
541. The detailed design of the Freight Hub should avoid and minimise effects on streams and wetlands to the extent practicable. For those effects that are demonstrably unavoidable, the effects management hierarchy defined in the NPS FM should be adhered to.
542. KiwiRail have stated they will manage these effects through an Erosion and Sediment Control Plan with reference to best practice standards but this is not addressed in the proposed conditions. Add a condition setting out the requirement to prepare and implement an ESCP, including the requirements for its content to be aligned with best practice.

⁴⁷⁰ S42A Report: Ecology: Section 8

543. The potential effects on fish passage will be addressed at the regional council consenting stage.
544. Recommendations to manage effects on fauna during construction have been identified in the Ecology Report and should be adopted. In the event that some works can take place prior to the regional consents being sought, the Wildlife Act 1953 requirements will apply.
545. A condition should be included to require development of a At Risk or Threatened flora and fauna discovery protocol prior to works commencing.

9.7 Effects on Natural Character

9.7.1 Key issues for assessment

546. The key issues are:
- a. Mitigation measures (such as the construction of stormwater management ponds and “recreation and naturalisation” of a channel to replace part of the northern stream⁴⁷¹) have been mis-identified as positive effects of the Freight Hub (regarding the natural character of rivers and their margins and wetlands).
 - b. Total loss of some sections of stream, extensive culverting of the majority of other streams, constructed conveyance of the northern stream, and potential removal of natural wetlands, will not preserve the existing natural character of the area. Adverse effects on natural character are not avoided or mitigated by constructing artificial water bodies or other measures; therefore, significant additional mitigation or offsets are likely to be required. It is unlikely that the adverse effects to natural character can be mitigated or offset within the designation boundary.

⁴⁷¹ AEE, Section 9.5.1 Natural Character of the Mangaone Stream and its Tributaries

9.7.2 Submissions received on this topic

547. The following submitter made a submission on natural character which has been considered in this evaluation:

73	Horowhenua District Council
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9.7.3 Analysis

i. Effects on natural character

548. KiwiRail's assessment is that the effects of the Freight Hub on natural character will be moderate positive.⁴⁷² The AEE identifies the potential for adverse natural character effects from the redirection and constructed conveyance of the existing stream tributaries that pass through the site, but notes that the streams within the designation site have low existing natural character. KiwiRail consider adverse natural character effects on the northern most stream will be reduced by the proposed re-creation and 'naturalisation' of part of this channel. KiwiRail consider the stormwater detention ponds will add to the natural character of the Mangaone Stream and its tributaries because they will feed into this waterbody and will be located in close proximity to it. Natural character benefits are also claimed from the construction of fish passages past existing culverts and from planting the edges of the stormwater ponds with species that would have been typical of this area.

549. Only one submission specifically addressed natural character. Horowhenua District Council⁴⁷³ supported the use of the NEIZ design guide to guide site plantings and to add to natural character. Two submissions supported the development of the stormwater ponds and associated native plantings, along with the proposed off-road trail to and around these, on the basis they would improve the environment and be well used by the community.⁴⁷⁴

550. Chapter 6 of the One Plan discusses the preservation of wetlands, rivers, lakes and their margins as a matter of national importance. It identifies natural character as an expression of:⁴⁷⁵ natural landform; natural waterbodies (lakes and rivers) and the sea; vegetation cover (type and pattern); natural

⁴⁷² AEE, Section 9.5.1 Natural Character of the Mangaone Stream and its tributaries

⁴⁷³ Submission 73

⁴⁷⁴ Submission 24: Zaneta Park, Submission 23: Mike Tate

⁴⁷⁵ One Plan Chapter 6: Indigenous biological diversity, landscape and heritage, at 6.1.3.

processes associated with the weather and the ecology; wildness, exposure and the natural sculpturing of landforms and vegetation; and the wider landscape context and a sites relationship to it.

551. We agree with Ms Whitby, the Council's landscape expert (who in turn relies on Ms Quinn), that the natural character assessment in the NOR AEE mis-identifies measures designed to mitigate other effects as positive natural character effects (i.e. the constructed stormwater ponds to mitigate the potential effects from stormwater contaminant discharges and flood risk are regarded as having positive natural character effects)⁴⁷⁶.
552. Ms Quinn, the Council's ecology expert, addresses natural character from a science perspective, and summarises the changes to streams within the site: "... of the 3.8 km of stream estimated to be within the site, approximately 445 m of stream [will be] 'redirected' to a 'constructed conveyance' channel. Of the remaining stream[s] within the site, approximately 1.5 km will be culverted. This leaves at least 1.8 km of stream channel that will cease to exist in any form, with the water itself being redirected to the culverted sections or the constructed channel. In my opinion, a more accurate description would be to identify the adverse effects on natural character as the loss of approximately 90% of the open stream channel with the site. I note again that this does not account for wetland values at all."⁴⁷⁷
553. A summary of Ms Quinn's assessment is that:
- a. the total removal of approximately 1.8km of existing streambed means those areas will have no natural character post development. There will be no opportunity to enhance the natural character of these sections of the water bodies.
 - b. the culverted sections of streams will have no riparian margin, will have a highly modified channel shape, geomorphological processes will be influenced by the straightened shape, the hydrological regime will be substantially changed, and the ecological processes will be highly affected. The post-development biophysical naturalness of the culverted streams will be notably less than pre-development.

⁴⁷⁶ S 42A: Landscape and Visual effects, Section 6.1

⁴⁷⁷ S 42A Report: Ecology, Section 6.5 Natural Character, paragraph 107.

- c. the portion of the northern stream channel that will not be piped will still be constructed. It will not be 'naturalised'. There will be a number of impediments to its natural function.⁴⁷⁸
 - d. the stormwater treatment devices will not contribute to the natural character of the rivers and wetlands within the site. They will be artificially constructed (not natural) and represent a very different ecosystem to streams. However, it is acknowledged they may provide some habitat benefit to terrestrial fauna.
 - e. while planting along stream margins outside of the site may be desirable for other reasons, it would not mitigate the effects on the biophysical naturalness of streams or wetlands within the designation site.
 - f. the natural character assessment failed to address impacts on wetlands on the basis that the Ecology Report did not identify any.
 - g. there will be residual adverse effects on the biophysical naturalness elements of natural character within the site.⁴⁷⁹
554. Section 6(a) of the RMA requires decision makers to recognise and provide for the preservation of the natural character of wetlands and rivers and their margins, and the protection of them from inappropriate subdivision, use and development. The duty in section 6(a) is interpreted in the RPS component of the One Plan by Objective 6-2, Policy 6-8 Natural Character and Policy 6-9 Managing Natural Character.
555. Policy 6-9 of the One Plan provides guidance on what must generally (without limitation) be considered 'appropriate' development. The criteria in Policy 6-9 are not exhaustive, and the policy wording is clear that a determination of whether development is appropriate or not is not limited by the policy criteria. This Policy will take further relevance in any future regional consenting process in respect of culverting or reclaiming existing waterways and removing any wetlands.

⁴⁷⁸ S 42A Report: Ecology, Section 6.5: Natural character

⁴⁷⁹ S 42A Report: Ecology, Section 6.5 Natural character.

556. Within the regional consenting process, it will be challenging for KiwiRail to demonstrate that effects it will have on natural character will qualify the culverting of the waterways and removal of any wetlands within the designation as 'appropriate', at least not without further measures. While some of the criteria in Policy 6-9 may be met, that will not readily be the case for others. For example, the natural functioning of the streams and their ecosystems will be disrupted (de-naturalised), and it is unlikely there will be practicable measures to restore and rehabilitate impacts on natural character within the designation boundaries.
557. In order to obtain the necessary regional consents where natural character outcomes are a determining consideration, it may be necessary for KiwiRail to modify the design and/or designation boundaries to accommodate a consentable proposal (including potential mitigations and offsets). While we acknowledge that KiwiRail has the option to request a change to the designation should that become necessary, we consider it is consistent with integrated management (and indeed sustainable management) that such potential modifications are, at the very least, identified as part of the current NOR evaluation.
558. We therefore recommend that KiwiRail undertake a more comprehensive natural character assessment (underpinned by a more extensive ecological baseline survey) and provide further advice on how it intends to address the effects of the proposal on natural character. In particular, providing advice on whether any significant changes to the extent or design of the Freight Hub might be necessary in order to secure regional council resource consents for the piping and reclamation of water bodies within the site. We also note that our recommendations in the previous ecology section concerning baseline surveys and detailed site assessment will also be relevant to natural character considerations.

9.8 Stormwater management and flooding

9.8.1 Key issues for assessment

559. The following issues are considered key issues for the purposes of this assessment:

- a. Parts of the Freight Hub lie within a Flood Prone Area and there is potential for increased risk of flooding both upstream and/or downstream of the site, and erosion effects to downstream watercourses.
- b. During construction there is potential for adverse effects from erosion of exposed soils and discharge of sediment-laden water, impacting on downstream receiving environments and resulting in adverse effects on aquatic life and habitat.
- c. There is potential for deterioration of water quality in receiving systems, due to discharge of contaminated runoff and increased temperature of runoff.
- d. Integration of the stormwater management system with existing networks.

9.8.2 Submissions received on this topic

560. The following submitters made submissions on effects associated with stormwater management and flooding. The following submissions have been considered in this evaluation:

1	Sonia & Neal Watson
4	Bruce M & Alison M Hill
18	Kevin and Yvonne Stafford
20	Horizons Regional Council
21	Ian Alexander Shaw
22	Fiona Hurly
23	Mike Tate
24	Zaneta Park
26	Peter Hurly
36	Helen S Thompson
37	Ian Harvey
38	Logan Harvey

45	PMB Landco Ltd, Brian Green Properties Ltd & Commbuild Property Ltd
47	Aaron P Fox
61	Peter Gore & Dale O'Reilly
62	Mary A Chapman
70	Renee Louise Thomas
72	Danelle O'Keeffe & Duane Butts
77	William J Bent
84	Raewyn Carey
86	June I Hurly
89	Max Houghton

9.8.3 Analysis

i. Flooding effects

561. The proposed Freight Hub site is located adjacent to the Mangaone Stream and partially within the stream's mapped 200-year Annual Recurrence Interval (ARI) flooding extents.
562. KiwiRail undertook a desktop and high-level modelling assessment of upstream and downstream hydrological and hydraulic conditions. Detailed hydraulic modelling will be undertaken at detailed design stage.
563. Upstream flood risk may be increased from changes to the existing conveyance systems, blockages of culvert inlets and changes to site levels. Downstream flooding may increase in level, extent, or duration due to more rapid flow rates, loss of flood plain storage (by filling for site formation); and the increase in impervious surfaces⁴⁸⁰.
564. KiwiRail intend to manage downstream effects through onsite stormwater detention devices to reduce peak flows, which will be located downstream of the operational area and outside the flood plain. Upstream flooding risk will

⁴⁸⁰ Technical Report G: Stormwater Flooding Assessment, Section 5.2 Adverse Effects

be managed by design of the size and hydraulic efficiency of the conveyance system and potentially diversion of flows⁴⁸¹.

565. A number of submitters are concerned the Freight Hub drainage system will impede flood waters and result in adverse effects on neighbouring properties and downstream residential areas⁴⁸² via the Mangaone Stream, citing existing flooding and ponding in the vicinity of Railway Road, Te Ngaio Road, Clevely Line and Kairanga-Bunythorpe Road. Several submitters consider the Mangaone will be “unable to cope” with additional floodwaters. Other submitters consider the Freight Hub stormwater infrastructure will be positive in addressing existing flooding issues. The Horizons Regional Council⁴⁸³ notes that the site lies within the floodplain of the Mangaone Stream catchment, with approximately 10ha of modelled flood depths within the site. They note that KiwiRail will have to give effect to Policy 9-3 of the One Plan.
566. Aaron Fox⁴⁸⁴ is concerned whether the stormwater assessment considered the impacts of climate change. Renee Louise Thomas-Crowther⁴⁸⁵ opposes the location of the Freight Hub in a flood zone, due to the unreasonable costs to mitigate flood risk.
567. A considerable portion of the proposed Freight Hub site lies within the Flood Prone Areas overlay in the District Plan, which equates to an area that would be inundated in an 0.5% annual exceedance probability flood event. Within such areas, Policy 9-2 of the One Plan directs that flood hazard avoidance (via flood control measures that provide protection from the 0.5% annual exceedance probability) is required (preferably) or the flood hazard must be mitigated, unless it can be demonstrated that there is a functional necessity to locate the activity within such an area.
568. The site is also located within the Upper Mangaone Stream Water Management Zone (Zone Mana_11 d in the One Plan), with site-specific/reach Surface Water Management Values for Flood Control and Drainage functions. Policy 5-24 of the One Plan requires the existing level of flood hazard and erosion protection to be maintained or enhanced.

⁴⁸¹ Technical Report G: Stormwater Flooding Assessment, Section 6.2 Operational Activities

⁴⁸² Submission 4: Bruce M & Alison M Hill

⁴⁸³ Submission 20

⁴⁸⁴ Submission 47: Aaron Fox

⁴⁸⁵ Submission 70: Renee Louise Thomas-Crowther

569. Policy 2.3 of Section 22 of the District Plan requires that development in Flood Prone Areas is controlled, to avoid or mitigate adverse effects of flooding hazards on people, property, infrastructure, and the environment. Where the effects of a hazard cannot be effectively avoided, remedied, or mitigated, development is to be excluded from hazard-prone areas⁴⁸⁶.
570. Council's stormwater experts Mr Arseneau and Ms Baugham acknowledge that details of the conveyance system and attenuation facilities will be confirmed at detailed design stage. The conceptual information provided in relation to culverts and attenuation facilities is considered likely to be appropriate, although other factors in the Mangaone Stream may require additional control of peak flows or runoff volumes (i.e., capacity limitations downstream)⁴⁸⁷.
571. They consider potential flooding effects related to loss of floodplain storage through site filling are not well characterised or addressed. They recommend that potential mitigation measures for these effects should be identified in the Stormwater Management Framework. Mr Arseneau and Ms Baugham also consider a robust assessment has not been provided of the potential for erosion in downstream watercourses leading to sediment releases and damage to aquatic and riparian habitats⁴⁸⁸.
572. Mr Arseneau and Ms Baugham agree with the underlying assumptions and proposed content of KiwiRail's Stormwater Management Framework⁴⁸⁹, which includes matters to address flood risk. They consider this framework should be required to be submitted to the Council, through the designation conditions.
573. To be consistent with the policy framework, KiwiRail will need to demonstrate that they are either able to avoid, or to mitigate flood risk, both upstream and downstream of the site. Detailed assessment of potential flood effects and design of mitigation measures has not yet been undertaken, so it is not possible to confirm whether this can be achieved. We rely on Mr Arseneau and Ms Baugham's advice that sufficient land has been accommodated within the designation extent for flood mitigation purposes, and therefore that these

⁴⁸⁶ PNCC District Plan, Section 22: Natural Hazards, Objective 2, Policy 2.1. Also Section 9: Rural Zone, Policy 2.5

⁴⁸⁷ S 42A Report: Stormwater and Flooding, Section 6.2

⁴⁸⁸ S 42A Report: Stormwater and Flooding, Section 6.2

⁴⁸⁹ Technical Report G: Stormwater Flooding Assessment, Appendix B: Stormwater Management Framework – Indicative Outline of Contents

effects should be able to be addressed through the regional consent process⁴⁹⁰. Given the overlap between regional and territorial functions in hazard management and the need for an integrated approach to the management of stormwater, we agree with Mr Arseneau and Ms Baugham that the flood management matters to be addressed in the Stormwater Management Framework should be secured via the designation conditions.

ii. Potential for adverse effects on water quality

574. KiwiRail identify that there is potential for adverse effects on downstream environments from:

- a. the discharge of sediment from exposed surfaces during construction activities;
- b. discharge of contaminated runoff, from on-site activities, spills or contaminants from non-stabilised building materials;
- c. an increase in temperature of runoff.⁴⁹¹

575. Management of erosion and sediment discharge during construction will be managed through an Erosion and Sediment Control Plan. During operation, stormwater treatment will include on-site practices to limit contaminant generation, the isolation and treatment of high contaminant generating areas, and general or final polishing treatment practices through a wetland system. The detail of the treatment systems will be addressed at detailed design stage and as part of the regional consenting process⁴⁹².

576. Several submissions were received which address potential effects on water quality. Two submitters⁴⁹³ are concerned at the potential for adverse effects from contamination of surface water and infiltration of groundwater, due to runoff from the Freight Hub containing a wide range of contaminants associated with oils and lubricants, petroleum products, cleaning and degreasing agents, other chemicals, fertilisers, and timber products. Danelle O'Keeffe & Duane Butts request an assessment of the potential risks for contamination of groundwater, and for surface water contamination from a

⁴⁹⁰ S 42A Report: Stormwater and Flooding, Section 1, Executive Summary

⁴⁹¹ Technical Report G – Stormwater Flooding Assessment, pg 10.

⁴⁹² Ibid, pg 13

⁴⁹³ Submission 72: Danelle O'Keeffe & Duane Butts, Submission 77: William Bent

major flooding event⁴⁹⁴. William Bent⁴⁹⁵ is concerned that inadequate consideration has been given to adverse effects arising from increased runoff to both surface and ground water, and cumulative adverse effects on the lower Manawatu River.

577. A number of submissions⁴⁹⁶ identify that in high rainfall events, stormwater can enter the wastewater network and result in overflow of wastewater into residential properties.
578. Mr Arseneau and Ms Baugham provide a comprehensive list of the relevant policy context for consideration of stormwater (and flooding) effects in their s 42A report at Section 3.5. We rely on this and do not consider it is necessary to repeat it. We note that Section 12A of the District Plan provides strong direction on how stormwater and runoff is to be managed in the NEIZ, a point we return to below.
579. Mr Arseneau and Ms Baugham identify that the stormwater quality effects related to operation of the Freight Hub primarily include social and ecological impacts from impaired water quality, which will generally be addressed by the mitigation measures proposed by KiwiRail (stormwater treatment wetlands, at-source contamination management). They consider the level of detail provided is appropriate for the purposes of confirming the area required for the designation, but note that significant design and assessment will need to be completed to deliver on the assumptions stated in KiwiRail's Stormwater Flooding Assessment⁴⁹⁷.
580. With respect to submissions on groundwater, KiwiRail have identified that detention ponds can be lined to reduce contaminants entering groundwater and that this should be effective in combination with isolation and treatment of high contaminant generating areas⁴⁹⁸. Effects on groundwater are addressed briefly in Section 9.16 of this report, on the basis that these effects will require detailed consideration through the regional consenting process.
581. With respect to the issue of combined sewer and stormwater flows, this is a pre-existing situation, which KiwiRail is not required to resolve. The situation should

⁴⁹⁴ Submission 72: Danelle O'Keeffe & Duane Butts

⁴⁹⁵ Submission 77: William J Bent

⁴⁹⁶ Submission 22: Fiona Hurley, Submission 26: Peter Hurly, and Submission 86: June I Hurly

⁴⁹⁷ S 42A Report: Stormwater and Flooding, Section 6.2

⁴⁹⁸ Third Section 92 Response, dated 28 May

not be made worse as a result of the proposed development. This issue will need to be investigated by the Council and upgrades may be needed if the NOR is confirmed.

582. On the issue of erosion and sediment control, we acknowledge that managing sediment discharges during construction is a responsibility that primarily rests as a regional council matter. KiwiRail have stated they will manage these effects through an erosion and sediment control plan (either as a standalone document or through the Stormwater Management Framework) with reference to best practice standards, but this is not addressed in the proposed conditions. For completeness, we consider the erosion and sediment control plan should be provided as part of the draft Stormwater Management Framework.
583. With respect to the submissions on downstream effects, there is insufficient information to form a firm conclusion on the potential adverse effects on downstream receiving environments from discharges from the Freight Hub. This issue will be addressed in detail at the regional consenting stage. Based on the advice of Mr Arseneau and Ms Baugham, we understand there should be sufficient land within the designation extent to accommodate these future requirements.
584. We also understand that the Council, Horizons Regional Council and KiwiRail have previously agreed the necessary components to be included in the Stormwater Management Framework, as well as the assumptions that should inform preparation of that Framework. These matters are set out in Appendix A and B of KiwiRail's Stormwater Flooding Assessment.
585. It is important that all elements of the stormwater management framework are implemented to ensure that the stormwater management system will integrate with the Council's existing network and that it will give effect to the stormwater management approach for industrial development within the NEIZ⁴⁹⁹. This includes mitigation of stormwater run-off via "on-site primary stormwater management with collection and storage, and permeable

⁴⁹⁹ As set out in Section 12A: NEIZ, in particular Objective 3 and policies 3.4, 3.7, 3.8, 3.9, 3.10 and Rule 12A.6.2.

surfaces⁵⁰⁰, along with consideration of water sensitive design, sustainable urban drainage systems and low impact design⁵⁰¹.

586. To ensure this happens, we adopt Mr Arseneau and Ms Baugham's recommendations that the Stormwater Management Framework should be included in the designation conditions⁵⁰². We consider the draft Stormwater Management Framework should be developed in consultation with the Council, mana whenua and Horizons Regional Council, and finalised following the regional consenting process.

iii. Stormwater management in the NEIZ

587. The proposed designation includes 50 hectares of land that is part of the NEIZ, and covered by the NEIZ Structure Plan shown on Map 7.2 in the District Plan. The Structure Plan includes an area of Watercourse Reserve for detention and supplementary retention of stormwater from the NEIZ, which is located within the area proposed be used for marshalling yard.

588. If this land is not to be available for use in accordance with the Structure Plan, one submitter⁵⁰³ requests a suitable replacement stormwater reserve area is identified, that is accessible to the land owned by the submitters with the District Plan's Structure Plan needing to be amended to reflect the alternative as a consequence.

589. Policy 2.8 of Section 12A of the District Plan directs that construction of any building, or the filling and raising of the level of the land within Watercourse Reserve Areas is avoided. To ensure the adverse effects of stormwater runoff in the NEIZ are mitigated, Policy 3.7 requires that stormwater be primarily managed onsite with collection and storage and permeable surfaces, in addition to secondary processing through common watercourse reserve areas.

590. The Freight Hub will be required to address the stormwater generated by the site through onsite collection and storage. The submission does not identify which areas of land rely on this watercourse reserve area for secondary processing and therefore it is difficult to determine how the submitter is

⁵⁰⁰ PNCC District Plan, Section 12A: NEIZ, Policy 3.7

⁵⁰¹ PNCC District Plan, Section 12A: North East Industrial Zone, Policy 3.4, 3.8, 3.9 and Rule 12A.6.2

⁵⁰² S 42A Report: Stormwater and Flooding, Section 10

⁵⁰³ Submission 45: PMB Landco Ltd, Brian Green Properties Ltd & Commbuild Property Ltd

affected by the loss of this watercourse reserve area. We suggest that the submitter may wish to provide further clarity on this issue.

9.8.4 Recommendation

591. We recommend that KiwiRail prepares the Stormwater Management Framework as described in Appendix A and B of KiwiRail's Technical Report G - Stormwater Flooding Assessment. The draft Framework should be developed in consultation with the Council, mana whenua and Horizons Regional Council. The Stormwater Management Framework should be updated to reflect the requirements of regional council consents and the Final Framework (with any amendments required by regional consents) submitted with the first Outline Plan.

9.9 Lighting effects

9.9.1 Key issues for assessment

592. The following issues are considered the key issues for the purposes of this assessment:

- a. Updated modelling results show that glare to residential dwellings will be significant. Of the 32 dwellings considered, only three meet the identified curfew limits and 50% do not meet every day (non-curfew) limits for an A2 low district brightness (rural) environment⁵⁰⁴. The proposed acoustic barriers will not mitigate glare.
- b. Proposed acoustic barriers will provide some mitigation of spill light beyond the site boundaries and spill light to residential dwellings will be to acceptable levels for a rural environment⁵⁰⁵.
- c. Skyglow effects will be to acceptable levels for a rural environment⁵⁰⁶.
- d. Potential adverse effects from headlight vehicle sweep on dwellings.
- e. Potential adverse effects of lighting on navigation for Palmerston North Airport.

⁵⁰⁴ AS/NZS 4282:2019: A2 Low district brightness Lighting Environmental Zone

⁵⁰⁵ AS/NZS 4282:2019 Table 3.2: The spill light limits for an A2 Low district brightness Lighting Environmental Zone are 5 lux non-curfew (6am to 11pm) and 1 lux curfew (11pm to 6am).

⁵⁰⁶ AS/NZS 4282:2019 Table 3.2: The sky glow upward light ratio limit for an A2 Low district brightness Lighting Environmental Zone is 0.01 (1%).

- f. Effects of construction lighting at night.
- g. Landscape and visual effects of lighting have not been assessed.

9.9.2 Submissions received on this topic

593. The following submitters made submissions on lighting effects. The following submissions have been considered in this evaluation:

1	Sonia & Neal Watson
2	Warren Bradley
5	Palmerston North Airport Ltd Terry Brian Cooney
6	Glen & Karen Woodfield
7	Rochelle & Rex McGill
10	Timothy Brennon Tewake
15	Maree Woods
16	Martin Jones
22	Fiona Hurly
34	Stuart Robinson
35	Robyn Curtis
36	Helen S Thompson
50	Kevin and Erina Carroll
53	Raewyn M Eastwood
54	Airways Corporation
57	John David Bryan Austin & Rosaleen Mary Wapp
59	Joanne K Whittle
64	Sharon Lee Gore
70	Renee Louise Thomas
72	Danelle O'Keefe & Duane Butts
80	Riana Carroll
82	Christina J Holdaway

84	Raewyn Carey
87	Mary & Michael Hurley
90	Justine Jensen
91	Steve M Kinane
98	David Odering

9.9.3 Analysis

i. Effects from glare and light spill

594. The NOR provides for 24/7 operation of the Freight Hub, which means that lighting is required during hours of darkness. The AEE describes the required safety and security operational lighting as including low level, street and tower lighting⁵⁰⁷. Lighting is to be installed within the rail operational areas⁵⁰⁸, internal access roads and car parks⁵⁰⁹. Modelling of the lighting layout was undertaken and provided with the NOR and updated in response to the December 2020 s92 request⁵¹⁰.
595. KiwiRail's lighting design adopts lighting limits for an A2 Low district brightness Lighting Environmental Zone in accordance with AS/NZS 4284:2019 *Control of the obtrusive effects of outdoor lighting*. These limits have been adopted across the site despite the different underlying and surrounding zones (rural, residential, industrial).
596. The updated modelling includes the proposed acoustic barriers, which provide some mitigation of spill light beyond the site boundaries. Spill light to residential dwellings will be to acceptable levels, as will skyglow effects⁵¹¹, when measured against the relevant parameters in AS/NZS 4282:2019 Zone A2. However, the noise barriers will have limited effect in mitigating glare, with some nearby dwellings expected to receive in excess of 60,000 cd during the curfew hours (between 11pm and 6am), compared to the AS/NZS 4282

⁵⁰⁷ AEE, Section 6.3.1 The Freight Hu

⁵⁰⁸ Described as the maintenance facilities, network services depot, log loading siding, tank siding, rail marshalling yard, container terminal and freight forwarding private sidings. See Section 1: Background of the Lighting Design Report, Appendix B to Technical Report A.

⁵⁰⁹ Technical Report A: Construction and Operational Report, Appendix B: Lighting Design Specification

⁵¹⁰ See request 3 and 4 in the December 2020 s92 request.

⁵¹¹ Upward Light Ratio

maximum glare limit of 1,000 cd. This is due to the difference in height between the noise barriers (3-5m) and proposed floodlights (approx. 22m)⁵¹². Of the 32 dwellings considered, only three meet curfew limits (between 11pm and 6am), and 50% do not meet every day (non-curfew) limits⁵¹³.

597. Several submitters are concerned about the effects of light pollution⁵¹⁴, in the particular the loss of the dark rural night sky that they currently enjoy⁵¹⁵. Rochelle and Rex McGill⁵¹⁶ consider the operational safety lighting used will be particularly invasive.
598. Some submitters are concerned light will disturb sleep⁵¹⁷ and result in health impacts⁵¹⁸. Glen & Karen Woodfield⁵¹⁹ and Martin Jones⁵²⁰ question why no evaluation of light pollution has been undertaken, or efforts made to reduce or mitigate this. Raewyn Eastwood is concerned that the risk of theft will increase because of greater visibility at night⁵²¹.
599. The District Plan provisions which relate to maintaining quality of the environment and controlling adverse visual effects are relevant⁵²² to this assessment. Rule R11.6.1.1(a)(VI) in the District Plan requires exterior lighting to comply with the AS Standard 4282, which has been recently superseded by *AS/NZS 4282:2019 - Control of the obtrusive effects of outdoor lighting*.
600. Given that the existing environment is sparsely inhabited and predominantly rural, Council's lighting expert, Mr Wright, supports KiwiRail's approach to apply rural light limits. Mr Wright considers this standard should be secured via the designation conditions and we agree⁵²³.

⁵¹² See s92 Response Attachment 4A - Lighting

⁵¹³ AS/NZS 4282:2019 Zone A2.

⁵¹⁴ Submission 1: Sonia & Neal Watson, Submission 10: Timothy Tewake, Submission 70: Renee Thomas-Crowther, Submission 87: Mary & Michael Hurley, Submission 90: Justine Jensen, Submission 91: Steve Kinane

⁵¹⁵ Submission 2 – Warren Bradley, Submission 15 – Maree Woods, Submission 57 – John Austin & Rosaleen Wapp,

⁵¹⁶ Submission 7

⁵¹⁷ Submission 15 – Maree Woods, Submission 34 – Stuart Robinson, Submission 35 – Robyn Curtis, S36 – Helen Thompson, S53 – Raewyn Eastwood, S57 – John Austin & Rosaleen Wapp, S84 – Raewyn Carey

⁵¹⁸ S36 – Helen Thompson, S50 – Kevin & Erina Carroll, S64 – Sharon Gore, S80 – Riana Carroll

⁵¹⁹ Submission 6

⁵²⁰ Submission 16

⁵²¹ Submission 53.

⁵²² PNCC District Plan: City View Objective 5, Rural Zone Objective 2 - Policy 2.3, Objective 3, Policy 3.3 and Policy 4.3

⁵²³ S 42A Report: Lighting, Section 9

601. Mr Wright agrees with KiwiRail that it should be possible to reduce glare to the extent that it will meet the curfew limits and that this requirement can be satisfied via the submission of a detailed lighting design for Council's peer review and certification⁵²⁴.
602. Mr Wright does not expect the effects of under carriage lighting or low-level security lighting to be adverse, but recommends conditions are placed on the NOR to consider and address these effects during preparation of the detailed lighting design⁵²⁵.
603. Based on Mr Wrights expert advice, we are comfortable that the lighting effects can be appropriately mitigated at the detailed design stage, subject to the imposition of appropriate conditions.

ii. Effects from headlights from road and rail traffic

604. KiwiRail have not assessed the effects of the proposed lighting design on road users, or the effects of vehicle lights or train headlight sweep on adjacent properties. KiwiRail anticipates that the noise barriers would be effective in mitigating train headlight sweep for most surrounding residents⁵²⁶.
605. Renee Thomas-Crowther⁵²⁷ is concerned about the impacts of traffic lights from the new perimeter road which will run close to her property.
606. Objective 2 in Section 20: Land Transport of the District Plan requires a land transport network that is safe, convenient, and efficient, and one which maintains the health and safety of people and communities and the amenity values and character of the City's environment. Buildings and activities should not compromise land transport network safety⁵²⁸. It is important therefore, that the lighting design does not result in adverse effects on nearby residents, or road users.
607. Mr Wright agrees that headlight sweep could be an issue for nearby residential dwellings, especially if this affects bedrooms. He considers this can be

⁵²⁴ S 42A Report: Lighting, Section 9

⁵²⁵ S 42A Report: Lighting, Section 9

⁵²⁶ s92 Response Attachment 4A - Lighting

⁵²⁷ Submission 70

⁵²⁸ PNCC District Plan, Section 20: Land Transport, Policy 3.3

appropriately addressed at detailed design through development of the Construction and Operational Traffic Management Plans⁵²⁹.

608. The effects of lighting on road users will need to be reviewed to confirm that it will comply with AS/NZS 4282:2019, Zone A2 limits. Mr Wright does not think these effects will be significantly adverse and therefore an assessment of these effects, and any appropriate design response, can be undertaken at the detailed design stage. He recommends this is secured via a condition on the designation⁵³⁰.
609. We agree with Mr Wright's conclusions and adopt his recommendations for amendments to the draft conditions below.

iii. Mitigation for lighting effects

610. KiwiRail has not proposed any mitigation for lighting effects, stating that this can be addressed at the detailed design stage.
611. Several submitters request mitigation for lighting effects. John Austin & Rosaleen Wapp⁵³¹ request that a lighting plan is designed that complies with the specified standards for residential walls containing windows and that KiwiRail provide mitigation that includes triple glazing with bronze tinted glass, custom made black out curtains and financial compensation to aid in landscaping of gardens to block light pollution. They also request that the proposed mitigation planting on the eastern boundary is undertaken before construction starts to enable maximum growth before lighting is erected. Christina Holdaway⁵³² is concerned that noise barriers and planting on the eastern boundary will be insufficient to screen lighting effects and requests a wider zone with more trees and screening. Rochelle & Rex McGill⁵³³ request independent monitoring of light glare, with the results reported to a community panel on an on-going basis.

⁵²⁹ S 42A Report: Lighting, Section 9

⁵³⁰ S 42A Report: Lighting, Section 9

⁵³¹ Submission 57

⁵³² Submission 82

⁵³³ Submission 7

612. The night-time operation of the Freight Hub is a significant concern to many submitters.⁵³⁴ Joanne K Whittle⁵³⁵ suggests that some of the greatest effects would be mitigated by reducing operating hours. She considers it is unlikely that a large industrial complex would receive consent to operate 24 hours a day in residential, rural-residential or rural parts of Palmerston North.
613. The industrial zone provisions in the District Plan require compliance with the relevant AS/NZ standard, which sets limits for night-time or 'curfew hours'⁵³⁶.
614. The District Plan anticipates that lighting effects at night will be regulated. We agree with Ms Whittle that lighting from industrial complexes during night-time hours should not disturb sleep. Mr Wright advises that if spill light effects are within the AS/NZS4282:2019 limits for Zone A2, the level of spill light should be non-obtrusive and would not affect sleep⁵³⁷. We rely on Mr Wright's expert opinion that compliance with the relevant standards should be sufficient to achieve this.
615. Mr Wright agrees with KiwiRail's proposed measures to mitigate glare⁵³⁸ and recommends such measures are considered during detailed lighting design. Skyglow effects could also be further reduced by adopting the recommendations of the Dark Sky Association⁵³⁹. We have recommended these measures are considered and adopted where practical.

iv. Effects on the operation of Palmerston North Airport

616. KiwiRail's Design Construction and Operational Report identifies the need to ensure that artificial lighting is shielded from the approach and take-off paths to and from Palmerston North Airport⁵⁴⁰.
617. Palmerston North Airport Ltd⁵⁴¹ and the Airways Corporation⁵⁴² are concerned about the potential effects of light under the horizontal obstacle limitation surface within the Palmerston North Airport Zone and how these might affect

⁵³⁴ S1 – Sonia & Neal Watson, S22 – Fiona Hurly, S34 – Stuart Robinson, S35 – Robyn Curtis, S36 – Helen Thompson, S59 – Joanne Whittle, S64 – Sharon Gore, S70 – Renee Thomas-Crowther, S84 – Raewyn Carey, S90 – Justine Jensen,

⁵³⁵ S59

⁵³⁶ PNCC District Plan, Section 11: Business Zone, Rule R11.6.1.1

⁵³⁷ S 42A Report: Lighting, Section 8

⁵³⁸ s92 response, Attachment 4a.

⁵³⁹ S 42A Report: Lighting, Section 7

⁵⁴⁰ Lighting Design, in the Design, Construction and Operation Report, Section 3.4, pg 17.

⁵⁴¹ Submission 5

⁵⁴² Submission 54

operations at the Airport (in particular the provision of air traffic control services). This is due to the proximity of the site to the navigation lights, control tower and other navigation/communication assets. The submitters request evidence that Civil Aviation Rules Part 77 – Objects and Activities Affecting Navigable Airspace can be complied with⁵⁴³. The Airways Corporation is concerned that light and glare could cause pilots and air traffic controllers visibility/identification/perception issues, particularly if lighting is unshielded or directional lighting is used⁵⁴⁴.

618. Policy 3-2 in the One Plan requires adverse effects from other activities on the Airport operations⁵⁴⁵ to be avoided as far as reasonably practicable, including by not allowing new activities that would adversely affect operations to establish near the airport unless those effects are minor, or more than minor effects can be adequately avoided, remedied, or mitigated.
619. Relevant lighting performance standards are set out in Chapter 12A: NEIZ chapter of the District Plan, Rule R12A.4.1. Rule R12A.4.1 Permitted Activity, Performance Standards (a) Maximum Height requires that *All buildings and structures shall comply with R13.4.7.1 (Airport Protection Surface) or 9 metres whichever is the lower.*
620. The Freight Hub site is located within the Horizontal Surface of the Airport Protection Surface which extends upward from 90m above mean sea level (AMSL).
621. Rule R12A.4.1 Permitted Activity, Performance Standards (f) Lighting has two requirements:
- i. Compliance with R11.6.1.1(a)(VI).
 - ii. Any artificial lighting must be shielded from the approach and take-off paths to and from the Palmerston North Airport.

And standard (n) glare has one requirement:

⁵⁴³ As does Submitter 72: Danelle O’Keeffe & Duane Butts

⁵⁴⁴ This concern is also raised by Submission 72: Danelle O’Keeffe & Duane Butts.

⁵⁴⁵ The Airport is recognised as infrastructure of regional or national importance under Policy 3-1 of the One Plan.

The roofs of buildings must have a matt finish and must not have roof glazing.

622. The lighting poles will not protrude into the Horizontal Surface of the Airport Protection Surface, but at 22m in height, they will not comply with the minimum height standard. No details are available regarding building roof materials.
623. Mr Wright agrees with the submitter that it is important to ensure no adverse lighting effects on air traffic controller observations or on pilots, and that consideration of roof material, roof orientation and roof slopes is required, along with the brightness of floodlights in the direction of the Airport Control Tower. He recommends that KiwiRail is required to demonstrate that glare to the tower will meet the AS/NZS4282 limits for Zone A2⁵⁴⁶. We adopt his recommendations as conditions.
624. Mr Wright also agrees that it appropriate to request a Part 77 determination prior to construction of light towers, to ensure that the lighting design does not present a hazard to aircraft operating in navigable airspace⁵⁴⁷. We recommend that KiwiRail provide evidence that they have obtained a CAA NZ Part 77 determination with the outline plan(s).

v. Effects of construction lighting

625. No information has been provided in the NOR on the effects of construction lighting.
626. If night-time construction works is planned, Mr Wright recommends that a Construction Lighting Management Plan (CLMP) is prepared. The CLMP should be required to address the potential effects from construction vehicle headlight sweep, security lighting and working lights⁵⁴⁸.
627. We note that night-time working may be required during the construction phase (as provision is made for temporary lighting in the Construction Management Plan draft condition at (e)) and therefore agree with Mr Wright that lighting controls should be addressed in a Construction Lighting Management Plan, to be included in the Construction Management Plan. Mr

⁵⁴⁶ S 42A Report: Lighting, Section 9

⁵⁴⁷ S 42A Report: Lighting, Section 9

⁵⁴⁸ S 42A Report: Lighting, Section 9

Wright advises that construction lighting (security lighting and working lights) should be designed to comply with Standard AS/NZS 4282:2019.

vi. Landscape and visual effects of lighting

628. No assessment has been undertaken of lighting effects from a landscape or visual amenity perspective and KiwiRail state that these effects will be assessed at detailed design stage.
629. KiwiRail's Landscape and Visual Assessment recommends that the lighting design should consider opportunities for a 'zoned' approach to fit particular uses across the site and limit visual clutter through a reduced number of lighting poles, balanced with maintaining lower tower type lighting.
630. The District Plan provisions which relate to maintaining quality of the environment and controlling adverse visual effects will be relevant to consideration of these effects⁵⁴⁹ as will be the Land Transport provisions which seek to address the visual amenity effects of roads, in relation to lighting proposed for the new perimeter road.⁵⁵⁰
631. Our understanding, based on Mr Wrights advice, is that a careful balance must be achieved to provide sufficient light for users health and safety, but not resulting in excessive lighting that generates effects beyond the boundary⁵⁵¹. Mr Wright is broadly comfortable that the proposed design achieves this balance, and that off-site lighting effects will be able to be appropriately mitigated at detailed design stage. Based on his advice, we consider these effects can be addressed via conditions specifying the matters to be included in a detailed lighting design submitted for expert peer review and approval.

9.9.4 Recommendation

632. We recommend conditions to:
- a. Adopt the AS/NZS 4282:2019 – Control of the obtrusive effects of outdoor lighting, Zone A2 limits.

⁵⁴⁹ See City View Objective 5, Rural Zone Objective 2 - Policy 2.3, Objective 3, Objective 3 – Policy 3.3 and Policy 4.3

⁵⁵⁰ Chapter 20: Land Transport - Objective 2 and Objective 2- Policy 2.2

⁵⁵¹ S 42A Report: Lighting, Section 6

Require the detailed lighting design to: demonstrate how it will meet the curfew limits for glare, satisfy R12A.4(f), road user glare effects via Threshold Increment calculations in accordance with recommendations of AS/NZS4282:2019, reduce skyglow effects, include details of under carriage lighting and low level security lighting, incorporate International Dark-Sky Associations recommendations, and demonstrate how it will meet the limits for glare to the PN Airport Air Control tower.

Require glare to the PN Airport Air Control tower to meet the AS/NZS 4282:2019 – Control of the obtrusive effects of outdoor lighting, Zone A2 limits.

Require skyglow caused by artificial lighting to have a Sky Glow Upward Light Ratio of no greater than 0.003, calculated in accordance with AS/NZS4282:2019.

Prepare a construction lighting management plan to address potential effects from construction vehicle headlight sweep, security lighting and working lights.

Include the effects of headlight sweep on residential dwellings as a matter to be addressed in the Construction Traffic Management Plan and Operational Traffic Management Plans.

9.10 Air Quality effects

9.10.1 Key issues for assessment

633. The following issues are the key issues for the air quality assessment:
- a. Kiwirail's non-quantitative assessment approach is not specific enough about the nature, scale and location of the proposed Freight Hub activities relative to the locations of sensitive receptors. This affects the level of confidence in the conclusions and recommended mitigation proposed by KiwiRail.
 - b. Air discharges associated with the operation of the Freight Hub are likely to include dust from yard operations, particularly from vehicle traffic or from spills of dusty materials, etc. The Freight Hub facilities include a log handling yard, which could accumulate dusty materials. It is unclear if there will be any unsealed areas.

- c. The construction operations have the potential for dust discharges, including from earthworks such as cut and fill operations, bund construction and vehicle movements.
- d. The emissions from land transport, diesel trains and heavy vehicles, have the potential to cause effects to air quality, principally from PM₁₀, PM_{2.5} and NO_x emissions. There may also be effects of odour from diesel combustion.
- e. Submitters are concerned at the potential for contamination of roof-sourced water supply from airborne pollutants.

9.10.2 Submissions received on this topic

634. The following submitters made submissions on effects associated with dust and air quality. The following submissions have been considered in this evaluation:

Number	Name
1	Sonia & Neal Watson
4	Bruce M & Alison M Hill
5	Palmerston North Airport Ltd
7	Rochelle & Rex McGill
10	Timothy Brennon Tewake
15	Maree Woods
18	Kevin and Yvonne Stafford
21	Ian Alexander Shaw
22	Fiona Hurly
23	Mike Tate
24	Zaneta Park
25	Andreas Johannes Hofman
26	Peter Hurly
33	Linda Spearpoint

34	Stuart Robinson
35	Robyn Curtis
36	Helen S Thompson
37	Ian Harvey
38	Logan Harvey
53	Raewyn M Eastwood
57	John David Bryan Austin & Rosaleen Mary Wapp
62	Mary A Chapman
72	Danelle O'Keeffe & Duane Butts
75	Ian & Andrea Ritchie
82	Christina J Holdaway
84	Raewyn Carey
86	June I Hurly
87	Mary & Michael Hurley
90	Justine Jensen
94	MidCentral District Health Board (MDHB) Public Health Service
98	David Odering

9.10.3 Analysis

i. Operational effects of dust

635. KiwiRail's second s92 response identifies air quality emissions from various site facilities. The largest contributors to air quality emissions are expected to be the Marshalling Yard and log loading area and siding. There will also be significant gas emissions from diesel fuel combustion within the Maintenance Facilities, and KiwiRail recommends that a wet scrubber system is installed in this building to remove particulates.
636. Several submitters are concerned about the generation of dust and other particulates during operation of the Freight Hub, including from locomotives

and the log yard. Concerns raised include soiling of washing and other surfaces, impacts on respiratory quality and effects on rainwater collection (addressed below).

637. Objective 7-1 in the One Plan prescribes that a standard of ambient air quality is maintained that is not detrimental to amenity values, human health, property, or the life-supporting capacity of air. In addition, ambient air quality must meet the national ambient air quality standards for PM10, and the regional air quality standards set out in the One Plan.⁵⁵² Policy 7-3 describes the approach to regulating discharges of contaminants to air, and achieving consistency with the implementation of the National Environmental Standards for Ambient Air Quality in Policy 7-1 and the regional standards for ambient air quality (set out in Policy 7-2).
638. One Plan Policy 7-4 directs that air quality problems arising from incompatible land uses establishing near each other must be avoided, remedied, or mitigated primarily through district plans and territorial authority consent decisions which prevent the future establishment of potentially incompatible land use activities near each other. This policy applies to the establishment of activities sensitive to existing activities and will apply to emitting activities establishing near existing sensitive land uses (which would be the case with the Freight Hub). The District Plan also provides policy direction around management of land use activities affected by, or which affect, air quality. Policy 2.3, in Section 9: Rural Zone, seeks to control adverse effects of activities in the rural zone, including from odour. The City View objectives seek outcomes in relation to high quality residential living environments (5) and providing for healthy and safe environments (9).⁵⁵³
639. In its AEE,⁵⁵⁴ KiwiRail stated that the potential adverse effects of dust informed the site layout⁵⁵⁵ but did not provide an assessment of operational air quality effects in the NOR. The Council issued two s 92 requests seeking further information on the potential for adverse effects from dust and air quality emissions more widely, including whether regional resource consents would be likely to be required to manage air quality emissions. In relation to dust generation, the Council sought information about whether an operational

⁵⁵² One Plan: Policy 7-1, Objective 7-2, Policy 7-2,

⁵⁵³ PNCC District Plan, Section 2.5.

⁵⁵⁴ AEE, Section 10.2.3

⁵⁵⁵ See Q2 of the December 2020 S92 Request.

dust management plan would be appropriate to manage the potential effects of dust. Information was also sought on the likely effects to amenity or public health and safety of contaminated dust from rail operations settling on nearby properties (particularly contaminated dust landing on rooves used for rainwater collection).⁵⁵⁶

640. This was followed by a further, more detailed request issued on the 28 April 2021,⁵⁵⁷ which asked:

- a. Whether the Freight Hub will be an 'industrial or trade premises' for the purposes of s 15 of the RMA;
- b. For details as to the likely compliance requirements at the regional consenting stage, whether consents would be needed and what status these activities would be under the One Plan;
- c. For an assessment of potential effects on air quality from each of the construction, Hub opening and full operational phases, along with recommendations for specific mitigation measures for each of these phases;
- d. For the assessment of effects to address potential effects from dust, PM10 and PM2.5, and from odour, and to include potential effects on human health.

641. In its response, KiwiRail confirmed that aspects of the Freight Hub would fall within the definition of an 'industrial or trade premises'. Their assessment is that no regional consents for discharges to air will be required for the operation of the Freight Hub on the basis that the Freight Hub activities will be permitted by Rule 15-14 in the Regional Plan, and in particular clauses (h) and (u).⁵⁵⁸ However, KiwiRail have not provided an assessment to demonstrate how the proposal will comply with the permitted activity standards in Rule 15-14. Therefore, it is not clear what activities proposed within the site will fall within Rule 15-14 clause (h) or (u), or how the permitted activity conditions will be met. If the Freight Hub cannot comply with Rule 15-14, the activity would become a discretionary activity under Rule 15-17.

⁵⁵⁶ See Q174 of the December 2020 S92 Request

⁵⁵⁷ See 3rd s92 request.

⁵⁵⁸ One Plan, Section 15.6 Rules – Other Discharges to Air.

642. If regional consents will not be required, any amenity or nuisance issues that would result in the Freight Hub introducing a potentially incompatible land use in proximity to sensitive receptors such as residential dwellings will need to be addressed through the NOR process. Policy 7-4 of the One Plan (RPS) directs that such activities should be prevented from establishing near each other, which would suggest that appropriate separation distances may be required.
643. Ms Ryan, the Council's air quality expert, is concerned that the limited FIDOL assessment of operational dust provided in the s92 response has not mapped out the sensitive receptors or actual separation distances. There is little or no information about the activities that will generate emissions, and what the scale of those emissions will be. Assessment criteria could, for example, have been identified and set as standards which the Freight Hub is required to meet. It is therefore difficult to form a conclusion as to the scale and significance of potential effects and therefore the appropriateness of any. Consequently, it is difficult to determine appropriate management responses to be adopted through an operational management plan⁵⁵⁹.
644. KiwiRail has provided an indicative scope for an Operational Dust Management Plan in its response to the first s 92 request. Ms Ryan considers this indicative scope should be broadened to address all potentially adverse discharges to air (i.e. particulates and odour), not just dust. In addition, Ms Ryan recommends that Kiwirail's Operation Dust Management Plan adopt appropriate air quality criteria that the Freight Hub (during construction and operation) will achieve⁵⁶⁰.
645. Provisions for the management of dust in the District Plan relate to home occupations, sawmills and rural industries,⁵⁶¹ so they are not directly relevant to the Freight Hub's activities. However, the provisions contain useful assessment criteria that describe adverse effects from the discharge of particulate matter:
- a. there is visible evidence of particulate matter suspended in the air across a site boundary;

⁵⁵⁹ S 42A Report: Air Quality, Section 6.2

⁵⁶⁰ S 42A Report: Air Quality, Section 6.2 and Section 9

⁵⁶¹ See Rule 10.7.1.5 and Rule 9.5.3.

- b. there is visible evidence of particulate matter traceable from the activity, settling on the ground or structure on a neighbouring site, or water.
646. To the extent possible based on limited information, Ms Ryan assesses the potential air discharge effects associated with the Freight Hub's operation and provides a set of recommendations for addressing potential adverse effects in her s42A report.
647. In relation to the operational effects on air quality, Ms Ryan concludes that *'these should be at an acceptable level to avoid significant adverse effects on health and amenity, given adherence to the Concept Plan and landscape plans, and management of key activities that will result in emissions to air via an OAQMP. This conclusion is contingent on receiving further information in relation to:*
- a. Bulk granular materials storage;
 - b. Bulk hazardous substances storage;
 - c. Compliance of the maintenance facility operation with the One Plan permitted activity conditions;
 - d. The frequency, scale and nature of the diesel train movements and associated fuel consumption and emission estimates for air contaminants, particularly within the marshalling yard⁵⁶²
648. Ms Ryan has made recommendations that she considers should be applied to the NOR process⁵⁶³. We consider it is important to understand whether additional land use controls (such as specifying separation distances to sensitive receptors) are required to be imposed at the designation stage. These types of land use controls may not be available during regional resource consenting despite being effective tools for mitigating the effects of air quality to surrounding land. We adopt the majority of Ms Ryan's recommendations (except those that we consider are more appropriately addressed through the regional consenting process) and have summarised them in the

⁵⁶² S 42A Report: Air Quality, Section 10

⁵⁶³ *ibid*

recommendations section below and in our Effects and Recommendation Summary Table.

ii. Effects of dust during construction

649. No assessment of air quality effects from Freight Hub construction activities is provided in the AEE or the supporting technical assessments, although reference is made to dust mitigation measures. KiwiRail proposes that dust suppression methods will be set out in the Construction Management Plan. Methods of dust suppression mentioned in the AEE include use of a compacted and rolled granular surface for subgrade bulk earthworks, water spray and/or polymer soil stabilisers. The NOR documents say that a water spray system would require a secure onsite water supply or connection to the PNCC water supply (upwards of 100,000 litres per day is potentially required).
650. Several submitters are concerned about the impacts of construction dust on their properties, especially given the prevailing westerly wind, the volume of earthworks proposed, and the lengthy site establishment and construction period. Submitters also request that mitigation measures are put in place well in advance of the main site works, such as earth bunds, noise walls and mitigation planting. One submitter considers that mitigation planting is unlikely to be effective to trap dust generated by site establishment earthworks, given the length of time it will take for trees and shrubs to grow to an effective height,⁵⁶⁴ and that such planting may not be adequately maintained once it is established. Another submitter is concerned that polymer soil stabilisers used to suppress dust may pose health risks to residents if these particulates end up in rainwater supplies, or result in damage to water pumps/filters.⁵⁶⁵
651. Several submitters support the implementation of a Construction Management Plan to manage dust effects. The Mid-Central District Health Board considers that this is insufficient and that a specific Construction Dust Management Plan should be included in the NOR conditions. The Health Board recognises that regional council resource consents may be required for major earthworks, and those processes may impose conditions to minimise dust from earthworks. But the Health Board identifies the advantage of a construction dust management plan as encompassing all sources of

⁵⁶⁴ Submission 7: Rochelle & Rex McGill

⁵⁶⁵ Submission 72: Danelle O'Keeffe & Duane Butts

construction dust. The Health Board notes the potential for construction dust to include particulate matter PM₁₀, which can cause both nuisance and health effects.

652. Ms Ryan provides analysis of the construction air discharge assessment and potential effects, along with her recommendations to address these. Similar to concerns about the completeness of the FIDOL assessment relating to operation, Ms Ryan has expressed concerns about the air discharge assessment provided for construction air quality. Ms Ryan also considers a water spray system is unlikely to be effective in managing dust during construction⁵⁶⁶.
653. We agree with concerns raised by submitters and Ms Ryan that there is potential for adverse effects to be generated during the construction phase. We agree that the long duration of the construction phase could mean any air discharges and associated effects occur for a significant period, potentially several years.
654. While the One Plan (regional rules) is the primary planning mechanism for managing discharges to air, we consider that there is value in providing certainty for the amenity and health outcomes of the surrounding existing land uses during construction, consistent with the policy direction in the One Plan and District Plan. Furthermore, KiwiRail have proposed a designation condition related to the management of dust discharges during construction (Condition 53) and we agree with Ms Ryan's recommendations to improve and reinforce that draft condition.
655. In our view, Ms Ryan's recommendations improve certainty and clarify the intent of the draft designation conditions. In conjunction with KiwiRail demonstrating compliance with the One Plan permitted activity rules (or through any regional resource consent obtained), we consider that Ms Ryan's draft designation conditions provide an appropriate level of effects management during the construction of the Freight Hub.

iii. Impacts of fumes and burning of fuels

656. KiwiRail notes in its second s 92 response that there will be areas of the Freight Hub where there will be concentrations of emissions of combustion products

⁵⁶⁶ S 42A Report: Air Quality, Section 6.1

from diesel locomotives, the majority of which will be fine particulates, including both PM₁₀ and PM_{2.5}. KiwiRail predict that there will be concentrations of emissions from the Marshalling Yard and maintenance facilities. The s 92 response states that KiwiRail should install a wet scrubber system to remove particulates from the exhaust gases released within the enclosed maintenance facilities building.

657. Some submitters are concerned about the potential adverse effects arising from combustion of fuels. One submitter notes that these effects may increase as a result of longer and heavier trains.⁵⁶⁷ The adverse effects cited include odour from fumes, and potential nuisance and health effects from particulates such as PM₁₀.
658. The District Plan requires the control of adverse effects of odour in the rural zone.⁵⁶⁸
659. Ms Ryan reports having difficulty assessing the potential air quality effects in the absence of quantitative information to determine the extent of train or truck movements within the site, and therefore the potential for concentrations of combustion emissions to exceed air quality emissions standards in the regulations. There is also insufficient information to determine any odour effects⁵⁶⁹.
660. Ms Ryan is not convinced that a wet scrubber system for removing particulates is appropriate and has a concern that this activity may not meet the permitted activity standards in the Regional Plan⁵⁷⁰.
661. Accordingly, we encourage KiwiRail to provide a detailed assessment of the operational aspects of the Freight Hub against the regional discharge to air rules and to identify any design changes to the Freight Hub that would be required to meet those requirements.

iv. Potential for adverse effects on drinking water supply

662. A number of properties in the vicinity of the Freight Hub rely on rainwater capture for their potable water requirements. KiwiRail's second s92 response⁵⁷¹

⁵⁶⁷ Submission 7: Rochelle & Rex McGill

⁵⁶⁸ PNCC District Plan, Section 9: Rural Zone, Policy 2.3

⁵⁶⁹ S 42A Report: Air Quality, Section 5, Executive Summary: Section 1

⁵⁷⁰ S 42A Report: Air Quality, Section 6.2

⁵⁷¹ 24 May 2021

notes that the exact number and location of residences within the area of impact (described as any dwellings within 100m of the site boundary) who rely on roof-top rainwater collection systems for their domestic water supply has not yet been confirmed. The prevailing westerly winds could disperse any emissions over properties to the immediate east and north-east of the Freight Hub boundary if no mitigation is in place. KiwiRail states that a number of options for effective mitigation of contamination of roof-top rainwater collection systems are being considered (including first flush diversion systems), and that this issue will be addressed further in KiwiRail's evidence.

663. Submitters are concerned at the potential for contamination of roof-sourced water supply from airborne pollutants associated with construction and operation of the Freight Hub, as well as the maintenance implications for water tanks or filters. Some submitters request that KiwiRail pay for the instalment of first catch run-off systems,⁵⁷² water filtration systems, any increased maintenance costs,⁵⁷³ or for connection to the reticulated water supply.⁵⁷⁴ One submitter requests annual testing and monitoring.⁵⁷⁵ The Mid-Central Health Board⁵⁷⁶ is concerned at the potential for residents to be exposed to airborne dust that might cause adverse health effects given the recommendation in KiwiRail's AEE that first flush diverters are installed as a protective measure to limit contamination of drinking water supply for individual residences. The Health Board requests that Condition 76 is amended to state that the objective of the Operational Dust Management Plan is to protect human health, specifically sensitive receptors.
664. Ms Ryan considers that there is significant potential for adverse effects on roof water supplies from dust during construction. She considers that specific mitigation measures should be identified for the high-risk receptors that are very close to and downwind of construction activities.⁵⁷⁷ KiwiRail have indicated that they will be providing further information on the impacts on roof-water drinking supplies and associated mitigation before the hearing. Ms Ryan will need to consider that further information before being able to make

⁵⁷² Submission 7: Rochelle & Rex McGill

⁵⁷³ Submission 72: Danelle O'Keeffe & Duane Butts

⁵⁷⁴ Submission 57: John Austin & Rosaleen Wapp, Submission 7: Rochelle & Rex McGill

⁵⁷⁵ Submission 7: Rochelle & Rex McGill

⁵⁷⁶ Submission 94

⁵⁷⁷ S 42A Report: Air Quality, Executive Summary

any further recommendations on this issue. We cannot comment further on this issue until this information is received.

9.10.4 Recommendation

665. In our opinion, sufficiently robust and enforceable conditions are required to ensure that adverse effects from the proposed Freight Hub (construction and operation) can be avoided remedied or mitigated, acknowledging that these issues may be addressed further during regional consenting. Without sufficiently robust and enforceable conditions, there is a risk that the uncertain effects associated with these discharges may not be adequately controlled. Based on Ms Ryan's recommendations, we recommend that the NOR conditions include:

- a. For the construction phase, incorporate the following into Condition 53 (Construction Management Plan):
 - i. Requiring real-time continuous monitoring of PM₁₀;
 - ii. An action trigger value for the PM₁₀ monitoring of 150 µg/m³ as a 1-hour average;
 - iii. On-site wind direction and strength monitoring; and
 - iv. Works to cease when winds exceed 10 metres per second and blowing towards the dwelling and/or if winds exceed 7 metres per second and a dwelling is within 100 metres downwind.
- b. Following further evidence from KiwiRail (which it has said it will provide), additional conditions may also be necessary in relation to potentially contaminated dust and impacts on roof-rainwater supplies.
- c. Given the level of uncertainty, both the CMP and ODMP should be independently certified by an appropriately qualified and experienced professional. As suggested by the Health Board, the plans should be required to incorporate an objective for managing the effects on air quality, in particular addressing management of the potential for effects on human health and amenity.

666. The first s92 response notes that complaints recording and responses "is a key part of any Dust Management Plan and the findings and mitigation actions

that result should also be transparently passed on to the complainants". We agree but note that 'complaints recording' does not appear in draft Condition 78. We therefore recommend that it is included.

667. We agree with Ms Ryan that an Operational Air Quality Management Plan should be developed. However, we do not consider there is scope to widen the Operational Dust Management Plan to include all air quality emissions in the current NOR process (as it is primarily a regional council matter and KiwiRail have not volunteered a condition that addresses air quality more widely).

668. We also recommend the following amendments to conditions:

- a. Include a mechanism for recording and responding to complaints about dust in the Operational Dust Management Plan
- b. Amendment to Condition 76: Operational Dust Management Plan as follows:

The objective of the Operational Dust Management Plan is to detail the mitigation and ongoing measures to control dust effects from the operation of the Freight Hub in order to minimise dust exposure to protect human health and amenity, specifically that of sensitive receptors. The ODMP must demonstrate that there shall be no noxious, dangerous, objectionable or offensive dust to the extent that the discharge causes an adverse effect at or beyond the site boundary.

9.11 Social Impact effects

9.11.1 Key issues for assessment

669. The following issues are considered key issues for the purposes of this assessment:

- a. There will be adverse effects on resident's way of life and amenity during the long construction phase, due to a reduction in accessibility to the city for jobs, education and recreation, and adverse impacts from noise, vibration, and visual effects.
- b. Once in use, the 24 hour/7 day a week operating period of the Freight Hub and resulting noise, vibration, lighting, and traffic effects will

impact on the amenity of neighbouring residents and subsequently their way of life. Some households (those in close proximity) are likely to experience particularly high negative impacts on their way of life.

- c. There may be sub-communities which could be more adversely affected, and which require specific mitigation, but this is not readily apparent from the high-level assessment of social effects.
- d. There will be a significant change to the community character, from what is currently described as a quiet rural-residential community, to one which is much more industrial in nature. There may be a loss of community cohesion if displaced residents leave the community.
- e. Loss of community connectivity will result from changes to commuting routes and travel times reducing ease of access. There may be some severance effects.
- f. There is significant uncertainty as to the scale and timing of social effects.

9.11.2 Submissions received on this topic

670. The following submitters made submissions on the social impact effects of the Freight Hub. Submissions which relate specifically to topics such as noise and vibration, lighting, dust, traffic are considered in those topic chapters. Where specific social impacts are raised, those submissions have been considered in this evaluation.

1	Sonia & Neal Watson
4	Bruce M & Alison M Hill
15	Maree Woods
17	Nicola Schreurs and Thomas Good
18	Kevin and Yvonne Stafford
21	Ian Alexander Shaw
22	Fiona Hurly
23	Mike Tate
24	Zaneta Park

25	Andreas Johannes Hofman
26	Peter Hurly
27	Helen and Pita Kinaston
30	Bunnythorpe Community Committee
34	Stuart Robinson
35	Robyn Curtis
36	Helen S Thompson
37	Ian Harvey
38	Logan Harvey
39	Letitia Stick
40	Gerry Rose & Gill Frampton
44	Mereti Taipana
47	Aaron P Fox
50	Kevin and Erina Carroll
53	Raewyn M Eastwood
57	John David Bryan Austin & Rosaleen Mary Wapp
59	Joanne K Whittle
64	Sharon Lee Gore
68	Friederike Lugt
72	Danelle O'Keefe & Duane Butts
79	Kate McKenzie
81	Dianne M C Tipene
83	Gordon H Malcolm
84	Raewyn Carey
86	June I Hurly
87	Mary & Michael Hurley
90	Justine Jensen
92	Ministry of Education

95	Owen Leonard Reid
97	Ji Hangfeng

9.11.3 Analysis

i. Impacts on the community's way of life and amenity

671. KiwiRail's Social Impact Assessment (SIA) identifies that there will be a reduction in the quality and amenity of the environment as a result of increased noise levels and changes to the landscape / visual character over a lengthy construction phase. During operation these effects will be felt across most of the local impact area. While noise and landscape mitigation can be implemented, the changes will still impact on values of importance to the local community and there is still uncertainty on the final design and associated mitigation. A noisier environment may affect residents' daily patterns at home and possibly at work and school. This will be most severe if night-time activities occur at the Freight Hub⁵⁷⁸.
672. Numerous submissions express concern that the Freight Hub will impact on the way of life currently experienced and valued by the community. Residents choose to live in this area as they value the rural way of life⁵⁷⁹.
673. Submissions highlight apprehension that the impacts of noise, dust, odour and lighting will have on home life, mental and physical health and the use and enjoyment of outdoor living spaces. Friederike Lugt⁵⁸⁰ considers the social impact assessment has not adequately addressed these effects.
674. A large volume of submissions express discontent at the proposed operating hours of the Freight Hub, which they consider will compound other adverse effects. Several request that the hours of operation be restricted⁵⁸¹.
675. The District Plan requires that the amenity and quality of rural and residential environments be maintained and enhanced⁵⁸², and that the health and safety

⁵⁷⁸ Technical Report J – Social Impact Assessment, Executive Summary

⁵⁷⁹ Submission 2: Sonia and Neal Watson and Submission 4: Bruce M and Alison M Hill

⁵⁸⁰ Submission 68: Friederike Lugt

⁵⁸¹ Submission 39: Letitia Stick and Submission 86: June I Hurly

⁵⁸² PNCC District Plan: Section 10: Residential Zone, Objective 2, PNCC District Plan: Section 9: Rural Zone, Objective 3

of residents is protected, for example through establishing limits on the emission of noise⁵⁸³.

676. Council's social impacts expert, Ms Linzey, considers the scale of effects on residents' way of life could potentially be higher than identified by KiwiRail's assessment during the construction stage, because of uncertainties around timing and effectiveness of construction mitigation methods such as acoustic and visual screening (which are highlighted in the s 42A reports of Mr Lloyd and Ms Whitby). She considers the impact of construction noise on residents' way of life could be greatly exacerbated by the long site establishment and construction period⁵⁸⁴.
677. Ms Linzey agrees with KiwiRail's conclusion that adverse effects on way of life are likely to be moderate-high during operation. People's daily routines are likely be adversely affected by changes to the road network and disruptions to sleep, home-working and spending time outside.
678. Ms Linzey is concerned that most of the mitigation proposed to address way of life effects consists of landscaping, noise, and construction management measures, and that there is a degree of uncertainty around their timing and effectiveness. Ms Linzey considers that further mitigation may be needed, and that it would be appropriate to design this mitigation in conjunction with the community. Ms Linzey recommends several amendments to the proposed conditions, including to the proposed Community Liaison Forum (CLF)⁵⁸⁵, which we agree with.
679. We agree with submitters and Ms Linzey that there could be significant adverse effects on the communities' way of life from the Freight Hub from physical changes to the environment, for example the introduction of noise, vibration, light, large buildings and structures and changes to road networks. We support Ms Linzey's recommendation to specify who should be invited to attend the CLF, and we agree with her that, assuming they participate, such a process is likely to assist with mitigating effects on particularly affected sub-communities within the local impact area.

⁵⁸³ PNCC District Plan: Section 9: Rural Zone, Policy 3.1

⁵⁸⁴ S 42A Report: Social impacts, Section 4.4.2

⁵⁸⁵ S 42A Report: Social Impacts, Section 6

680. Ms Linzey recommends that KiwiRail develop a design framework as a means of addressing adverse physical and social effects in an integrated and iterative manner, and that the community (through the CLF) could be engaged to help develop and subsequently provide feedback on the effectiveness of this framework. She considers this would assist to address some of the community concerns regarding the uncertainty of social effects⁵⁸⁶.
681. We agree with Ms Linzey that a design framework would be an appropriate mechanism to consider the range of adverse physical and social effects in a holistic manner, including how changes to one form of mitigation might have unanticipated or adverse effects on another aspect of amenity (i.e. increasing the height of acoustic barriers might have an adverse effect on neighbours visual amenity). We can see the benefit in providing an opportunity for the community (via the CLF) to have a say in determining how best to protect the quality of the environment they currently enjoy.
682. We also consider it would be appropriate for the Construction Engagement Plan to be developed in consultation with the CLF and that it would be useful to add this to a list of specified matters which fall within the remit of the CLF.

ii. Loss of community character and cohesion

683. KiwiRail identify that the character of the community will change as a result of a community that largely consists of rural-residential homeowners being replaced by an industrial workforce, and the loss of the quiet, rural 'feel' that characterises the area. It is uncertain whether residents whose land will be acquired will remain living locally or whether residents close to the Freight Hub will choose to move away once it is operational. This effect is described as moderate negative for the local impact area⁵⁸⁷.
684. Several submitters consider the Freight Hub will fundamentally alter the character of the area from a quiet, rural village to one of an industrial nature. Two submitters are concerned that the 'community feel' of Bunnythorpe Village will be negatively impacted, and that the village will experience a change in culture⁵⁸⁸. Joanne K Whittle⁵⁸⁹ noted that the development will *"dominate, and indeed redefine the landscape, environment and amenity of*

⁵⁸⁶ S 42A Report: Social Impacts, Section 6.1

⁵⁸⁷ Technical Report J: Social Impact Assessment, Executive Summary, pg ii

⁵⁸⁸ Submission 79: Kate McKenzie, and Submission 15: Maree Woods

⁵⁸⁹ Submission 59: Joanne K Whittle

our homes, our township and the wider surrounding rural area". Another submitter considers this substantial change is not adequately addressed in the SIA.

685. Several submissions ⁵⁹⁰ emphasise discontent at the proposed location of the development, on the basis that it will displace numerous residents. Many also discuss how this displacement will exacerbate the social impacts of the current housing crisis⁵⁹¹, due to an already competitive market and existing issue of homelessness⁵⁹². Sonia and Neal Watson⁵⁹³ submit that pressure on the availability of similar replacement lifestyle properties would be immense. Loss of property value, and costs and difficulties associated with relocation are concerns raised in many submissions.
686. The District Plan requires that high quality residential living environments are provided to satisfy the needs of all residents⁵⁹⁴ and that the character and amenity of existing zones is maintained.⁵⁹⁵ Residential areas should remain "a safe, attractive, social and healthy environment in which to live"⁵⁹⁶.
687. Ms Linzey identifies that the land use buffer provided by the rural zone will be lost by development of the Freight Hub and this will result in an industrial land use directly abutting residential areas. Ms Linzey considers this could alter the community's sense of place and community character (which they value), resulting in potentially moderate or even high adverse social impacts, depending on the mitigation employed to reduce this impact⁵⁹⁷.
688. Ms Linzey considers that these effects could be addressed through development of the design framework. The design principles and outcomes could include community identity and place, so that the design responds positively to community values and addresses adverse effects on community character.

⁵⁹⁰ ⁵⁹⁰ Submission 1: Watson, Submission 17: Nicola Schreurs and Thomas Good, Submission 26: Peter Hurly, Submission 81: Dianne M C Tipene

⁵⁹¹ Submission 4: Bruce M & Alison M Hill, Submission 22: Fiona Hurly, and Submission 84: Raewyn Carey

⁵⁹² Submission 64: Sharon Lee Gore

⁵⁹³ Submission 1: Sonia and Neal Watson

⁵⁹⁴ PNCC District Plan, Section 2: City View Objectives, Objective 5

⁵⁹⁵ PNCC District Plan: Section 9: Rural Zone, Objective 3, Section 10: Residential Zone, Objective 4.

⁵⁹⁶ PNCC District Plan, Section 10: Residential Zone, Objective 2.

⁵⁹⁷ S 42A Report: Social Impacts, Section 4.4.1

689. We agree that a design framework would provide an opportunity to address the interconnected amenity and 'community character' effects.
690. Community cohesion is a more difficult issue to address through physical mitigation, and we anticipate that over time, communities will adjust to changes to their composition. This is reflected in the NPS UD Objective 4, which recognises that urban environments, including their amenity values, develop and change over time in response to the diverse and changing needs of people, communities and future generations.
691. With respect to the submissions which address property values, we understand that the correct focus of our assessment should be on the primary effects of the NOR, on the theory that potential impact on property values is best addressed through consideration of immediate physical effects of the Freight Hub. However, we acknowledge submitters' concerns.

iii. Loss of community connectivity

692. KiwiRail's SIA identifies that connectivity between Bunnythorpe township and Palmerston North is important for accessing work, services and facilities and shopping⁵⁹⁸. Residents may experience disruption and frustration if reduced connectivity occurs from roading changes, road closures and relocated accessways⁵⁹⁹. These effects will be exacerbated during the construction period if residents cannot anticipate when and where to expect roading and footpath changes and traffic delays⁶⁰⁰.
693. Submitters are concerned that changes to the road layout will cause community severance, including as a result of heavy traffic in residential areas. Many submissions address the potential for increased traffic volumes to create safety issues for people using local roads for leisure and recreation, impact on safe travel to school and increase commuting times. On the other hand, one submitter⁶⁰¹ welcomes the roading changes as an opportunity to divert heavy

⁵⁹⁸ Technical Report J: Social Impact Assessment, Existing Environment, Section 3.1 Local impact area.

⁵⁹⁹ Technical Report J: Social Impact Assessment, Section 7.1 Summary of social effects and recommended mitigation, Pg 39

⁶⁰⁰ Technical Report J: Social Impact Assessment, Assessment of effects, 5.1 Construction phase, 5.1.1 Local Impact Area - Peoples way of life, pg 18

⁶⁰¹ Submission 24: Zanetta Park

traffic out of Bunnythorpe via connections to the strategic road network, increasing both safety and the community feel of the village.

694. The NPS UD requires that planning decisions contribute to well-functioning urban environments. Such environments have good accessibility for all people between housing, jobs, community services, natural spaces and open spaces, including by way of public or active transport⁶⁰². The District Plan requires provision for active transport and leisure and recreation opportunities⁶⁰³ and that the land transport network is safe, convenient, and efficient, while avoiding, remedying or mitigating adverse effects in a way that maintains the health and safety of people and communities, and the amenity values and character of the City's environment⁶⁰⁴.
695. Ms Linzey agrees that impacts on community connectivity is a significant social impact arising from the construction and operation of Freight Hub⁶⁰⁵. She recommends that the design framework could assist to address concerns regarding community connectivity, as this framework could be developed to include design principles and outcomes including details of pedestrian and cycle access around the site and within Bunnythorpe⁶⁰⁶.
696. We agree with submitters and Ms Linzey that any road network changes, or changes in the volume and type of traffic, should not impact on safe provision for active transport to/from and around the site. This is also a clear direction in the District Plan policy framework. Ms Fraser makes several recommendations for conditions to provide for safe and efficient walking and cycling in her s 42A report at Section 10. We support and adopt Ms Linzey's design framework recommendation and Ms Fraser's recommendations and consider these will assist to address issues of community connectivity.
697. We note that connectivity will also be addressed through conditions such as the Rooding Network Integration Plan, Construction Traffic Management Plan and Operational Traffic Management Plan. We agree with KiwiRail that there should be a requirement to consult with the CLF during the preparation of

⁶⁰² NPS Urban Development, Policy 1.

⁶⁰³ PNCC District Plan, Section 2: City View Objectives 21 and 24

⁶⁰⁴ PNCC District Plan, Section 20: Land Transport, Objective 2

⁶⁰⁵ S 42A Report: Social Impacts, Section 4.4

⁶⁰⁶ S 42A Report: Social Impacts, Section 6.1

these traffic management plans⁶⁰⁷. This consultation should include discussion of the social effects of increased traffic and roading changes, with the aim to reduce adverse social effects as far as practicable and/or to provide suitable mitigation, where it is possible and appropriate to do so.

iv. Uncertainty as to the scale and timing of social effects

698. KiwiRail's SIA identifies that there will be uncertainty about the extent and duration of effects on the amenity and the quality of the environment for neighbouring properties until detailed design and mitigation is finalised. There is also likely to be adverse effects on wellbeing from the uncertainty about the land acquisition process, relocating to a new home and the extent of effects for neighbouring landowners who will remain⁶⁰⁸.

699. The sentiment in many submissions is that KiwiRail have provided insufficient information or detail, that the information which has been provided is difficult to understand or comprehend and that it does not address the full range of potential effects. Two submissions state consultation has been inadequate and that residents have not been given enough time to make an informed decision on the development⁶⁰⁹. Others voiced the anxiety and stress that this lack of certainty has generated.⁶¹⁰

700. Ms Linzey agrees with submitters that there are information gaps, uncertainties, and inconsistencies in the NOR, and consequently, that the social effects could potentially be more adverse than as assessed in the SIA⁶¹¹. To mitigate some of the effects related to uncertainty, she recommends strengthening the role of the CLF by providing an opportunity for the group to input into and influence the detailed design phase, staging of the development and timing and nature of mitigation works, as well as to review and give feedback on each stage of construction and operation⁶¹².

701. We agree with submitters and Ms Linzey that there is an inherent uncertainty about the nature and timing of social effects (and other effects) generated by the Freight Hub, due to the high-level nature of the NOR and uncertainty

⁶⁰⁷ See proposed amendment to Condition 14, as submitted with the s92 response in February 2021.

⁶⁰⁸ Technical Report J: Social Impact Assessment, Executive Summary, pg i and ii.

⁶⁰⁹ Submission 26: Peter Hurly and Submission 97: Anonymous

⁶¹⁰ Submission 47: Aaron Fox, Submission 59: Joanne Whittle

⁶¹¹ S 42A Report: Social Impacts, Section 4.1 and 4.2

⁶¹² S 42A Report: Social Impacts, Section 6

as to the ultimate scale of development being sought (including that it will be developed over a long period, and in stages). We support KiwiRail's proposed conditions which establish a CLF, community liaison person, complaints register and Construction Engagement Plan. However, we agree with Ms Linzey that there is potential to strengthen these community mitigation conditions, and we adopt her recommendations through suggested amendments to the conditions.

9.11.4 Recommendation

702. We recommend that amendments are made to the CLF conditions to specify:

a. who should be invited to partake in the CLF;

how KiwiRail takes on board (and demonstrates that it has responded to) the feedback provided by the CLF;

the length of time that the group is active;

the regularity of meetings (and how these might differ at different periods of the Freight Hub's development);

the scope of matters/management plans/other documents that the CLF is engaged to consider;

that the CLF is commissioned to provide feedback on the effectiveness of management plans once the Freight Hub is operational.

703. We also recommend amendments or new conditions:

a. that the complaints register is maintained until at least five years after full development of the Freight Hub;

b. that the CLF is invited to provide feedback during preparation of the Construction Engagement Plan;

c. that KiwiRail prepare a design framework, as set out in Section 9.3.4. (Visual and Landscape effects) of this report.

9.12 Economic effects

9.12.1 Key issues for assessment

704. The following issues are considered key issues for the purposes of this assessment:

- a. There will be regional and national economic benefits from investment in the Freight Hub.
- b. The Freight Hub does not demonstrate efficient connections for freight movement with the NEIZ and the airport which has the potential to undermine the desired economic outcomes envisaged for the freight and distribution sector.

The Freight Hub may not connect efficiently with the future strategic road freight network, and in particular, the proposed regional freight ring road.

There is a risk that poor integration between the Freight Hub and the future strategic road freight network will not achieve a safe and efficient road transport network that underpins a modal shift to rail for freight journeys. It has the potential to cause disruption to the existing network, undermining existing economic activity.

Employment opportunities during construction may be overstated, but generation of long-term economic investment and growth will be significant.

The lack of certainty of delivery may have an adverse economic effect on other organisations, limiting their ability to plan investments that are dependent on the Freight Hub.

9.12.2 Submissions received on this topic

705. The following submitters made submissions which relate to the economic effects of the Freight Hub. The following submissions have been considered in this evaluation:

11	Christopher Joseph Clarke
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12	Central Economic Development Agency
13	Tutaki 2019 Ltd
17	Nicola Schreurs and Thomas Good
19	Janet Susan Stirling
23	Mike Tate
24	Zaneta Park
47	Aaron P Fox
51	Manawatu District Council
55	Michael Sharp
56	Accelerate 25 Manawatu
57	John David Bryan Austin & Rosaleen Mary Wapp
61	Peter Gore & Dale O'Reilly
70	Renee Louise Thomas
71	Darren Green
72	Danelle O'Keefe & Duane Butts
73	Horowhenua District Council
78	Ben Foster
84	Raewyn Carey
97	Ji Hangfeng

9.12.3 Analysis

i. Economic benefits of investing in regionally significant infrastructure

706. KiwiRail identifies that the Freight Hub will generate significant economic benefits from:

- c. reducing freight transport costs for users (by increasing the speed and capacity of container handling and through longer trains); and
- d. environmental, safety and congestion benefits for the wider country - due to an increase in the modal share of rail for moving freight inter-regionally.

707. KiwiRail estimate 20% of the benefits would be expected to accrue to rail users based in Palmerston North, around 40% to rail users outside the region, and around 20% to the wider country in the form of environmental, safety and congestion benefits⁶¹³.
708. Several submitters⁶¹⁴ are supportive of the Freight Hub as a driver for a shift in freight transport from road to rail, citing the benefits to road safety, reduction in congestion, increase in capacity, reduction in climate change emissions⁶¹⁵, reduced road maintenance costs and improved supply chain resilience. Others are less convinced and consider there is more likely to be a substitution of different effects⁶¹⁶, or that a modal shift may not be achieved, for example because of competition from technological advances in road transport⁶¹⁷.
709. Many submitters agree with KiwiRail that the Freight Hub proposal has the potential to generate multiple economic benefits and that the Freight Hub objectives are well aligned with local and regional strategic planning priorities.
710. The various documents which articulate these aspirations are referenced in submissions and set out in the s 42A report on economic impacts at section 4. These strategic documents share a common goal to grow the capacity and economic potential of the freight and logistics sector in Palmerston North. Investment in transport infrastructure is a crucial component in realising potential economic benefits, due to the sector's reliance on an efficient and effective transport network. The Draft Regional Land Transport Plan (2021-2031)⁶¹⁸ for example, recognises the Regional Freight Hub as a priority investment area and a significant activity relevant to the strategic vision and objectives for transport in the region⁶¹⁹.
711. The Freight Hub will qualify as transport infrastructure of regional or national importance under Objective 3-1 and Policies 3-1 and 3-3 of the One Plan. Objective 3-1 directs decision makers to have regard to the benefits of

⁶¹³ See 3rd s92 response, Section 5, pg 8-12.

⁶¹⁴ Submission 55: Michael Sharp, Submission 73: Horowhenua District Council

⁶¹⁵ Submission 11: Christopher Clarke

⁶¹⁶ Submission 71: Darren Green

⁶¹⁷ Submission 97: Anonymous, Submission 47: Aaron Fox

⁶¹⁸ Horizons Regional Council. Regional Land Transport Plan (Draft). 2021-2031 Report No: 2021/EXT/1720. Accessed from: <https://www.horizons.govt.nz/HRC/media/Media/Draft-Regional-Land-Transport-Plan.pdf?ext=.pdf>

⁶¹⁹ See Table 3, pg 75 of the Regional Land Transport Plan (Draft). The Freight Hub is not funded through the RLTP but is recognised as a significant activity relevant to the strategic vision and objectives for transport in the Horizons region.

infrastructure of regional or national importance by recognising and providing for the establishment, operation, maintenance and upgrading of such infrastructure⁶²⁰. Where road and rail networks are mapped in the Regional Land Transport Strategy⁶²¹, Policy 3-1 states that determining authorities must recognise that infrastructure as being a physical resource of regional or national importance and have regard to the benefits derived from those activities. City View Objective 13 in the District Plan seeks to stimulate investment within the City, and that priority sectors such as logistics are well supported.

712. With respect to the benefits of a greater modal shift to rail, the NPS UD seeks that New Zealand's urban environments support reductions in greenhouse gas emissions and are resilient to current and future effects of climate change⁶²².
713. Mr Vuletich broadly agrees with KiwiRail's economic analysis of the transport cost and mode shift benefits, but has some reservations relating to specific assumptions, which he considers would have the effect of overstating some benefits (such as those derived from timing assumptions for introducing longer trains), and understating others (efficiency benefits from improved freight handling facilities), as set out in detail in his report at section 5.2.
714. We agree with KiwiRail, submitters, and Mr Vuletich that there is potential for significant economic benefits to be derived from this proposal, which would assist to support a priority sector for the city; and we consider that those benefits are an important consideration for this assessment, weighing in its favour.

ii. Locational benefits and opportunities for integration with the NEIZ

715. KiwiRail considers there will be advantages for businesses in locating in the NEIA adjacent to the Freight Hub⁶²³.
716. The NOR provides for a central, southern vehicle access into the Freight Hub, connected to the existing network via a roundabout in the vicinity of the

⁶²⁰ PNCC District Plan, Section 23: Network Utilities, Objective 1 has a similar direction.

⁶²¹ The Regional Land Transport Strategy has been replaced by the Regional Land Transport Plan. The NIMT and Palmerston North-Gisborne rail line are recognised as rail corridors of national or regional significance in the Regional Land Transport Plan (Draft) 2021-2031, pg 98.

⁶²² Objective 8

⁶²³ AEE, Section 9.1.4 Employment Opportunities

intersection between Richardsons and Roberts Line. Freight being transferred from sites within the NEIZ or Airport onto rail will need to be loaded onto trucks and driven to the Freight Hub.

717. Several submitters consider the chosen site to be an ideal location for the Freight Hub, due to its central location⁶²⁴, proximity to freight generating industries (such as food manufacturers⁶²⁵) and subsequent employment and business opportunities⁶²⁶ for Bunnythorpe, Palmerston North, and the wider region. CEDA⁶²⁷ identifies that the Freight Hub would be an integral part of a wider hub or precinct (which they call the Central New Zealand Distribution Hub) which is intended to service regional and national freight movements and stimulate economic growth and investment in the surrounding industrial areas.
718. Other submitters question the optimality of access to the Freight Hub for freight and logistics customers. Nicola Schreurs and Thomas Good⁶²⁸ ask why the Freight Hub does not include rail sidings into the NEIZ. They consider the current design seems counter-intuitive and negates the locational advantages. Another submitter considers the proposed road closures and diversions will adversely impact on the connectivity of current NEIZ users⁶²⁹.
719. CEDA⁶³⁰ and other submitters⁶³¹ would like to enable the future-proofing of connections between the NEIZ and the Freight Hub. They request that development of the Freight Hub should preserve an opportunity to develop dedicated infrastructure for direct freight movements between the NEIZ and the Freight Hub in the future, as freight movements increase between the various nodes.
720. The NPS UD directs local authorities to make decisions on urban development that are integrated with infrastructure planning, strategic over the medium and long term, and responsive, particularly to proposals that would supply

⁶²⁴ Submission 11: Christopher Clarke, Submission 19: Janet Stirling

⁶²⁵ Submission 73.

⁶²⁶ Submission 19: Janet Stirling, Submission 23: Mike Tate, Submission 24: Zaneta Park, Submission 51: Manawatū District Council, Submission 56: Accelerate 25, Submission 78: Ben Foster

⁶²⁷ Submission 12

⁶²⁸ Submission 17

⁶²⁹ Submission 72: Danelle O'Keeffe & Duane Butts

⁶³⁰ Submission 12

⁶³¹ Submission 63: Central Distribution Hub Stakeholder Group

significant development capacity.⁶³² Objective 3-3 of the One Plan and City View Objective 2 in the District Plan direct Council to provide for the adequate, timely, efficient, and economically sustainable supply of infrastructure.

721. Council's economic expert, Mr Vuletich, considers that an optimally efficient freight precinct will require a high level of integration between the NEIZ, KiwiRail Freight Hub, Palmerston North Airport, (and the Regional Freight Ring Road, which is discussed further below). The Freight Hub is likely to generate significant freight flows between the Freight Hub and the NEIZ. In his opinion, maximising efficient movement (for example through future provision of a grade separated freight corridor between the NEIZ and the Freight Hub) will enhance productivity for NEIZ occupiers who utilise rail and consequently attract higher levels of inward investment⁶³³. It will also minimise conflict with other road users, a point which is addressed in Ms Fraser's evidence at section 7.
722. We agree with submitters that the chosen site aligns with the Council's and other stakeholders plans to develop a 'Distribution Hub' in this part of the city, building on the potential locational advantages of the existing NEIZ and Palmerston North Airport. The Council's Economic Development Strategy Priority 2 is to provide infrastructure to enable growth and a transport system that links people and opportunities, recognising in turn the City Development Strategy for "Council's commitment to delivering infrastructure in an integrated way that is efficient and focused on the future needs of the growing city". The priority identifies that "further improvements in rail and roading infrastructure are needed to provide better connectivity to the expanding North-East industrial zone."
723. We agree with Mr Vuletich and submitters that because of the long-term horizon which KiwiRail is planning for, it would be useful to preserve the potential for a dedicated freight corridor to be established in the future, whatever form that might ultimately take. This would be consistent with the direction in the NPS UD⁶³⁴, One Plan⁶³⁵ and District Plan⁶³⁶ to support proposals

⁶³² Objective 6.

⁶³³ S 42A Report: Economic Effects, Section 6.1

⁶³⁴ Objective 6.

⁶³⁵ Objective 3-3

⁶³⁶ PNCC District Plan, Section 2: City View Objectives, Objective 2

that increase development capacity and improve the efficiency of infrastructure.

724. Mr Vuletich recommends requiring KiwiRail to actively engage with stakeholders regarding opportunities for integration⁶³⁷. One way to do this would be to establish an NEIZ users' group, which KiwiRail is required to engage with prior to preparation of the RNIP. A condition could specify who is invited to join the group, when and in what format consultation should be undertaken, and require that KiwiRail provide evidence of genuine consideration of any outcomes of that consultation in forming the RNIP.
725. A user group arrangement would provide flexibility for the group to discuss and agree their requirements for the type and nature of infrastructure connections, the appropriate timing for delivery and how these might be funded.

iii. Integration with the existing and future road network

726. KiwiRail say that situating the Freight Hub outside Palmerston North and integrating it with Waka Kotahi's planned freight road and Manawatu Gorge road will take freight traffic out of central Palmerston North and reduce congestion on Tremaine Avenue. The AEE states that KiwiRail is "working with Waka Kotahi and other stakeholders to integrate its development with future roading network upgrades anticipated by other agencies"⁶³⁸.
727. Several submitters comment on the proposed roading connections and how these will affect economic efficiency. Nicola Schreurs and Thomas Good⁶³⁹ consider the interaction between the main Freight Hub entrance and the new perimeter road will cause traffic conflicts between long distance movements and vehicles seeking to navigate the short distance between the NEIZ or airport and the Freight Hub.
728. Tutaki 2019 Ltd⁶⁴⁰ consider their business will be considerably affected by a sub-standard alternative connection to that which the business currently enjoys. Tutaki consider their suppliers, customers, employees, and logistics operators will experience a considerable loss of service, with subsequent adverse impacts for other businesses. They seek an alternative access for their business

⁶³⁷ S 42A Report: Economic Effects, Section 6.1

⁶³⁸ AEE, Section 9.1.5 Strengthening the Resilience of the Transport System

⁶³⁹ Submission 17

⁶⁴⁰ Submission 13

which does not require the closure of the Roberts Line/Railway Road level crossing and intersection.

729. One submitter⁶⁴¹ considers the relocation of the existing yard will adversely affect those businesses which have chosen to locate in proximity to the Tremaine Avenue Yard, who will now face increased travel times and congestion to access the Freight Hub, or alternatively, relocation costs to position themselves once again in a favourable location. Alongside closer integration between the Freight Hub and the NEIZ, CEDA⁶⁴² seek an outcome which provides for successful integration of the Freight Hub to the future transport network described in the PNITL Business Case, in an efficient and effective manner.
730. Provisions in the District Plan seek to ensure that the City's land transport networks provide for people and goods to be moved through and within the city in a safe and efficient manner⁶⁴³, and that the road network can provide for the current and future needs of the city⁶⁴⁴. The through movement of traffic should be restricted where this has adverse visual, noise and safety effects on adjoining areas. The roading hierarchy should be used to direct higher volume and heavy traffic movements onto identified arterial routes and to discourage this traffic from other areas, such as residential areas⁶⁴⁵.
731. We understand from Mr Vuletich's evidence, that efficient connections between the Freight Hub and the existing and future road network is the other essential component to maximising the potential economic benefits of the Freight Hub⁶⁴⁶. Changes to the road network (for example the closure of Railway Road and redirection of traffic onto the perimeter road) have potential to adversely impact on traffic flows and thus business efficiency.
732. Given the significant demand the Freight Hub will place on the region's roading network, Mr Vuletich considers it is important that the design of the Freight Hub supports an optimal alignment for the Ring Road, which should be

⁶⁴¹ Submission 72: Danelle O'Keeffe & Duane Butts

⁶⁴² Submission 12

⁶⁴³ PNCC District Plan, Section 20: Land Transport, Objective 1

⁶⁴⁴ PNCC District Plan: Section 20: Land Transport, Policy 1.3

⁶⁴⁵ PNCC District Plan: Section 20: Land Transport, Policy 2.1

⁶⁴⁶ S 42A Report: Economic Impacts, Section 6.2

in place prior to the Freight Hub opening, and that the roading connections between the Freight Hub and Ring Road are as efficient as they can be.

733. Fulfilment of these conditions will, in his opinion, ensure the efficient movement of freight and strengthen the region's reputation as a key distribution hub. It will also encourage maximum road user uptake of the regional Ring Road, which is critical to the Council's wider objectives to reduce heavy freight traffic through the central city and residential areas⁶⁴⁷.
734. We agree with his analysis and note the direction in the District Plan to achieve safe and efficient movement of goods,⁶⁴⁸ a road network that is able to provide for the current and future needs of the city⁶⁴⁹ and one that discourages heavy traffic movements through sensitive areas. We agree with Mr Vuletich and submitters that the timing and interdependency of the two projects is closely intertwined, and further complicated by the responsibility for delivering the projects sitting with different agencies. In that respect we acknowledge that despite the importance of efficient integration between the related projects, this is not solely KiwiRail's responsibility.
735. Submitters have pointed to the RNIP as a means to align these two projects, and we agree that this seems a pragmatic way forward, acknowledging that such alignment cannot occur until such time as the ring road is sufficiently advanced as a project. KiwiRail has suggested amendments to this condition which would provide for the outcomes of consultation with the key Roding Authorities to be incorporated into the RNIP. We agree that this is helpful and support this amendment. Further changes to this condition have been proposed by submitters, and we deal with those requests in Section 9.2 of this report, which addresses effects on the transport network.

iv. Generation of employment opportunities and economic growth

736. There are currently 543 people employed at the existing Freight Yard, 305 of which are KiwiRail workers, and the rest of which are employed by freight partners (238). At the opening of the Freight Hub, the number of people employed by KiwiRail will remain the same, with a modest increase in people employed by freight partners (total of 280). By the time the Freight Hub is fully

⁶⁴⁷ S 42A Report: Economic Effects, Section 6.2

⁶⁴⁸ PNCC District Plan, Section 20: Land Transport, Objective 1

⁶⁴⁹ PNCC District Plan: Section 20: Land Transport, Policy 1.3

built out, the number of freight partner employees is expected to increase to 700, with total employment at the site at 1005⁶⁵⁰.

737. Several submitters welcome the new employment opportunities that will be generated by construction and operation of the Freight Hub. A couple question KiwiRail's estimates on the generation of new jobs⁶⁵¹, including whether these jobs are additional, or a substitution for existing jobs in other locations, such as the current Freight Yard⁶⁵². One submitter notes the current shortage of construction workers to service existing projects in the region and questions whether there will be sufficient labour available to deliver the project⁶⁵³.
738. City View Objective 13 in the District Plan is that investment within the City is stimulated and identified priority sectors such as logistics and construction (amongst other named sectors) are well supported.
739. Mr Vuletich agrees that the Freight Hub is likely to generate significant economic benefits during the construction phase (through employment and spending), but that these benefits may be overstated, for reasons which he sets out in his report at section 5.3.2. On the other hand, Mr Vuletich considers that longer term investment benefits are likely to be much more significant. New investment by freight sector firms and growth in the number and/or size of supporting businesses will lead to increased economic output and employment opportunities in the region⁶⁵⁴.
740. The stimulation of investment in the freight and distribution sector is consistent with City View Objective 13 in the District Plan. We agree with Mr Vuletich that the predicted generation of long-term economic investment will be a significant positive effect of the Freight Hub proposal.

v. Investment certainty

741. KiwiRail have requested a lapse period of 15 years to give effect to the designation.

⁶⁵⁰ Third s92 response, Question 5.

⁶⁵¹ Submission 47: Aaron Fox

⁶⁵² Submission 71: Darren Green, Submission 72: Danelle O'Keeffe and Duane Butts

⁶⁵³ Submission 72: Danelle O'Keeffe and Duane Butts

⁶⁵⁴ S 42A Report: Economic Impacts: Section 5.3.2.

742. William Bent and Peter Gore & Dale O'Reilly oppose a lapse period of 15 years as this is too great a period of uncertainty⁶⁵⁵. Joanne Whittle considers KiwiRail has given no convincing evidence for this time period and that the lapse period should be retained at five years⁶⁵⁶.
743. City View Objective 13 seeks to stimulate economic investment in the city and is relevant to this assessment.
744. Mr Vuletich considers greater certainty regarding the KiwiRail project would assist with the realisation of economic benefits. Business investment is more likely if there is certainty the project will go ahead. Mr Vuletich is concerned that the length of the lapse period will deter or delay both private and public investment, such as the Ring Road. He recommends the lapse period is kept as short as reasonably possible⁶⁵⁷.
745. We agree with his assessment and note that submitters have also requested a shorter lapse period. While we appreciate that KiwiRail requires time to obtain the necessary resource consents and undertake further site investigations on what is a major development, we consider the lapse period could be significantly shortened and still provide more than enough time for KiwiRail to take the steps necessary to give effect to the designation. This would assist to stimulate and support economic investment, consistent with City View Objective 13 in the District Plan. A shorter lapse period would mitigate adverse effects associated with economic uncertainty, as well as the social impact of uncertainty on the community. We have recommended a lapse period of ten years, which we consider strikes an appropriate balance for a project of this significance.

9.12.4 Recommendation

746. We make the following recommendations:
- a. that the lapse period is set at 10 years rather than the requested 15;
 - b. that a condition requiring a NEIZ users group to be established is developed, if supported by stakeholders and KiwiRail. The purpose of

⁶⁵⁵ Submission 77, Submission 61

⁶⁵⁶ Submission 59

⁶⁵⁷ S 42A Report: Economic impacts, Section 5.4

the group would be to determine the appropriate means to provide for safe and efficient freight connections between the NEIZ and the Freight Hub, and for the outcomes of consultation with that user group to be used to inform development of the RNIP and the detailed design.

9.13 Effects on infrastructure and network utilities (except roads)

9.13.1 Key issues for assessment

747. The following issues are considered key issues for the purposes of this assessment:

- There could be adverse effects on existing network utilities, subject to further design details being shared and mitigation agreed with the affected network utility operators.
- Existing Council three waters infrastructure and roading connections will be disrupted by construction of the Freight Hub, and KiwiRail will need to make alternative provision to ensure an appropriate level of service is maintained.
- Construction of the Freight Hub will require an alternative alignment to Council's planned off-road cycling connection between Feilding and Palmerston North.
- Submitters are concerned about adverse effects on connectivity to community facilities in Bunnythorpe.

9.13.2 Submissions received on this topic

748. The following submitters made submissions which relate to effects on other network utilities. The following submissions have been considered in this evaluation:

5	Palmerston North Airport Ltd
30	Bunnythorpe Community Committee
48	Powerco Limited
54	Airways Corporation

61	Peter Gore & Dale O'Reilly
67	Transpower New Zealand Limited
72	Danelle O'Keeffe & Duane Butts

9.13.3 Analysis

i. Effects on network utilities

749. KiwiRail identify that some network utilities may need to be relocated at the appropriate time, with the agreement of the service provider. Although no assessment of effects on network utilities is provided, KiwiRail consider no adverse effects are anticipated⁶⁵⁸.
750. Powerco Limited⁶⁵⁹ has overhead and underground electrical assets located within the designation extent. Powerco Limited consider it is not clear whether their networks will be adversely affected or not.
751. If assets are not relocated outside the designation, Powerco will be hampered by time delays and additional costs due to road closures and restricted access, which will require significant network deviations or easements over private land. This will be particularly problematic at the southern end of the designation, where a number of different network linkages are located, and where Powerco are proposing to establish a new zone substation to service the NEIZ.
752. Powerco requests that the requirement is modified so that the designation boundaries do not extend over the legal roads of Railway Road, Roberts Line and Richardsons Line. Alternatively, Powerco seeks a number of conditions, as set out in their submission.
753. Transpower New Zealand Limited⁶⁶⁰ (Transpower) are concerned that the proposed designation will directly affect the Bunnythorpe – Mangahao A (BPE-MHO A) 110kV transmission line and Tower A0632 at the northern end of the Freight Hub, between Maple Street and Railway Road.

⁶⁵⁸ AEE, Section 9.12: Effects on Network Utilities

⁶⁵⁹ Submission 48

⁶⁶⁰ Submission 67

754. Transpower seek further information on the proposed design and construction methodology and the potential for this to impact on the National Grid Yard. Transpower also seek additional conditions to address construction management, restrictions on landscaping, and controls on permanent structures within the National Grid Yard.
755. In their submission, Danelle O'Keeffe & Duane Butts⁶⁶¹ reflect on the numerous utilities that will be impacted by the proposed designation, and question whether relocation/replacement costs have been adequately assessed. They do not want these costs passed on to the community via rate increases.
756. There are several network utilities within the designation extent that will require relocating, including those identified through submissions, plus the First Gas high pressure gas transmission pipeline to Hastings (which runs west to east across the site) and the Council's wastewater rising main sewer that services Bunnythorpe.
757. The National Policy Statement on Electricity Transmission 2008 (NPS ET) requires recognition of the national significance of the electricity transmission network by facilitating its operation, maintenance and upgrade, and management of adverse effects of other activities on the network⁶⁶².
758. The One Plan requires decision makers to recognise and provide for the ongoing operation, maintenance and upgrading of network utilities of regional or national importance, which includes the network utilities identified above⁶⁶³. The Council must ensure that adverse effects on such infrastructure from other activities are avoided as far as reasonably practicable⁶⁶⁴. Similar provisions are included in Section 23: Network Utilities of the District Plan. The District Plan requires that earthworks activities are managed to avoid adverse effects on the National Grid⁶⁶⁵.
759. We agree with the submitters that KiwiRail has not undertaken an assessment of potential effects on these network utilities, which are recognised as nationally or regionally significant infrastructure. Such an assessment is

⁶⁶¹ Submission 72

⁶⁶² Objective 1

⁶⁶³ One Plan, Policy 3-1.

⁶⁶⁴ One Plan, Policy 3-2.

⁶⁶⁵ PNCC District Plan, Section 6: General Rules – Earthworks, Policy 1.3

necessary to determine whether there will be any adverse effects during construction or operation of the Freight Hub.

760. We agree with PowerCo that the conditions they request to provide for the safe ongoing operation of their assets are reasonable and generally support these. However, PowerCo have also requested that these assets are relocated outside the designation and that this is a condition on the designation. Given that this appears to be an operational relationship issue, we suggest this is a matter best resolved directly between KiwiRail and PowerCo.
761. With respect to PowerCo's request to narrow the extent of the designation, we understand that the designation extends over legal roads (which are themselves subject to a designation in the District Plan) to enable KiwiRail to make the necessary modifications to the roading network. We recommend that the extent of designation should be revisited following construction, and that KiwiRail should consider relinquishing any areas which are not required on an ongoing basis, in particular where this extends over public roads. This is important given that the District Plan encourages the use of roads as network utility corridors⁶⁶⁶, and provision is made for this through the National Code of Practice for Network Utility Operators' Access to Transport Corridors (September 2016). It is reasonable to assume that network utility providers will continue to want to use these corridors to locate their assets.
762. In response to Transpower's submission, we requested further information from KiwiRail to understand the potential for adverse effects on the National Grid⁶⁶⁷. KiwiRail's response was that no adverse effects are anticipated because no new buildings or structures are proposed in the vicinity of the National Grid and no earthworks are proposed around the pylon. Trees proposed as mitigation for visual effects on residents of Maple Street can be located away from the pylon and overhead transmission lines. KiwiRail will work with Transpower regarding any access requirements and to ensure earthworks are undertaken in accordance with Transpower's guidance on development near National Grid assets.

⁶⁶⁶ PNCC District Plan, Section 23: Network Utilities, Policy 3.6

⁶⁶⁷ See third s92 request.

763. We consider that it is likely that any potential adverse effects on the National Grid can be avoided or mitigated, subject to further information on:
- a. how construction in the vicinity of the National Grid will be managed in accordance with the minimum safe clearance distances set out in the New Zealand Electrical Code of Practice for Electrical Safe Distances;
 - b. how any landscaping will comply with the Electricity (Hazards from Trees) Regulations 2003;
 - c. how access to Transpower's assets will be maintained at all times; and
 - d. whether there is any risk of earth potential rise.
764. Transpower have requested additional conditions to cover the matters set out above. We agree such conditions would be useful and that the conditions put forward by PowerCo may address the relief sought by Transpower, with some modifications (as we propose below). Transpower may wish to confirm this, or to propose alternative wording of conditions in their evidence to the Panel.
765. It may also be useful to address these issues through development of an Electricity Transmission Management Plan, which would be prepared in consultation with Transpower and PowerCo. Transpower and PowerCo may wish to respond on whether such a plan would assist to address their concerns and if so, what matters this plan should address. As in the case of PowerCo, we agree that it would be appropriate for KiwiRail to remove its designation from Transpower's assets following completion of construction, where this is practicable.

ii. Effects on Council infrastructure

766. The proposed designation extends over several assets owned and operated by the Council. An existing water bore for public supply is located within the south-eastern end of the designation, adjacent to the Roberts Line / Railway Road intersection. The designation lies over the existing access to this bore and the southern corner of this site. The Freight Hub will require relocation of wastewater assets such as the existing wastewater rising main along Railway Road and may affect stormwater management assets. The designation extends over formed and paper roads for which the Council is the road

controlling authority (and which are designated for roading purposes in the District Plan). A number of those roads will be required to be stopped.

767. One submission has been received from Peter Gore & Dale O'Reilly⁶⁶⁸, who are concerned that KiwiRail does not address the impacts of the Freight Hub on the wastewater infrastructure on Te Ngaio Road.
768. Mr van Bentum, the Council's Chief Engineer, has prepared a s 42A report which addresses the potential effects on Council's existing and future three waters and roading infrastructure. The report sets out the potential impacts and what is required to ensure ongoing operation of infrastructure and optimised delivery of future upgrades. We largely rely on his report and where required recommend conditions to address the issues raised.
769. With respect to the submission on wastewater infrastructure, we understand from Mr van Bentum's s 42A report that the Council has been working with KiwiRail to develop a Project Agreement⁶⁶⁹. The Project Agreement will set out the respective obligations of the parties in relation to potential effects on Council infrastructure. We understand that this Project Agreement will address any requirements for KiwiRail to relocate or provide connections to water and wastewater networks, which should address the issue raised by the submitter. However, to provide certainty in the event the Project Agreement is not finalised before a decision on the NOR is made, we have recommended a condition to ensure continuity of service is maintained.
770. With respect to the water bore, we agree with Mr van Bentum that it is important that this water supply and its planned expansion is provided for. We note that this infrastructure will qualify as regionally significant infrastructure under Policy 3-1 of the One Plan and that adverse effects on the operation and upgrading of this infrastructure are to be avoided as far as reasonably practicable under Policy 3-2. We subsequently recommend a condition to require that PNCC's future plans to construct a second reservoir and chemical treatment facilities for the water bore will not be impacted by the proposed designation. We understand some of the facilities may be relocated to a site

⁶⁶⁸ Submission 61

⁶⁶⁹ S 42A Report: Palmerston North City Council Infrastructure Assets, Section 3

northwest of the existing facility; and we provide for this within the proposed condition.

771. We also understand that access to the water bore site will be required to provide for servicing and chemical treatment resupply⁶⁷⁰. Again, we have recommended a condition to require this access to be provided by KiwiRail.
772. Mr van Bentum's report identifies that the Council is in the process of designing and constructing a number of active transport links for walking and cycling in the vicinity of the Freight Hub, including a separated shared pathway along the north-western edge Richardsons Line, an extension to the existing Mangaone shared pathway from Flyers Line to Bunnythorpe and a separated shared pathway on land adjacent to the eastern boundary of the Freight Hub, to provide an active transport connection between Bunnythorpe and Palmerston North. The Council plans to construct the eastern shared path within the next two years. The Council wants to ensure construction of the shared path is not obstructed by the construction or operation of the Freight Hub⁶⁷¹.
773. The shared pathway's are important for active transport connections, but also to provide for safe provision for pedestrians and cyclists, as discussed in the s 42A report of Ms Fraser. Therefore we have recommended a number of conditions to ensure that the shared paths can be constructed and in relation to the eastern shared path, that it will be available at all times during construction and operation of the Freight Hub.

iii. Impacts on community infrastructure

774. The Freight Hub will require the relocation of a public bus stop and there will be some changes to the footpath network. Access to other community infrastructure will not be directly impacted.
775. The Bunnythorpe Community Committee⁶⁷² are concerned about impacts on Bunnythorpe's infrastructure including access to footpaths, bus stops, churches, school and the community centre. If it goes ahead, they ask that funding is set aside to improve the aesthetics of Bunnythorpe.

⁶⁷⁰ S 42A Report: Palmerston North City Council Infrastructure Assets, Section 6

⁶⁷¹ S 42A Report: Palmerston North City Council Infrastructure Assets, Section 4

⁶⁷² Submission 30

776. The submission raises concerns about access to community facilities. We acknowledge that the Freight Hub has the potential to have significant effects on the safe and efficient operation of the transport network in and around Bunnythorpe. We have recommended conditions in section 9.2 of our report to ensure that the Bunnythorpe transport network is upgraded where necessary to maintain a safe and efficient environment. This should address the concerns raised by the submitter regarding access to facilities within Bunnythorpe.
777. The submitter has also asked for KiwiRail to contribute to improving the aesthetics of Bunnythorpe. We appreciate that there will be significant changes to the character and sense of place of Bunnythorpe, which Ms Linzey addresses in her s 42A report⁶⁷³. Ms Linzey considers that there are likely to be residual adverse social effects on the Bunnythorpe community, even after the implementation of mitigation currently proposed by KiwiRail⁶⁷⁴.
778. Requiring KiwiRail to contribute to improving the aesthetics of Bunnythorpe would in our opinion be a form of compensation for adverse connectivity effects incurred by the Bunnythorpe community. Section 171(1B) prevents the consideration of the positive effects created by such a fund unless that fund is proposed or agreed to by KiwiRail. We consider that positive benefits would arise from a community fund that contributes to any community projects that maintain the 'village' feel and values and generate positive social effects. We consider that such a fund would be sensible and would recommend that a compensatory fund is given further consideration by KiwiRail.

9.13.4 Recommendation

779. Conditions which address the following issues should be adopted:
- a. As soon as practicable following completion of construction of the Freight Hub, the Requiring Authority must review the width of the area designated for the Freight Hub and identify any areas of designated land that are no longer necessary for the on-going operation or maintenance of the Freight Hub, or for on-going mitigation, offsetting or compensation measures required to address adverse effects of the

⁶⁷³ S42A Report: Social Impacts, Section 4.4.1

⁶⁷⁴ S42A Report: Social Impacts, Section 6

Freight Hub and give notice to the Council in accordance with Section 182 of the RMA that those parts of the designation are no longer wanted.

- b. Enabling or construction works activities and structures must be designed and undertaken to comply with the New Zealand Code of Practice for Electrical Safe Distances (NZECP 34:2001).
- c. Any trees or vegetation shall be selected, located and managed to ensure that it will not result in that vegetation breaching the Electricity (Hazards from Trees) Regulations 2003, including at full maturity.
- d. All works must be undertaken in accordance with the National Code of Practice for Utility Operators Access to Transport Corridors (September 2016) or any approved update to the Code.
- e. Prior to the commencement of any site works, the requiring authority shall identify the location of existing overhead or underground network utilities and make these known to construction personnel, along with the restrictions in place in relation to those existing network utilities.
- f. Conditions to require the shared path constructed between Palmerston North and Bunnythorpe to be available at all times during construction and operation of the Freight Hub, with any diversion or modification have the same dimensions and surface treatment as the path that existed. If a diversion is required, a diversion management plan for the shared path must be prepared and any diversion or modification undertaken in accordance with that plan.
- g. A safe separated path of at least 2.5m in width must be constructed along the entirety of the new perimeter road for cyclists [and pedestrians], including through any intersections, with a safe connection across the railway line provided for cyclists and pedestrians to replace the level crossing at Roberts Line that will be closed to construct the Freight Hub.

9.14 Rail design and operations

9.14.1 Key issues for assessment

780. The following issues are considered key issues for the purposes of this assessment:

- a. the need for expansion to provide for future freight growth, which is unable to be accommodated at the existing Tremaine Avenue Freight Yard;
- b. future proofing of the Freight Hub design to provide for 1500m long trains;
- c. insufficient evidence that health and safety risks have been identified and addressed through the Concept Plan design process.

9.14.2 Submissions received on this topic

781. The following submitters made submissions on rail design and operational matters. The following submissions have been considered in this evaluation:

8	Fire and Emergency New Zealand (FENZ)
16	Martin Jones
72	Danelle O’Keeffe & Duane Butts

9.14.3 Analysis

i. **Establishment, operation and upgrading of infrastructure of regional or national importance**

782. KiwiRail has identified that the Tremaine Avenue Yard has adequate capacity to accommodate its current operational requirements, but no further available land to accommodate projected future growth. Therefore, an alternative site is needed. The Freight Hub will cater for existing operational needs and planned future services, with the proposed layout providing for more efficient container handling than is currently possible.

783. Horizons Regional Council⁶⁷⁵ and Horowhenua District Council⁶⁷⁶ support the proposed designation from a transport perspective, given the importance of the rail network to the proposed regional investment priorities in the Draft Regional Land Transport Plan 2021-31.
784. Objective 3-1 in the One Plan requires regard to be had to the benefits of infrastructure of regional or national importance by recognising and providing for its establishment, operation, maintenance and upgrading. In managing any adverse effects arising from these activities under Policy 3-3, the Council must take into account any functional, operational or technical constraints that require infrastructure to be located or designed in the manner proposed (amongst other matters set out in the policy).
785. Mr Than, Council's expert on rail engineering, agrees with the assessment that there is insufficient space for future expansion at the existing site⁶⁷⁷. He also agrees that the Freight Hub site should accommodate current operational needs and that the concept design and proposed layout is likely to improve the operation and through-put of containers. Increased capacity for on-site freight storage will assist to provide for the efficient growth of rail freight transport.⁶⁷⁸
786. We agree with the submitters that the Freight Hub proposal will assist to provide for the establishment, operation and upgrading of nationally and regionally significant infrastructure, which aligns with Objective 3-1 and Policy 3-3 in the One Plan, along with the regional transport investment priorities in the Draft RLTP, which are a relevant 'other matter' in this assessment. We appreciate that there are physical and operational constraints which limit the future capacity of the existing yard and that these future requirements have influenced the Freight Hub location and design.

ii. Future proofing and provision for 1500m long trains

787. KiwiRail states that the Freight Hub rail yard has been designed to accommodate much longer trains than are currently marshalled (up to 1500m long trains). Longer trains would accommodate the predicted freight growth between Palmerston North and Auckland, while south of Palmerston North, the

⁶⁷⁵ Submission 20

⁶⁷⁶ Submission 73

⁶⁷⁷ S 42A Report: Railway Track design, construction and operation, Section , Section 4.4

⁶⁷⁸ S 42A Report: Railway Track design, construction and operation, Executive Summary

maximum train length would remain at 900m, reflecting ferry capacity for freight transport to the South Island⁶⁷⁹.

788. Martin Jones⁶⁸⁰ seeks that the footprint of the marshalling yard is reduced to the extent where it can handle the current 800m long trains, on the basis that no other part of the network is currently capable of accommodating 1500m long trains. Danelle O'Keeffe & Duane Butts⁶⁸¹ consider future proofing should be extended to all elements of the design, including to reduce noise and air emissions to a minimum. They consider the design should enable greater use of electric locomotives and increasing use of electric vehicles.
789. When considering the requirement for 'future proofing', s 5 of the RMA directs us to use natural and physical resources in a way or at a rate that enables communities to provide for their economic wellbeing, at the same time as sustaining the potential of those resources to meet the reasonably foreseeable needs of future generations. Section 7 (b) requires particular regard to be had to the *efficient* use and development of such resources. Provisions in the District Plan seek that infrastructure is provided in an integrated, efficient, timely, environmentally sensitive, and economically sustainable manner⁶⁸².
790. In response to Danelle O'Keeffe & Duane Butts submission regarding electrification of the rail network, we note that KiwiRail have set out the indicative phasing for electrification of tracks in the Design, Construction and Operation Report. Exact timing will be driven by demand⁶⁸³. Management of noise emissions is addressed in section 9.3 of this report.
791. Mr Than, Council's expert, recognises the general strategy to improve resilience and capacity of the rail network, but observes that it remains unclear when or how the wider network will be upgraded to achieve the operational standards required to accommodate such long trains. He also considers it is unclear how such long trains will be operated and accommodated within the yard from a practical operational perspective⁶⁸⁴.

⁶⁷⁹ Attachment 8a s92 Response - Economic

⁶⁸⁰ Submission 16

⁶⁸¹ Submission 72

⁶⁸² Section 2: City View Objectives 2 and 3.

⁶⁸³ Technical Report A: Design Construction and Operation Report, Table 7, pg 21

⁶⁸⁴ S 42A report: Railway track design, construction and operation, Section 5.3

792. The provisions identified above indicate that provision of rail infrastructure that provides for future needs is appropriate for sustainable management, but that delivery must be timed and integrated with existing infrastructure efficiently.
793. Mr Than (and Martin Jones) question whether the reasonably foreseeable future needs of rail infrastructure includes provision for 1500m long trains.
794. KiwiRail's reply in relation to various questions related to the provision for 1,500 m long trains is set out in its third s92 response. KiwiRail's response identifies that it is planning for and undertaking works to enable longer trains within the rail network. KiwiRail identify that the key operational objectives of enabling longer trains include:
- a. taking advantage of the economies of scale of running bigger trains (which have a lower unit cost per tonne);
 - b. increasing rail's competitive advantage over other transport modes;
 - c. future proofing major infrastructure developments for growth;
 - d. adding network capacity/flexibility; and
 - e. reducing New Zealand's carbon emissions from transport.
795. KiwiRail also identifies that it is much more expensive, if indeed possible, to increase the length of existing terminal hubs, such as the Existing Freight Yard.
796. KiwiRail's proposal is that the Freight Hub designation should provide capacity for longer trains⁶⁸⁵ as a network upgrade to future proof the network, providing capacity and resilience in a way that is efficient, in fulfilment of its purpose.
797. Our opinion is that KiwiRail have demonstrated a reasonable need for the Freight Hub NOR to be sized to provide for up to 1500m long trains even if the timing and introduction of 1,500 m long trains is somewhat uncertain currently. We note that if 1500m long trains do not eventuate, KiwiRail can either surrender part of the designation or they may choose to use that land for alternative rail functions, such as a classification yard.

⁶⁸⁵ KiwiRail's third S92 response, May 2021, response to Q6.

iii. Safety in design and the elimination of hazards

798. KiwiRail state in their first s92 response⁶⁸⁶ that they have not documented a safety/risk/hazard analysis at this stage. However, KiwiRail adheres to Safety, Health and Environment (SHE) standard 14-STD-003-COM which sets out the arrangements for the KiwiRail Enterprise-wide Safety, Health and Environment (SHE) Management System, a copy of which is appended to the s92 response.
799. One submission has been received which is relevant to the consideration of safety in design. Fire and Emergency New Zealand (FENZ)⁶⁸⁷ identify that the Freight Hub activities include service facilities and bulk storage of hazardous substances, and the positioning of overhead line equipment above the marshalling yards poses a high risk to their service. To mitigate the risk of fire, adequate access to both the source of a fire and a firefighting water supply is essential. FENZ request that a condition is placed on the designation to this effect.
800. Provisions in the District Plan seek to maintain and develop the safe and efficient operation of the land transport network, with adverse effects to be managed in a way that maintains the health and safety of people and communities, and the amenity values and character of the City's environment⁶⁸⁸.
801. Mr Than considers there is insufficient evidence of whether or how KiwiRail has applied SiD to the proposed design. There should be information to demonstrate how KiwiRail have undertaken risk assessment and management, including for situations when designs are operated outside of the design intent. Mr Than considers the outcomes of any such SID review may also have implications for the design and layout of the Freight Hub, so should occur at an early stage⁶⁸⁹.
802. Failure to consider health and safety risks is at odds with the provisions in the District Plan. We consider KiwiRail should document a SID process and include evidence of this in the Outline Plan.

⁶⁸⁶ First s92 response, Attachment 3 s92 response: Design, Construction and Operation, response to Q124.

⁶⁸⁷ Submission 8

⁶⁸⁸ PNCC District Plan, Section 2: City View Objective 23, Section 20: Land Transport – Objective 1, Objective 2.

⁶⁸⁹ S42A Report: Railway track design, construction and operation, Section 5.1

803. We also agree with FENZ that it is important to mitigate the risk posed by fire, and that a condition on the designation requiring a water supply to be provided for firefighting purposes in accordance with industry standards is appropriate.

9.14.4 Recommendation

804. We recommend the following conditions:

- a. Provision for access to a water supply for firefighting purposes.
- b. Documentation of a safety in design process in the Outline Plan. The Safety in Design process should include the components set out in the evidence of Mr Than at section 5.1 and be recorded in the Outline Plan.

9.15 Urban development and land use effects

805. The following topic addresses effects on the efficient functioning of urban form, the spatial strategy for future urban development of the city and any effects associated with the loss of most versatile land.

9.15.1 Key issues for assessment

806. The following issues are considered key issues for the purposes of this assessment:

- a. the location of the Freight Hub is well aligned with the Council's spatial plan for future development of the city, including in relation to industrial and residential growth;
- b. whether the Freight Hub occupation of the NEIZ will result in a shortage of industrial land;
- c. the freight Hub will result in the loss of productive land;
- d. contribution of the Freight Hub to governmental goals for low carbon urban environments.

9.15.2 Submissions received on this topic

807. The following submitters made submissions on urban planning issues. The following submissions have been considered in this evaluation:

4	Bruce M & Alison M Hill
10	Timothy Brennon Tewake
17	Nicola Schreurs and Thomas Good
19	Janet Susan Stirling
20	Horizons Regional Council
23	Mike Tate
24	Zaneta Park
26	Peter Hurly
27	Helen and Pita Kinaston
32	Richard Jon Kibby
43	Nick Turner
44	Mereti Taipana
45	PMB Landco Ltd, Brian Green Properties Ltd & Commbuild Property Ltd
46	Paul Linklater
47	Aaron P Fox
55	Michael Sharp
57	John David Bryan Austin & Rosaleen Mary Wapp
58	Foodstuff North Island
59	Joanne K Whittle
60	Nexus Logistics Limited
61	Peter Gore & Dale O'Reilly
63	Central New Zealand Distribution Hub Stakeholder Group
64	Sharon Lee Gore
65	Waka Kotahi NZ Transport Agency

66	Andrew Wotton
70	Renee Louise Thomas
72	Danelle O'Keeffe & Duane Butts
77	William J Bent
88	Corinne J Dingwall
94	MidCentral District Health Board (MDHB) Public Health Service
97	Ji Hangfeng
98	David Odering

9.15.3 Analysis

i. KiwiRail's preferred location for the Freight Hub

808. KiwiRail undertook a multi criteria analysis (MCA) and decision conferencing process in order to determine its preferred location for the Freight Hub. The process is described in Volume 2 of the NOR. Nine area options were considered along the corridor of the existing NIMT, with the chosen site located to the south of Bunnythorpe, on the western side of the NIMT.

809. Several submissions comment on KiwiRail's chosen site, with some preferring alternative locations, for example Taonui,⁶⁹⁰ Longburn or Woodville⁶⁹¹. Others such as Zaneta Park⁶⁹² and Mike Tate⁶⁹³ support the chosen site on the basis that a large proportion of the area is already zoned industrial, and because there is clear separation from the residential area of Kelvin Grove and nearby rural-residential areas. The Central NZ Distribution Hub Stakeholder Group⁶⁹⁴ supports the chosen location for the opportunity it provides to develop a multi-modal distribution hub in this part of the city. Some submitters criticise the assessment of alternative sites, on the basis of various shortcomings which they identify⁶⁹⁵.

⁶⁹⁰ Submission 88: Corinne J Dingwall and Submission 43: Nick Turner

⁶⁹¹ Submission 44: Mereti Taipana, Submission: 64 Sharon Lee Gore, and Submission 72: Danelle O'Keeffe & Duane Butts

⁶⁹² Submission 24: Zaneta Park

⁶⁹³ Submission 23: Mike Tate

⁶⁹⁴ Submission 63

⁶⁹⁵ Submission 61: Peter Gore & Dale O'Reilly, Submission 72: Danelle O'Keeffe & Duane Butts

810. We have reviewed the MCA documentation and consider that KiwiRail has undertaken a comprehensive site selection process. Any site selection process will typically be based on imperfect information because the cost and effort required to develop a complete understanding of every site option is not practicable. The Council's consideration must be limited to an assessment under s171(1)(b) as to whether KiwiRail has given "adequate consideration" to alternative sites, not whether it has selected the best performing site, even if one did exist. Even though there may be disagreement by submitters around KiwiRail's scoring of criteria or inconsistencies within the MCA analysis, we don't think that means KiwiRail's consideration of alternative sites was inadequate.
811. Turning to the alternative sites proposed in submissions, we understand that while Longburn is identified as an area for industrial growth, the Council considers that area as being better suited to 'wet or processing industries', given the proximity to the Council's existing wastewater infrastructure⁶⁹⁶.
812. A location at Taonui or Woodville would be beyond the boundary of the Council's jurisdiction and would lie within the Manawātū District or Tararua Districts respectively. We consider a Freight Hub at either location would be somewhat removed from the existing industrial areas within Palmerston North City and would be unlikely to fully capitalise on the potential economic benefits of colocation and agglomeration with freight and distribution businesses, which KiwiRail are seeking to realise with the proposed location, and which would be consistent with Council land development and economic development strategies. These benefits are discussed in the evidence of Mr Vuletich.⁶⁹⁷

ii. The strategic fit of the proposed development and effects on future city development

813. KiwiRail state that moving the existing Freight Yard and developing the Freight Hub will mean that the Council is better able to realise its strategic plans to encourage rail and industry to locate in the northeast of the city⁶⁹⁸.
814. Not all submitters agree with this. One submission⁶⁹⁹ considers the proposed Freight Hub will exacerbate the housing crisis, due to the lack of available land

⁶⁹⁶ Appendix 1: Memorandum from David Murphy: Strategic Planning Context, 15 June 2021

⁶⁹⁷ S 42A Report: Economic Impacts, Section 5.3.2.2

⁶⁹⁸ AEE, Section 9.1.3: Spatial Planning Benefits

⁶⁹⁹ Submission 97: Anonymous

for urban development, while another considers the proposal will prevent or constrain future urban development, particularly the development of Bunnythorpe and Whakarongo⁷⁰⁰. Aaron Fox⁷⁰¹ considers KiwiRail's preferred site could more properly be dedicated to the construction of residential housing, in response to demand for new subdivisions around Palmerston North.

815. To inform our assessment of the appropriateness of the Freight Hub at a strategic and spatial planning level, David Murphy, the Council's Acting General Manager, Strategy and Planning has provided an overview of the strategic planning context in this area of the city, and how the Freight Hub proposal might align with that framework. His overview is summarised in a memorandum dated 15th June 2021, which is appended to this report at Appendix 1. We draw on the contents of this memorandum in our assessment below.
816. The NEIZ has been established since 2004. The rationale for rezoning this land for industrial purposes included that there was potential for connectivity to the Airport and NIMT, as well as to a new inter-regional road transport network located outside the urban area of Palmerston North. The relative lack of rural-residential and residential development was another determining factor, as was physical factors such as the topography, soil quality and ability to manage stormwater and flood risk. The proposed occupation of the NEIZ (for the purposes of the Freight Hub, which has many commonalities with an industrial land use) is therefore well aligned with the factors which led to the zoning of that land for industrial uses.
817. The Council participated in the multi-criteria analysis processes led by KiwiRail. The Council supported the preferred site because of the strong alignment with the city's strategic growth strategy (as set out in the Council's Spatial Plan and other strategic planning documents)⁷⁰². The Council's growth strategy includes plans to develop a multi-modal distribution hub in this area of the city, alongside the NEIZ and the airport.
818. In response to the submissions which consider the land is better suited to address the shortage of land for residential development, the Council considers sufficient land is available to be zoned and serviced to

⁷⁰⁰ Submission 72: Danelle O'Keeffe & Duane Butts

⁷⁰¹ Submission 47: Aaron P Fox

⁷⁰² See Appendix 1, para 29

accommodate predicted greenfield residential growth. That land is located at Kākātangiata (City West), Whakarongo and Aokautere. In the future, and if the Freight Hub is confirmed, we understand that the Council may consider rezoning land for residential development in the vicinity of Bunnythorpe. Such zoning would not be precluded by development of the Freight Hub.

iii. Impacts on supply of industrial land

819. KiwiRail state that they are not aware of any factors that would preclude the successful identification and rezoning of additional land to offset the increased uptake of the NEIZ as a result of the Freight Hub and on that basis, they consider it is unlikely that there will be any adverse economic effect⁷⁰³.

820. One submitter is concerned that the Freight Hub occupation of significant area of the NEIZ will reduce the availability of industrial land for other businesses looking to locate in the NEIZ⁷⁰⁴.

821. City View Objective 1 in the District Plan requires planning for industrial growth to proceed in a compact, orderly, and connected manner, avoiding uncontained urban expansion into the rural zone.

822. Our understanding is that while there may be a requirement to zone more industrial land in the future because of uptake of the NEIZ extension land by the Freight Hub, the Council considers sufficient land will be available in the vicinity of the NEIZ. We also note that when KiwiRail vacates their existing site this will release further land that could be suitable for light industrial or commercial uses⁷⁰⁵. We do not see the reduction in the supply of industrial land as a significant adverse effect of the NOR proposal.

iv. Land use zoning

823. The underlying zoning of the Freight Hub includes rural, residential and industrially zoned land.

⁷⁰³ February 2021 S92 Response, Attachment 8B s92 response – Economics, Section 3: Impacts of changes in land use due to the NOR, pg 10

⁷⁰⁴ Submission 72: Danelle O’Keeffe & Duane Butts

⁷⁰⁵ See Attachment 8b s 92 Response – Economics, Section 2 – Impacts of Freeing up land at the existing Freight Yard site

824. Several submissions⁷⁰⁶ have been made about the zoning of particular areas or properties, seeking clarification on zoning, opposing zoning, or requesting a particular change in zoning.

825. With respect to these submissions, the NOR process does not change the zoning underlying the designation extent, or that of surrounding areas. If the NOR is confirmed, the Council may consider zoning changes to surrounding areas in the future, to provide for industrial or residential growth stimulated by the Freight Hub. However, any zoning changes would be subject to a separate planning process.

v. Loss of productive land

826. The development of the Freight Hub will result in the loss of versatile land⁷⁰⁷. Seventy-five hectares of the land within the designation extent is currently being farmed. This equates to 47% of the overall land, comprised of 7 properties. Fifty-two hectares or 37% is in rural/lifestyle uses and vacant industrial land makes up 25 hectares or 16%⁷⁰⁸. KiwiRail state that the subdivision of rural land into smaller lifestyle blocks has already impacted on the productive potential of that land. KiwiRail's assessment is that the effects of the Freight Hub on productive land supply would be minor⁷⁰⁹.

827. Several submitters are concerned at the loss of productive land within the designation extent⁷¹⁰. Peter Gore and Dale O'Reilly⁷¹¹ note that as well as their own vegetable and livestock business, there are several other small farms within the designation extent.

828. The Ministry for Primary Industries is preparing a National Policy Statement for Highly Productive Land which will guide decision making on how highly productive land should be managed. This document is still under development, so is not material to this assessment. Under Objective 3-4 and Policy 3-5 of the One Plan, the Council is required to pay particular attention to the retention of Class I and II versatile soils for use as production land when

⁷⁰⁶ Submission 98: David Odering, Submission 46: Paul Linklater, and Submission 57: John David Bryan Austin & Rosaleen Mary Wapp

⁷⁰⁷ AEE, Section 9.14 Effects on Productive Land Supply

⁷⁰⁸ February 2021 s92 response, Attachment 8b s92 response – Economics, pg 8-9

⁷⁰⁹ AEE, Section 9.14 Effects on Productive Land Supply

⁷¹⁰ Submission 61: Peter Gore & Dale O'Reilly, Submission 66: Andrew Wotton, Submission 44: Mereti Taipana

⁷¹¹ Submission 61

providing for urban growth, in recognition that allowing urban expansion onto such soils adjacent to urban areas will reduce options for their future productive use, which is a cost to future generations⁷¹².

829. We note that a significant portion of the versatile soils (approximately 50ha)⁷¹³ has already been zoned for future industrial use. Palmerston North is somewhat constrained in that it is located on an alluvial plain with good quality soils all around it. Therefore, from an urban development point of view, it is hard to avoid city growth on versatile soils. Locating the Freight Hub immediately adjacent and within the existing industrial zone means that the take up of that productive land would not be ad hoc.

vi. Impacts on landowners existing access rights

830. Helen and Pita Kinaston⁷¹⁴ are concerned that access to their property and stock water will be compromised due to the location of the proposed Freight Hub stormwater pond adjacent to 824 Roberts Line.

831. KiwiRail will be required to provide alternative access arrangements for any neighbouring properties which are affected by the Freight Hub proposals. The details of these arrangements are likely to be resolved during the detailed design stage.

vii. Sustainability and carbon footprint

832. KiwiRail state that the Freight Hub will increase the volume of freight moved by rail through the region. This will assist to reduce carbon emissions, by reducing reliance on roads for the transport of freight⁷¹⁵.

833. Many submissions reflect on the benefits of a modal shift to rail, which include reducing New Zealand's carbon footprint, helping meet the country's climate obligations and prolonged longevity of the urban and rural transport network.

834. One submission⁷¹⁶ questions KiwiRail's statement that the Freight Hub might assist *'in mitigating the causes of climate change through the relative reduction in carbon emissions by reducing reliance on roads for the transport*

⁷¹² Horizons One Plan, Chapter 3, Section 3.7.2 Urban growth and rural residential subdivision on versatile soils.

⁷¹³ KiwiRail AEE, Section 9.14: Effects on Productive Land Supply

⁷¹⁴ Submission 27: Helen and Pita Kinaston

⁷¹⁵ AEE, Executive Summary, pg v.

⁷¹⁶ Submission 47: Aaron P Fox

of freight' and requests that this claim is weighed against the carbon emissions from construction. Another⁷¹⁷ notes that heavy vehicle traffic associated with freight distribution will limit KiwiRail's ability to meet their goal of a 25% reduction in carbon emissions. One submitter⁷¹⁸ seeks a thorough life cycle assessment of the proposed development, to evaluate its environmental impact over the next 100 years.

835. Section 6 of the RMA requires decision makers to have particular regard to the efficient use and development of natural and physical resources and to the efficiency of the end use of energy. Under the NPS UD, planning decisions should contribute to well-functioning urban environments, and such environments should support reductions in greenhouse gas emissions. However, the contribution of individual developments to the emission of greenhouse gases and to meeting national commitments to reduce carbon is not currently a matter to which the Council is required to have regard under the RMA.
836. A modal shift to rail and reduction in reliance on road transport for freight is consistent with the government's national transport policy, such as the New Zealand Rail Plan and GPS on Land Transport. This is a relevant other matter to be considered in the Council's recommendation on the NOR.
837. Taking this statutory and policy framework into account, we consider the Freight Hub proposal to be well aligned with national direction on rail transport and sustainability. If the Freight Hub is well integrated with existing and planned industrial areas, there is an opportunity to reduce heavy vehicle movements and therefore establish an urban environment which supports a reduction in greenhouse gas emissions.

9.15.4 Recommendation

838. No additional conditions are proposed.

⁷¹⁷ Submission 72: Danelle O'Keeffe & Duane Butts

⁷¹⁸ Submission 97: Anonymous

9.16 Other effects and issues raised in submissions

839. The following section addresses a range of other effects. These effects are likely to be more limited in nature, such that a light touch assessment is considered appropriate. The following effects and issues are addressed:

- a. effects associated with the storage, use and transport of hazardous substances;
- b. natural hazards;
- c. contaminated land effects on human health;
- d. water quality (surface water and groundwater);
- e. historic heritage and archaeology.

9.16.1 Key issues for assessment

840. The following issues are key issues for this assessment:

- a. **Storage, use and transport of hazardous substances:** there is potential for adverse effects on people, property, or the environment from the storage, use or transport of hazardous substances within the Freight Hub.
- b. **Archaeological and Historic Heritage:** there is potential for earthworks and physical changes to the existing environment to adversely affect archaeological or historic heritage areas or items.
- c. **Natural hazards:** there is potential for damage to people, property, and the environment from a seismic event, because the Freight Hub is in an active seismic area, in proximity to several significant faults with high recurrence intervals.
- d. **Contaminated land effects on human health:** there is potential for adverse effects on human health from the disturbance of contaminated land during soil disturbance or construction.
- e. **Effects on groundwater** – there is potential for adverse effects on groundwater because of discharges of contaminants to land that may enter water.

9.16.2 Submissions received on this topic

841. The following submitters made submissions on the above topics. The following submissions have been considered in this evaluation:

Use, storage or transport of hazardous substances

1	Sonia & Neal Watson
3	Mason Durie on behalf of Aorangi Papakainga
8	Fire and Emergency New Zealand (FENZ)
57	John David Bryan Austin & Rosaleen Mary Wapp
72	Danelle O'Keeffe & Duane Butts

Archaeology and Heritage

S61	Peter Gore & Dale O'Reilly
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Natural Hazards

S20	Horizons Regional Council
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Contaminants in soil – effects on human health

S94	MidCentral District Health Board (MDHB) Public Health Service
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Effects on ground water

S72	Danelle O'Keeffe & Duane Butts
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9.16.3 Analysis

i. Storage, use and transport of hazardous substances

842. Hazardous substances will be stored, used, and transported through the Freight Hub.

843. Five submitters are concerned about the proposed bulk liquid and chemical storage activities, what substances might be present and whether this poses a health and safety risk for nearby residents. FENZ are concerned about the ability for emergency services to access and fight fires within the Freight Hub.
844. Via the One Plan Policy 3-12, the Council is empowered to control land use for the purpose of preventing or mitigating any adverse effects of the storage, use, or transport of hazardous substances. The District Plan takes the approach that it is appropriate to impose more stringent requirements than the Hazardous Substances and New Organisms Act 1996 (HSNO Act) on major hazardous facilities⁷¹⁹, to minimise the potential for adverse effects on the environment or the community from large-scale or higher risk activities.
845. Section 14 of the District Plan seeks to prevent or mitigate adverse effects on property, the environment, and the health of residents from activities which manufacture, store, use or transport hazardous substances⁷²⁰, with consideration to be given to the design, management and location of hazardous facilities⁷²¹. Under Rule R14.6.1 in the District Plan, 'Major Hazardous Facilities' are discretionary activities⁷²². Policy 1.3 lists relevant matters for the assessment of such activities:
- a. a risk assessment addressing the information requirements in section 5.4(h) of the plan;
 - b. consideration of effects in the event of an accidental or unintentional release or loss of control of hazardous substances;
 - c. how such events can be prevented, remedied or mitigated through site and operational management plans and systems, monitoring and maintenance schedules, design and construction; and
 - d. the provision of emergency response plans.

⁷¹⁹ As defined by the District Plan, see Section 4: Definitions

⁷²⁰ PNCC District Plan, Section 14: Hazardous Substances, Objective 1

⁷²¹ PNCC District Plan, Section 14: Hazardous Substances, Policy 1.1

⁷²² The Freight Hub would qualify as a 'major hazardous facility' because diesel fuel will be stored in bulk on site (in excess of 50,000L) and there is also potential for storage of petrol to exceed the stated limits (100,000L). See s92 response: Attachment 5: Contaminated Land

846. KiwiRail was asked⁷²³ to provide a risk assessment addressing the information requirements in section 5.4(h) of the District Plan.
847. The risk assessment provided⁷²⁴ lacks detail as to how the various risks will be managed. There is no information on emergency management or how access will be provided for emergency services in the event of a fire. No information has been provided on the substances likely to be stored in the tank farm, or what their hazard risk profile will be. The response does not identify that the designation abuts the residential zone at the northern end and information provided on separation distances to these dwellings is inconsistent with other information⁷²⁵ which indicates that there may be dwellings within 50 metres from the site boundary, and therefore potentially within 100m of the fuel tanks. No rationale is provided as to why a 100m separation distance is suitable to mitigate this risk.
848. We therefore agree with submitters that there is insufficient information to evaluate whether the risks of accidental release or loss of control of hazardous substances, and the potential effects of this on the environment, can be adequately mitigated. KiwiRail largely relies on future compliance with the requirements of the HSNO Act, the Health and Safety at Work (Hazardous Substances) Regulations 2017 and the Health and Safety at Work (Major Hazardous Facilities) Regulations 2016.

ii. Recommendation

849. In the absence of appropriate detail, we are unable to form any recommendations as to whether the adverse effects on people, property or the environment will be prevented or mitigated in accordance with the requirements of Objective 1 and Policy 1.1 of the District Plan: Section 14: Hazardous Substances.

iii. Archaeological and Historic Heritage

850. KiwiRail has undertaken a Preliminary Archaeological Assessment⁷²⁶ which identifies that there are no registered historic places or recorded or known archaeological sites associated with pre – 1864 Māori occupation within the

⁷²³ s92 Request, December 2020

⁷²⁴ February s92 response: Attachment 5: Contaminated Land

⁷²⁵ Such as KiwiRail's s92 response on noise

⁷²⁶ Technical Report H

designation boundary⁷²⁷. KiwiRail considers the potential for discovery of unknown sites is low, and if any sites were uncovered, they would have low archaeological value. However, KiwiRail notes that further research and consultation may identify sites of moderate or high potential value⁷²⁸.

851. KiwiRail anticipate a moderate adverse effect on five built heritage sites, with a significant adverse effect anticipated on one house site, due to the potential association with the early pioneer Robert Volkerk⁷²⁹.
852. The NIMT has moderate archaeological potential due to the historical presence of a minor station at Bunnythorpe and future railway junction. While the potential for these historic uses to be located within the designation extent is low, if present, they would have high overall archaeological/heritage value, and their likely destruction would result in a significant potential adverse effect.
⁷³⁰
853. Peter Gore and Dale O'Reilly⁷³¹ are concerned about potential effects on heritage values, including the sections settled by the Gore and Major families, which have potential to be archaeological sites, the impact on the Glaxo factory and on the 'settlers hut', still standing on Section 16.9. The submitters would like to see the NOR modified to address effects on these features, alternatively they seek conditions to address these concerns.
854. Section 6(e) and (f) of the RMA are relevant to consideration of these effects, as are One Plan Objectives 2-1 and 6-3. Historic heritage is to be protected from activities that would significantly reduce heritage qualities⁷³². One Plan Policy 2-2 requires contractors to have clear procedures in place if wāhi tapu or wāhi tūpuna are discovered.
855. Under the District Plan, cultural heritage features of the City are to be preserved and enhanced⁷³³. Sites of cultural, historic and natural significance to tangata whenua are to be actively protected⁷³⁴ and the effects of development which could disturb or destroy the intrinsic cultural values

⁷²⁷ AEE Section 9.9 Archaeological and Historic Effects,.

⁷²⁸ See Section 9.9 Archaeological and Historic Effects, in the AEE.

⁷²⁹ See Section 9.9 Archaeological and Historic Effects, in the AEE.

⁷³⁰ See Section 9.9 Archaeological and Historic Effects, in the AEE.

⁷³¹ Submission 61

⁷³² Objective 6-3.

⁷³³ City View Objective 17

⁷³⁴ PNCC District Plan, Section 3, Objective 4

associated with an identified site or object are to be avoided, remedied or mitigated⁷³⁵.

856. The construction of the Freight Hub and in particular the levelling of the landforms will result in the loss of the historic features within the designation extent. We agree with the submitter that as a result, there will be adverse effects on heritage values. The District Plan requires that such effects are avoided, remedied, or mitigated.
857. An archaeological authority will be required under the Heritage New Zealand Pouhere Taonga Act 2014 to undertake the land disturbance works and any historic building demolition⁷³⁶. That authority will require a research strategy and archaeological management plan. Conditions attached to this authority should provide for the appropriate management of the effects.
858. We support KiwiRail's proposal to obtain an archaeological authority from Heritage New Zealand prior to commencement of earthworks, or alternatively to provide evidence that an authority is not required for the works. Where an area of the designation is not subject to such an authority, we agree an accidental discovery protocol should be in place. We recommend this should be prepared in consultation with Heritage New Zealand Pouhere Taonga. The protocol should also include the matters we recommend in section 9.5 of this report.

iv. Recommendation

859. Amend condition 32 as identified in section 9.5 and include Heritage New Zealand as a consultee during preparation of the accidental discovery protocol.

v. Natural hazard risks (excluding flooding)

860. KiwiRail has undertaken a high-level assessment of the geotechnical risks for the Freight Hub⁷³⁷. Lateral spreading and differential settlement could affect the structural integrity of buildings where a building straddles different soil types which settle differently in a seismic event. This is assessed as a high risk, but one

⁷³⁵ PNCC District Plan, Section 17, Policy 1.3.

⁷³⁶ Under the Heritage New Zealand Pouhere Taonga Act 2014 (HNZPTA) it is an offence to modify or destroy, or cause to be modified or destroyed, the whole or any part of an archaeological site, without the prior authority of Heritage New Zealand.

⁷³⁷ Technical Report D: Preliminary Geotechnical Assessment

that is mitigatable through design, localised ground improvement, or excavation and replacement of liquefiable material. Other risks include earthquakes and slips on constructed slopes, open water courses or the detention ponds, which can be mitigated through slope stabilisation or pond lining if required. KiwiRail consider these risks can be mitigated through the detailed design⁷³⁸.

861. Horizons Regional Council⁷³⁹ identify known active faults located to the south-east⁷⁴⁰ and north-west⁷⁴¹ of the designation. For those areas of the designation which consist of the low lying geologically recent alluvial material, the potential for liquefaction damage is moderate to high.
862. Policy 9-3 in the One Plan states that new critical infrastructure must not be placed in an area likely to be adversely affected by natural hazards, unless there is satisfactory evidence that the infrastructure will not be adversely affected by that hazard, will not cause any adverse effect on the environment in the event of such a hazard, is unlikely to increase the scale or intensity of a hazard event, and cannot reasonably be located in an alternative location. Policy 9-4 requires that new development in areas susceptible to natural hazard events avoids increasing risk to human life, property, or infrastructure, and if such risks cannot not be practicably avoided, they must be mitigated.
863. Under the District Plan, earthworks should not increase the risk posed by natural hazards⁷⁴² and built development should not take place on unstable land unless it can be demonstrated by a suitably qualified and experienced practitioner that the hazard can be avoided, remedied, or mitigated⁷⁴³. Any built development on areas subject to liquefaction should be located or designed in a manner that suitably addresses the hazard on the site.⁷⁴⁴
864. Some parts of the Freight Hub (i.e. the NIMT) will qualify as critical infrastructure and KiwiRail will be required to demonstrate that this infrastructure will not be

⁷³⁸ AEE, Section 9.8.1 Geotechnical Hazards

⁷³⁹ Submission 20

⁷⁴⁰ Pohangina Fault and Pohangina Anticline

⁷⁴¹ Taouui Fault, Rauoterangi Fault, Mount Stewart-Halcombe Fault and Feilding Anticline

⁷⁴² PNCC District Plan Section 6: General Rules, Policy 1.4

⁷⁴³ PNCC District Plan Section 22: Natural Hazards, Policy 2.5

⁷⁴⁴ PNCC District Plan Section 22: Natural Hazards, Policy 2.6

adversely affected by liquefaction, or result in an adverse effect on the environment.

865. The Freight Hub will require substantial earthworks, modification to waterways, and the construction of building and structures, which may need to be located on land prone to liquefaction. KiwiRail have not yet undertaken a site-specific investigation or assessment to determine the extent of the risks associated with this, or the necessary measures to avoid, remedy or mitigate these risks, as is required by the policy framework.

866. Due to the lack of detailed geotechnical information, we are not able to form a conclusion as to whether the risks can be avoided, remedied, or mitigated. Based on the information available, it appears that the primary risk is to infrastructure and assets within the Freight Hub and that this risk will be addressed by KiwiRail through the detailed design and meeting Building Act obligations.

vi. Recommendation

867. No conditions are recommended.

vii. Effects of contaminated or potentially contaminated land on human health

868. A Preliminary Site Investigation (PSI) has been completed for the Freight Hub which identifies two HAIL sites near the site - the Bunnythorpe cemetery and effluent treatment site. The PSI states that it is unlikely that the contaminants from these sites would cause contamination but recommends a detailed site investigation (DSI) is undertaken. Due to the size of the designation extent and historical agriculture land use, there may be areas of localised contamination, for example associated with sheep dips and/or spray races (HAIL A8) and rubbish burning pits/burn pads (HAIL G5). These activities present a potential risk to site workers during construction⁷⁴⁵.

869. The MidCentral District Health Board (MDHB) Public Health Service⁷⁴⁶ note the potential for unidentified contaminated sites and the need for adequate remediation prior to construction work. The MDHB support a DSI being undertaken in accordance with the Resource Management (National

⁷⁴⁵ Technical Report I: Contaminated Land Assessment.

⁷⁴⁶ Submission 94

Environmental Standards for Assessing and Managing Contaminants in Soil to Protect Human Health) Regulations 2011 (NES-CS).

870. We agree with the MDHB that a DSI would be an appropriate response to the findings of the PSI and note that KiwiRail have proposed conditions to this effect⁷⁴⁷. The DSI should take place before any soil disturbance or construction works commence on the site. Subject to the findings of the DSI, there may be a requirement for a resource consent under the NES-CS. We consider the requirements of the NES-CS consenting process would appropriately manage the potential effects of any existing historical contamination.

871. We support KiwiRail's proposed contaminated land conditions (29 and 30).

viii. Recommendation

872. Conditions 29 and 30 of KiwiRail's proposed conditions should be retained.

ix. Contamination of ground water

873. Activities at the Freight Hub will include storage of hazardous goods and potentially commercial refuelling.⁷⁴⁸ The Freight Hub will become a registered HAIL site under the NESCS Regulations, due to the potential for future contamination from these activities. There is also potential for contamination of soils during construction, arising from diesel or oil spills⁷⁴⁹.

874. Danelle O'Keffee and Duane Butts⁷⁵⁰ are concerned that expected and known contaminants may be found on the site and that subsequent operational activities may result in future contamination. They are concerned at the potential for groundwater contamination during construction and operation and that potential risks to private bores and the community water supply (via the PNCC water bore) have not been assessed⁷⁵¹.

875. Policy 5-6 in the One Plan states that discharges and land use activities must be managed in a way which maintains the existing groundwater quality (unless it is degraded, in which case it must be enhanced).

⁷⁴⁷ February s92 response – updated conditions

⁷⁴⁸ AEE, Section 9.11 Land Contamination Effects.

⁷⁴⁹ AEE, Section 9.11 Land Contamination Effects.

⁷⁵⁰ Submission 72

⁷⁵¹ Submission 72

876. KiwiRail have not provided an assessment of potential risks to groundwater, and the NOR does not identify whether or not regional resource consents will be required for discharges of contaminants to surface water, or for discharge of contaminants to land, which may enter water.
877. In response to a s92 request for further information on these potential risks⁷⁵² KiwiRail identified that no project specific ground investigation has been undertaken and there is limited existing information on the site. The potential for discharge to groundwater during construction and operation will be better understood once the underlying conditions have been investigated and an appropriate methodology developed. KiwiRail acknowledge that the Freight Hub may require consents for discharges of contaminants if compliance with Rule 14-28 cannot be achieved.
878. KiwiRail outline a number of potential methods to prevent groundwater contamination and consider these should maintain water quality in potential receiving environments and enable compliance with drinking water standards⁷⁵³. KiwiRail consider there will be minimal effects on groundwater recharge and that stormwater can be managed to provide for recharge.
879. Our understanding⁷⁵⁴ is that further assessment will be required, as localised reductions in shallow groundwater could potentially result in ground settlement and reduce surface water levels and flows. There may also be further investigation needed if detention ponds provide for groundwater recharge (including consideration of the potential volume and location of proposed stormwater discharge/infiltration), as inferred in the s92 response.
880. Because KiwiRail have not undertaken a ground investigation of the site it is difficult for us to have any certainty as to the scale of adverse effects or the effectiveness of the proposed mitigation. Effects on groundwater will be addressed through the regional council consenting process.

⁷⁵² See third s92 request, May 2021

⁷⁵³ See third s92 response.

⁷⁵⁴ This is based on a personal communication from Zoe Pattinson, Senior Hydrologist, GHD, 9th June 2021

10 Summary of Significant Effects

881. The above effects assessment addresses the potential effects of the Freight Hub. A wide range of effects has been identified. The following section does not address all of the effects but draws out what we consider to be the most significant positive and adverse effects.

10.2 Potentially Significant Positive Effects

882. The Freight Hub will create a number of positive effects on the environment. The most significant positive effects will be economic. The Freight Hub should provide a catalyst to stimulate growth in the freight and logistics sector, which in turn will lead to economic growth and employment opportunities. The regional hub model provides for increased handling capacity and efficiency of the rail freight transport network. These positive effects will contribute significantly to providing for the economic wellbeing of people and communities, with flow on benefits to wider community wellbeing. The economic effects will be experienced locally, regionally, and nationally, with local positive effects being the most significant.

883. The Freight Hub is well aligned with government objectives to facilitate a modal shift to rail and increase resilience to the freight transport network, which has wider regional and national benefits for safety, and transforming to a low carbon transport system that supports emissions reductions.

884. Achievement of these positive effects is heavily reliant on the Freight Hub being well connected and integrated with the wider transport network and with the other economic activities in the northeast of the city (e.g. the NEIZ and Palmerston North Airport). More work is needed to demonstrate how and when these integrations will be achieved, however the development of the freight hub in its proposed location is well aligned with local and regional strategic planning to develop an integrated, well-connected multi-modal freight and logistics centre in the north-east of the city.

885. The description of positive effects identified by KiwiRail are largely accepted, however Mr Vuletich's review⁷⁵⁵ identifies some differences of opinion in relation to the effect predictions arising from economic modelling.

10.3 Potentially Significant Adverse Effects

886. Based on our analysis and the reporting of the s 42A expert team, we have also identified potentially significant adverse effects of allowing the NOR. We have identified these as significant due to:

- a. the large scale of the effects and the fundamental changes to the characteristics of the environment;
- b. the nature and potential intensity of the effects; and
- c. the uncertain timing and long duration of the effects.

887. We consider the most potentially significant adverse effects are:

- d. effects of noise and vibration on sensitive receivers during construction and operation;
- e. social effects arising from disruption to communities, displacement of people and loss of amenity;
- f. effects on the safe and efficient functioning of the road network;
- g. loss of waterbodies (streams and wetlands) and their actual and potential values, including in relation to Te Mana o te Wai and natural character;
- h. effects on the relationship of Māori and their culture and traditions with their ancestral lands, water, sites, wāhi tapu and other taonga;
- i. visual effects arising from the introduction of large-scale buildings, structures and roads.

888. The above list includes effects where there is limited information on the scale, characteristics and intensity of the effects and/or the way in which those effects can be avoided, remedied or mitigated. Because KiwiRail's NOR only provides information in respect of a 'concept design only' and the separation

⁷⁵⁵ S42A Report: Economic Impacts, Section 1.2.

of regional consenting from the NOR, the level of information available has presented a challenging barrier to our ability to reliably predict the effects of allowing the requirement.

889. The effects are complex and interrelated and we are not confident that we have the 'full picture' of them individually and collectively at this stage of the process. Those gaps in understanding of how the effects will ultimately be quantified and managed has inhibited our ability to assess their potential to drive modifications to the extent and design of the Freight Hub.
890. We anticipate that some of the concerns we raise regarding these effects may well be addressed through the evidence exchange and hearing process, and therefore we are reluctant to provide a conclusive opinion or overall evaluation of the NOR at this stage.
891. We do consider, however, that the following measures will contribute significantly to avoiding, remedying or mitigating potential adverse effects:
- a. adopting stringent noise standards, along with off-site mitigation, or alternatively, by extending the designation boundaries;
 - b. developing a design framework with a set of agreed principles and outcomes, in consultation with mana whenua and the community, which the detailed design and mitigations must achieve;
 - c. providing for safe and efficient connections and access to the existing and future road network, including in and around Bunnythorpe, the NEIZ and the strategic road network;
 - d. strengthening the role of the CLF to enable it to influence the design, mitigation of effects and ongoing site management;
 - e. facilitating the active and meaningful participation of tangata whenua in all relevant aspects of the Freight Hub design, implementation and ongoing management, including, importantly, in relation to all matters relating to freshwater management;
 - f. collaborating with key stakeholders, including through the RNIP and potentially the NEIZ user group, if adopted by KiwiRail.

892. This is not a complete list of recommended conditions and mitigations. A full summary of those recommendations is set out in the Summary of Effects and Recommendations Table which accompanies our report.

11 Consideration of alternatives

893. Section 171(1)(b) requires consideration of whether “adequate consideration” has been given to alternative sites, routes or methods of undertaking the work if the requiring authority does not control the land, or the work is likely to have significant adverse effects on the environment. Both triggers are engaged here, suggesting that a careful consideration of alternatives is warranted.

894. KiwiRail has undertaken an evaluation of alternative sites, which is summarised in Volume 2 of the NOR. This evaluation included an MCA and decision conferencing process on the identified options. In summary, that analysis appears to be comprehensive, and we are of the view that this represents an adequate consideration of the alternative sites. As discussed at section 9.x, some submitters consider that the selected location is less suitable than some of the alternatives. However, the test is not whether this is the most suitable site, but whether an adequate assessment has been undertaken, and we consider there has. We understand that the enquiry is to be on the process, not the outcome.⁷⁵⁶

895. While we have concluded that adequate consideration has been given to alternative sites, there are some areas where we consider further explanation or information is warranted in relation to alternative methods:

- a. The MCA process records potential mitigation for adverse effects of the shortlisted sites. One of the mitigation methods proposed was to extend the designation to provide an effects buffer to neighbouring properties.⁷⁵⁷ It is not documented whether this potential alternative configuration of the NOR was given further investigation or why expanding the boundaries of the NOR in this location to assist with the control of noise effects was apparently discarded. This should be explained and is particularly important because:

⁷⁵⁶ *Boulder Trust v New Zealand Transport Agency* [2015] NZ EnvC 84.

⁷⁵⁷ Appendix F5 MCA Noise and Vibration Assessment, Section 6: Mitigation

- i. the Acoustic Assessment identifies that there could be significant adverse noise effects over a relatively large footprint;⁷⁵⁸
 - ii. Mr Lloyd identifies that the existing land use planning rules over land surrounding the designation will not appropriately respond to the presence of the Freight Hub. This potentially allows further development of sensitive activities in close proximity to the Freight Hub where they may experience more than minor adverse effects. The restrictive effect of a designation over significantly affected land would have addressed that issue;
 - iii. An effects buffer is a potential method for the project that could be effective in mitigating a range of effects, including noise, vibration, dust, glare and visual effects. This would mean effects generated by the Freight Hub would be contained within the designation.
- b. The impact of the Freight Hub on existing activities and functionality of the NEIZ was considered during the MCA process. It was identified that mitigation was required to avoid conflicts with movements generated by existing firms in the NEIZ. The MCA Economic assessment records that "potential mitigation measures are currently being investigated". Relying on these potential mitigation measures, the assessment for the selected site was revised to improve the scores.⁷⁵⁹ It is not clear from the NOR documentation what the mitigation measures were that improved the proposed site's score, how they were considered, or whether they have been integrated into the proposal. This should be explained.
 - c. CEDA and the Central New Zealand Distribution Hub Stakeholder Group have proposed alternatives for connections between the Freight Hub and the NEIZ. Given the benefits of integrating these symbiotic land uses, and the potential to minimise traffic on public roads, direct connection would likely offer an alternative that merits consideration.

⁷⁵⁸ Technical Report D: Acoustic Assessment pg 35.

⁷⁵⁹ Appendix F12 MCA Economic Assessment, Assessment Template – Economics Addendum 1.

- d. As Ms Fraser identifies, there are several alternative methods for integrating the Freight Hub with the road network identified through the MCA process, which do not appear to have been adequately considered as part of the ITA.⁷⁶⁰
- e. Given the extensive level of proposed modification to existing waterbodies, alternatives to piping the watercourses within the designation extent have not been adequately considered.

896. Generally, we consider that KiwiRail has demonstrated that it has considered alternatives through its site selection process. There are nevertheless specific gaps or deficiencies in the information on the matters identified above. In our opinion, it is appropriate for KiwiRail to demonstrate its consideration of these matters through its evidence.

12 Achieving the objectives of the Requiring Authority

897. Under s 171(1)(c) of the RMA, when considering the effects of the NOR, particular regard must be had to “whether the works and designation are reasonably necessary for achieving the objectives of the Requiring Authority for which the designation is sought”.

898. We consider this with respect to KiwiRail's stated objectives.

To increase its operational capacity to efficiently accommodate projected regional and national freight growth and support wider regional development.

899. We agree with the explanation of why the Freight Hub is needed to increase operational capacity as set out in Section 10.3.1.1 in the AEE. Mr Than identifies in his evidence that the Freight Hub concept plan is also likely to improve container handling and throughput.⁷⁶¹ The chosen location has the potential to support wider regional development, subject to achieving appropriate integration, as discussed below.

⁷⁶⁰ S42A Report: Traffic and Transport, Section 7.18.

⁷⁶¹ S42A Report: Railway track design, construction and operation, Executive Summary.

900. We agree that the Freight Hub is reasonably necessary to achieve this objective.

Enable rail to be integrated with, and connected to, other transport modes and networks.

901. This objective only seeks integration and connection of the rail network to be enabled, not that the quality or level of integration is improved. The current Freight Yard already achieves this objective.

902. Based on the evidence of Ms Fraser and Mr Vuletich, the Freight Hub will enable rail to be connected to other modes and networks, but not always in an efficient way⁷⁶². We consider that sub-optimal integration would risk undermining KiwiRail's other two objectives for the project.

903. Given that the objective is already achieved by the current Freight Yard, we do not consider the Freight Hub is reasonably necessary to achieve this objective.

Improve the resilience of the regional and national freight transport system over time.

904. KiwiRail has demonstrated that the capacity and wider network limitations at the current yard are likely to impact the resilience of the regional and national freight transport system over time. The proposed Freight Hub will provide flexibility for changes in freight transport technology and freight demand and characteristics.

905. Considering KiwiRail's stated objectives in totality, we consider that the Freight Hub project is reasonably necessary.

906. However, we consider that the extent to which the Freight Hub project achieves its objectives is capable of some improvement through careful design and in reliance on appropriate conditions.

13 Part 2 Consideration

907. We have turned our minds to the relevant purpose and principles statements of Part 2 of the RMA while undertaking our assessment. This section provides a

⁷⁶² S42A Report: Economic Impacts, sections 4.3 and 6; and S42A Report: Traffic and Transport, sections 7.3, 9.7 and 9.8.

summary of our consideration of Part 2 in terms of where we are currently in the process.

908. Given the uncertainty in the effects and measures to address them, we consider it is premature to be able to draw a conclusion in relation to achieving the outcomes of Part 2 and the sustainable management purpose of the RMA. In terms of s 5, we agree that there are significant benefits to economic and community wellbeing for Palmerston North, the region, and nationally, that would result from allowing the NOR. However, this is likely to come with potential adverse impacts on community wellbeing (particularly in and around Bunnythorpe) and with an uncertain impact on Māori cultural wellbeing. The Freight Hub will assist future generations to provide for their economic needs, however there is uncertainty as to whether the adverse effects will be avoided, remedied or mitigated and there is significant uncertainty as to whether the proposal will safeguard the life-supporting capacity of water and ecosystems in and around the site.

909. In relation to s 6 matters:

- a. It is unlikely that the proposal will preserve the natural character of wetlands, rivers and their margins, recognising that these matters will require subsequent consideration by the regional council.
- b. We do not yet have a complete understanding of the presence and significance of habitats of indigenous fauna, particularly wetlands.
- c. Due to the limited involvement of tangata whenua to date we are not yet clear whether the relationship of Māori with their cultural and traditions with the site and surroundings will be provided for.
- d. The information on how the significant risks from natural hazards will be managed is still conceptual and it is likely through detailed design that these risks will be addressed.

910. In relation to s 7 matters:

- a. Kaitiakitanga may be provided for as a result of ongoing discussions between KiwiRail and tangata whenua and proposed conditions to establish a mana whenua framework.

- b. The CLF is a potential mechanism for the community and KiwiRail to exercise stewardship.
- c. The proposed location, being adjacent to an industrial area and forming an extension to the current urban area provides for the efficient use of existing physical resources and the loss of productive soils is appropriate given the geophysical setting of Palmerston North city.
- d. A modal shift to rail represents an improvement in the efficiency of the end use of energy required for the movement of freight.
- e. The Freight Hub will adversely impact on the amenity of the receiving environment, even after mitigation, therefore those amenity values will not be maintained or enhanced.
- f. The intrinsic values of ecosystems in particular those associated with surface waterbodies are likely to be diminished.
- g. The Freight Hub is unlikely to maintain and enhance the quality of the environment because of the scale, characteristics and intensity of the effects that will extend beyond the boundary; and the contrast of these factors with the existing environment.
- h. There are finite features of the environment which will be lost, such as productive soils, natural wetlands and streams.
- i. The effects of climate change can be taken into account through the comprehensive approach to stormwater management.
- j. The Freight Hub enables the extension of electrification of the rail network.

911. In relation to s 8:

- a. Tangata whenua have had a limited role in the design of the Freight Hub to date. We consider that it is important for applying the Treaty principles that tangata whenua are able to participate more actively in determining the matters that affect their interests and values. We understand that KiwiRail is in discussions with tangata whenua and we anticipate that they will provide an update on this in their evidence.

At that point the Panel will have a better appreciation of how tangata whenua wish to be involved in the process and how KiwiRail intend to provide for this in their role as requiring authority.

14 Lapse period

912. KiwiRail request a 15-year lapse period for the reasons set out at Section 6.4 of the AEE.
913. Several submissions⁷⁶³ comment on the proposed lapse period of 15 years, stating that KiwiRail has provided no justification as to why this length of time is needed, and that this exposes residents and the community to a long period of uncertainty. A lapse period of no more than 5 years is requested by many submitters.
914. We agree with submitters that KiwiRail has provided insufficient justification for a 15-year lapse period. Forty-two land acquisitions are a significant number, but it is by no means unusual for a designation in New Zealand. Extensive site investigations will be required, but the Design, Construction and Operation Report indicates that regional consents and detailed investigations can be completed in a period of 3.5 years.⁷⁶⁴
915. We consider this lapse period is too long, creating prolonged uncertainty that has an impact on:
- a. investment decisions – Council's economic experts say an extended period of uncertainty will defer capital investment and business growth until there is some certainty around the Freight Hub's construction⁷⁶⁵;
 - b. the community - creating stress and anxiety around private property investment and relocation decisions;
 - c. the PNITI roading programme and how this might be integrated with the Freight Hub;

⁷⁶³ Submission 59: Joanne K Whittle, Submission 77: William J Bent, and Submission 61: Peter Gore & Dale O'Reilly.

⁷⁶⁴ Technical Report A, Section 4.2 Indicative Construction Programme.

⁷⁶⁵ S42A Report: Economic Impacts, Section 5.4

- d. planning and investment in urban infrastructure and planning for city growth.
916. If the NOR is confirmed, we recommend that the lapse period is reduced to ten years to reduce uncertainty and enable the Council, affected landowners and businesses to plan for a future environment that includes the Freight Hub. We appreciate that KiwiRail may require a period of at least 3.5 years to undertake detailed site investigations and obtain regional consents. Therefore, we have not recommended a five year lapse period, as requested by submitters, on the basis that this timeframe may be unattainable.

15 Assessment of Draft Conditions

917. KiwiRail put forward a set of proposed conditions with the NOR, and a set of revised conditions was appended to the s92 response.⁷⁶⁶
918. As set out earlier in this report, the Freight Hub has been developed to 'concept design' stage only, along with "*indicative locations of access roads, noise mitigation structures, stormwater ponds and landscaping*".⁷⁶⁷ KiwiRail asserts that this information and a "*reasonably likely construction methodology*" inform the identification of an "envelope" of actual and potential effects.
919. As we have discussed throughout this report, we are generally unconvinced that clear and reliable effect parameters have been established in relation to key matters. We are therefore doubtful that the 'effects envelope' is an appropriate description of the information in the NOR and proposed conditions. Where appropriate, our recommendations for conditions generally align with the views of submitter Joanne Whittle who observed the need for specific, monitorable and enforceable conditions to ensure that effects are mitigated to a level that will be acceptable. Where it has been possible to identify limits or standards that can (and should) be met (for example, in relation to noise), our approach has been to recommend they be imposed, despite the uncertainty of the available information.

⁷⁶⁶ Appendix B – Updated NOR Conditions for s92 Response.

⁷⁶⁷ AEE, Section 6.5 Outline Plan of Works.

920. The management plan and outline plan process, as provided for by Part 8 of the RMA, are not the appropriate place for defining the effects or establishing the extent of the effects envelope. Those elements should provide for input from communities and stakeholders. This input is not available through the management plan and Outline Plan processes.
921. Two submitters⁷⁶⁸ raise concerns that the community is unable to comment on management plans, despite their apparent importance to management of impact on the community. The submissions request that the management plans are available for public scrutiny before a decision is made on whether to approve the designation. Waka Kotahi NZ Transport Agency⁷⁶⁹ raises a similar concern regarding the preparation of management plans within the outline plan(s) process, and the requiring authorities' ability to reject changes requested by the Council. Waka Kotahi seeks changes to the conditions that would *'avoid KiwiRail having sole discretion over the decision made with respect to effects on the transport network during construction and operation'*.
922. Given the uncertainty about the final design and effects of the Freight Hub at this stage, we agree that it would be appropriate to provide for affected parties to be given meaningful opportunities to have input into the design and development of any associated mitigation strategies. While the conditions cannot be used in such a way as to prevent the requiring authority from seeking outline plan approval, we recommend amendments to the conditions to ensure that opportunities are given to the community and stakeholders to influence the production and finalisation of management plans, via the CLF and other conditions.
923. In relation to the management plan approach, if management plans are to be used, they should be scoped using clearly established statements of what the management plan is intended to achieve. This will require careful drafting of conditions and, in some cases, further information from KiwiRail through evidence.
924. We acknowledge that the Outline Plan process provides an opportunity for the Council to give recommendations regarding the avoidance, remediation,

⁷⁶⁸ Submission 47: Aaron P Fox, and Submitter 59: Joanne K Whittle.

⁷⁶⁹ Submission 65: Waka Kotahi NZ Transport Agency.

or mitigation of adverse effects of the Freight Hub that relate to the detailed design and construction methodology. Nevertheless, leaving all matters to management plans and subsequently an outline plan is not appropriate in our opinion when clear standards (as conditions on the designation) can put an upper limit on permissible effects.

925. For the reasons given above, it is our opinion that significant revision will be required to the conditions offered by KiwiRail to capture specific recommendations within this report and to align with the general approach to conditions and effects management that we have outlined above. This will be a detailed exercise, and for reasons addressed throughout this report, we are still expecting to receive information from KiwiRail through evidence, and from submitters, which may influence the drafting of these conditions.
926. As such, in substitution for fully drafted recommended conditions, we have invested our time into developing a series of particular recommendations for conditions, in which we identify the outcomes that we consider the conditions should achieve. We provide this as a companion document to this Report (Effects and Recommendations Summary Table). This document is provided subject to the acknowledgement that it is likely to require updating and amendment following the receipt of evidence from other participants in this process.
927. In preparing this table, we have taken into account KiwiRail's draft conditions, recommendations in the NOR documentation, recommendations of the Council's technical experts and submissions. We have used the set of conditions provided in KiwiRail's first s 92 response as a base document. Accordingly, where our recommendations do not expand upon or differ from the base document, it should be assumed that those conditions offered by KiwiRail are accepted as appropriate, subject to any differences that might arise through detailed drafting.
928. The intention of reporting officers is to prepare a draft set of conditions in accordance with the recommendations in a timely manner before the commencement of the hearing, subject of course to any further directions from the Panel.



Anita Coplestone



Phillip Percy

18 June 2021

16 Appendix A – Memorandum of David Murphy

MEMORANDUM

TO: ANITA COPPLESTONE, KAHU
ENVIRONMENTAL

FROM: DAVID MURPHY, ACTING CHIEF PLANNING
OFFICER, PALMERSTON NORTH CITY
COUNCIL

SUBJECT: **KIWIRAIL NOTICE OF REQUIREMENT
REGIONAL FREIGHT HUB: STRATEGIC
PLANNING CONTEXT**

DATE: 15 JUNE 2021

1. The purpose of this memorandum is to provide a high-level summary of the Palmerston North strategic planning context as it relates to the KiwiRail Notice of Requirement (NoR).

2001 Industrial Land Review & North East Industrial Zone

2. The North East Industrial Zone (NEIZ) was established in 2004 to enable large floor-plate freight and distribution activities and was informed by a comprehensive industrial land review completed in 2001/02. Key rationales supporting the identification of this land for rezoning included:
 - a) The potential for connectivity to the Palmerston North Airport and North Island main trunk railway.
 - b) The potential for connectivity to a new inter-regional road transport network located outside of the urban area of Palmerston North.
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- c) The relative lack of rural-residential and residential development in the area that supported 24-7 operation of large floor-plate freight and distribution activities, noting most older industrial areas in Palmerston North have restrictions on service and loading hours due to surrounding residential development.
- d) The topography, soil quality and ability to manage stormwater and flooding risks.

2007 Joint Industrial Land Review, PNCC / MDC Boundary Change & NEIZ Extension Area

- 3. Following the rezoning of the NEIZ in 2004, a further industrial land review was completed in 2007, this time in partnership with Manawatū District Council (MDC). The 2007 Joint Industrial Land Review recommended an extension to the NEIZ for large floor-plate freight and distribution activities, as well as recommending Longburn for wet industry and Feilding for agri-business activities. The schematic from the 2007 Joint Industrial Land Review included as **Appendix 1** of this memorandum is a useful spatial summary of the recommendations of that work. It is evident from this schematic that the land subject to the KiwiRail NoR has been identified by PNCC and MDC as a preferred location for large freight and distribution activities for over a decade.
- 4. The key rationale for recommending an extension to the NEIZ were largely the same as those first identified as part of the 2001 industrial land review. The NEIZ extension would also enable Palmerston North and Manawatū to build on the success of the initial development at the NEIZ. Longburn was preferred for wet industry given its proximity to the Palmerston North wastewater treatment plant at Totara Road. The NEIZ is less suitable for wet industry given the capacity constraints of the wastewater network that traverses the city back to Totara

Road. Feilding was deemed suitable for agri-business given the strong concentration of existing business in Feilding that specifically supports the agriculture sector.

5. At the time the 2007 Joint Industrial Land review was completed, the land identified for an extension of the NEIZ was located within land administered by MDC, as was Longburn. Both locations required PNCC infrastructure in order for development to occur.
6. The recommendations of the 2007 Joint Industrial Land Review, together with ongoing challenges associated with planning and delivering a strategic road transport network to service the growth of Palmerston North, lead to PNCC and MDC collaborating on a boundary change process that was confirmed in 2012. The boundary change incorporated Longburn, Bunnythorpe and a significant area of rural land to the north of the urban area of Palmerston North into PNCC's jurisdiction, including the land subject to the KiwiRail NoR.
7. Following the completion of the 2012 boundary change process, PNCC completed a significant extension to the NEIZ in 2015/16 as part of the PNCC Sectional District Plan Review. District Plan Change 15E successfully rezoned 126ha of rural land that was formerly within MDC's jurisdiction to NEIZ (known as the NEIZ Extension Area within the District Plan), including the land zoned NEIZ that is subject to the KiwiRail NoR.

Palmerston North Spatial Plan

8. Following the completion of District Plan Change 15E and a variety of other strategic planning initiatives within Palmerston North, PNCC turned its attention to bringing the various threads together via its first Spatial Plan. The Spatial Plan was prepared, consulted on and confirmed as part of the 2018 Long Term Plan process under the LGA 2002. The Spatial Plan specifically identified and

referenced 'Regional Ring Road, Rail, Airport & multi-modal infrastructure to enable industrial growth: Longburn & North East Industrial Zone (NEIZ)'. An updated Spatial Plan has been prepared as part of the 2021 Long Term Plan process that identifies an expanded multi-modal distribution hub alongside the airport and NEIZ. The 2018 and 2021 Spatial Plans are included as **Appendices 2** and **3**, respectively.

Regional Spatial Plan

9. PNCC also led the development of the Manawatū-Whanganui region's first Regional Spatial Plan during 2020/21. The Regional Spatial Plan identified the region's five big initiatives. The Regional Freight Ring Road and Central NZ Freight Hub were identified as priorities 1 and 2 respectively. The Regional Spatial Plan was made available to the public by all councils within the region as part of their respective 2021 Long Term Plan processes under the LGA 2002. One of the key drivers of the regional spatial plan was to articulate the region's priority investments to Government and other decision makers. The 2021 Regional Spatial Plan is included as **Appendix 4**.

Central NZ Distribution Hub Strategy (Draft)

10. Following the lodgement of the KiwiRail NoR, PNCC turned its attention to a collaborative planning exercise in partnership with CEDA¹ that sought to ensure the KiwiRail Regional Freight Hub contributed to the development of a nationally-significant, integrated multi-modal freight and distribution hub that offered more than just co-location benefits for freight operators, if confirmed. For example, the ability for operators to move freight efficiently between the airport, NEIZ and Kiwi Regional Freight Hub. This work culminated in CEDA

¹ PNCC and MDC Economic Development Agency

preparing a draft Central NZ Distribution Hub Strategy which anticipates the positioning of Palmerston North as the key freight and distribution hub for central New Zealand.

11. The work anticipated by the draft Central NZ Distribution Hub Strategy involves four workstreams:

- a) Identity.
- b) Master planning.
- c) Advocacy.
- d) Accelerated Investment.

12. The collaborative planning exercise undertaken in partnership with CEDA also resulted in a joint submission from the Central NZ Distribution Hub Steering Group. A key issue identified as part of the collaborative planning exercise has been landowners and operators seeking to ensure the KiwiRail Regional Freight Hub and surrounding infrastructure is able to protect the opportunity for “level 2” freight operator within the NEIZ or Palmerston North Airport to access the rail infrastructure being delivered by KiwiRail. This would mean “level 2” operators could decide to locate within the airport, NEIZ or KiwiRail Regional Freight Hub, whilst continuing to benefit from the rail infrastructure. “Level 1” operators are likely to need to be located within the KiwiRail Regional Freight Hub, while level 3 operators do not require rail access, but would benefit from co-location.

13. The master planning workstream identified within the draft Central New Zealand Distribution Hub Strategy will be a collaborative planning exercise lead by PNCC and address matters such as:

- a) A further review of the capacity of the NEIZ.

- b) Integrated stormwater management.
- c) Housing growth at Bunnythorpe to accommodate increased employment associated with the freight hub.
- d) Efficient transport connections between the Palmerston North Airport, NEIZ, KiwiRail Regional Freight Hub, Bunnythorpe and the proposed Regional Freight Ring Road.

14. The master planning workstream will involve PNCC, MDC, Iwi, CEDA, Waka Kotahi, KiwiRail, Horizons Regional Council, landowners and operators and other Government departments including Kāinga Ora and the Housing and Urban Development Authority.

15. It is anticipated that the draft Central New Zealand Distribution Hub Strategy will be finalised by the time of the KiwiRail NoR hearing.

Industrial Land Supply

16. Council completed its first housing and business development capacity assessment under the National Policy Statement on Urban Development Capacity (2016) in May 2019. The development capacity assessment was completed at approximately the same time as KiwiRail was investigating sites options for the Regional Freight Hub, but prior to the preferred site being confirmed by KiwiRail.

17. The executive summary of the development capacity assessment includes a number of relevant observations and conclusions regarding the supply of land for large floor-plate industrial development, including the following:

In summary, the City has 212-hectares of land zoned for large floor-plate industrial development. Of this 212ha:

- *In the NEIZ 51.7ha of land is developed or has been purchased with the intention to develop and is not available to the market; and*
- *In the Extension Area, 60ha is anticipated to be developed by KiwiRail, 8.3ha is currently being subdivided and developed, and approximately 30ha is under contract.*

Approximately 150ha of land of the 212ha of land zoned for large floor-plate development has been developed or has been secured with the intention to develop in the short to medium-term (up to 10 years). The ongoing concern is that the emerging land ownership concentration will remain relatively high.

The value of major development and infrastructure projects in the Region over the period to 2030 is projected at \$2.5 to \$3.0 billion. This is providing the market with confidence to invest in an area that is emerging as a major inter-modal road, air and rail freight hub located in the central North Island.

June 2018 data shows a low level of vacancy in existing building stock, demand for industrial large-scale development is strong, supply is scarce and land value has grown. Given the factors discussed above, it is likely that capacity issues for large floor-plate industrial land is likely to arise in the next 10-15 years (medium to long-term) rather than beyond the 20-year horizon (long-term) projected in the Capacity Assessment.

18. Taking into account the conclusions of the development capacity assessment and the confirmation of KiwiRail's preferred site for the Regional Freight Hub, PNCC has determined that there is a need to formally review the NEIZ development capacity. This work will occur as part of the broader master planning exercise signalled within the Central New Zealand Distribution Hub Strategy.

Residential Growth Planning

19. Submissions received on the KiwiRail NoR identify that there is a shortage of land for housing in Palmerston North and the land subject to the KiwiRail NoR should be made available for residential growth.

20. There is strong demand for housing in Palmerston North and this is projected to continue for the next decade or longer. PNCC has a well-settled residential growth strategy that can accommodate projected growth over the next 30 years, without requiring the land subject to the NoR.
21. The major greenfield residential growth locations are detailed at a high-level on the Palmerston North Spatial Plan, and include:
- a) Aokautere
 - b) Whakarongo
 - c) Kākātangiata
 - d) Ashhurst
22. Residential growth will also be accommodated within the existing urban area. Work is also planned to investigate housing opportunities at Bunnythorpe as part of the wider central New Zealand Distribution Hub Master Planning exercise.
23. The current KiwiRail railyard at Tremaine Avenue is zoned Industrial. Given the constraints associated with heavy traffic accessing the railyard, there is a potential that parts of this land are rezoned residential and redeveloped for housing as KiwiRail transitions to the Railway Road / Bunnythorpe site, should the NoR be confirmed.

Strategic Transport Planning

24. Palmerston North stakeholders and PNCC have had a long-held plan to deliver a Regional Freight Ring Road around the city in order to remove heavy traffic from the urban area and provide access to the NEIZ, Palmerston North Airport, Linton Army Camp, Massey University, FoodHQ and planned residential growth.

25. The Regional Freight Ring Road planning has had to navigate various reforms of transport agencies and the varying strategic funding priorities of different Governments. The two most significant strategic transport planning exercises undertaken in the last decade are:

a) The 2010 Joint Transport Study completed by NZTA, Horizons Regional Council, MDC and PNCC.

b) The 2021 Waka Kotahi NZTA Palmerston North Integrated Transport Investment (PINITI) Project Network Options Report that was approved by the Waka Kotahi Board in the first quarter of 2021.

26. Both the 2010 Joint Transport Study and 2021 PNITI Network Options Report were informed by a well-settled land-use strategy that included multi-modal industrial growth at the NEIZ, wet industry at Longburn and major greenfield residential growth at Kākātangiata (City West), Whakarongo & Aokautere. Both documents included spatial representation of the Regional Freight Ring Road, including key connections to the NEIZ and the land now proposed for the KiwiRail Regional Freight Hub. The key outcomes of both documents have also been supported in the various three-yearly iterations of the Regional Land Transport Plan (RLTP), most recently as part of the 2021 RLTP. The spatial representation of the Regional Freight Ring Road, as depicted in the 2010 Joint Transport Study and the 2021 PNITI report, are included as **Appendices 5** and **6**, respectively.

Chronological Summary of Strategic Planning Context

27. Below is a chronological summary of the strategic planning context discussed above.

a) 2001 Industrial Land Review.

- b) 2004 Rezoning of the NEIZ.
- c) 2007 Joint Industrial Land Review.
- d) 2010 Joint Transport Study.
- e) 2012 Boundary Change.
- f) 2015 Extension of the NEIZ.
- g) 2018 Palmerston North Spatial Plan.
- h) 2021 Palmerston North Spatial Plan.
- i) 2021 Regional Spatial Plan.
- j) 2021 Palmerston North Integrated Transport Investment Network Options Report.
- k) 2021 Draft Central New Zealand Distribution Hub Strategy.

Conclusion

28. The KiwiRail NoR is not an unexpected outcome given city's strategic planning journey over the last 20 years. The NoR is strongly aligned to key components of the city's strategic direction.

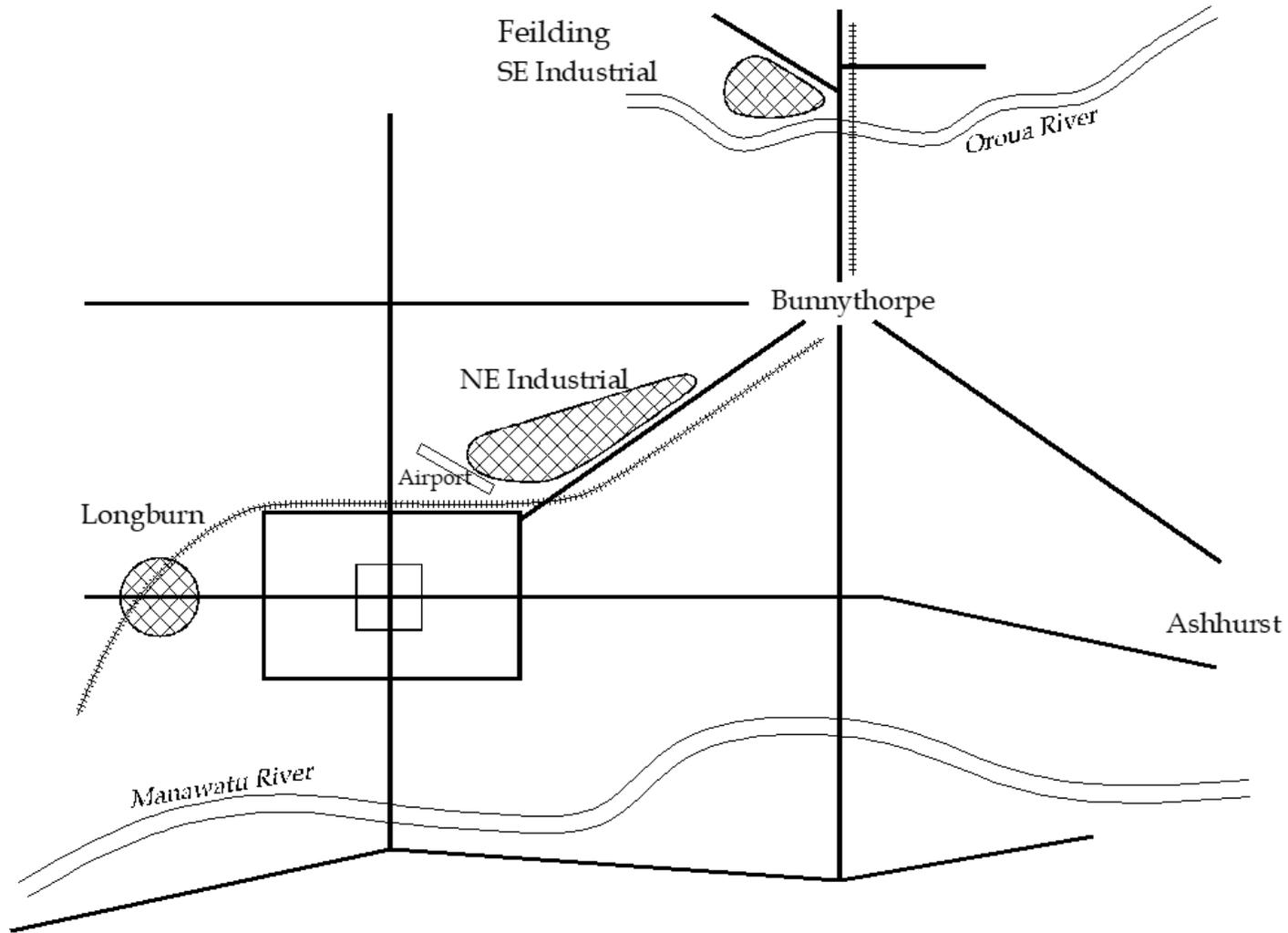
29. PNCC participated in the multi-criteria analysis processes lead by the KiwiRail prior to the lodgement of the NoR. Given the strong alignment to the city's strategic direction, PNCC supported the identification of the site subject to the NoR as the preferred option, subject to a full assessment under part 8 of the RMA 1991.

David Murphy
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Palmerston North City Council

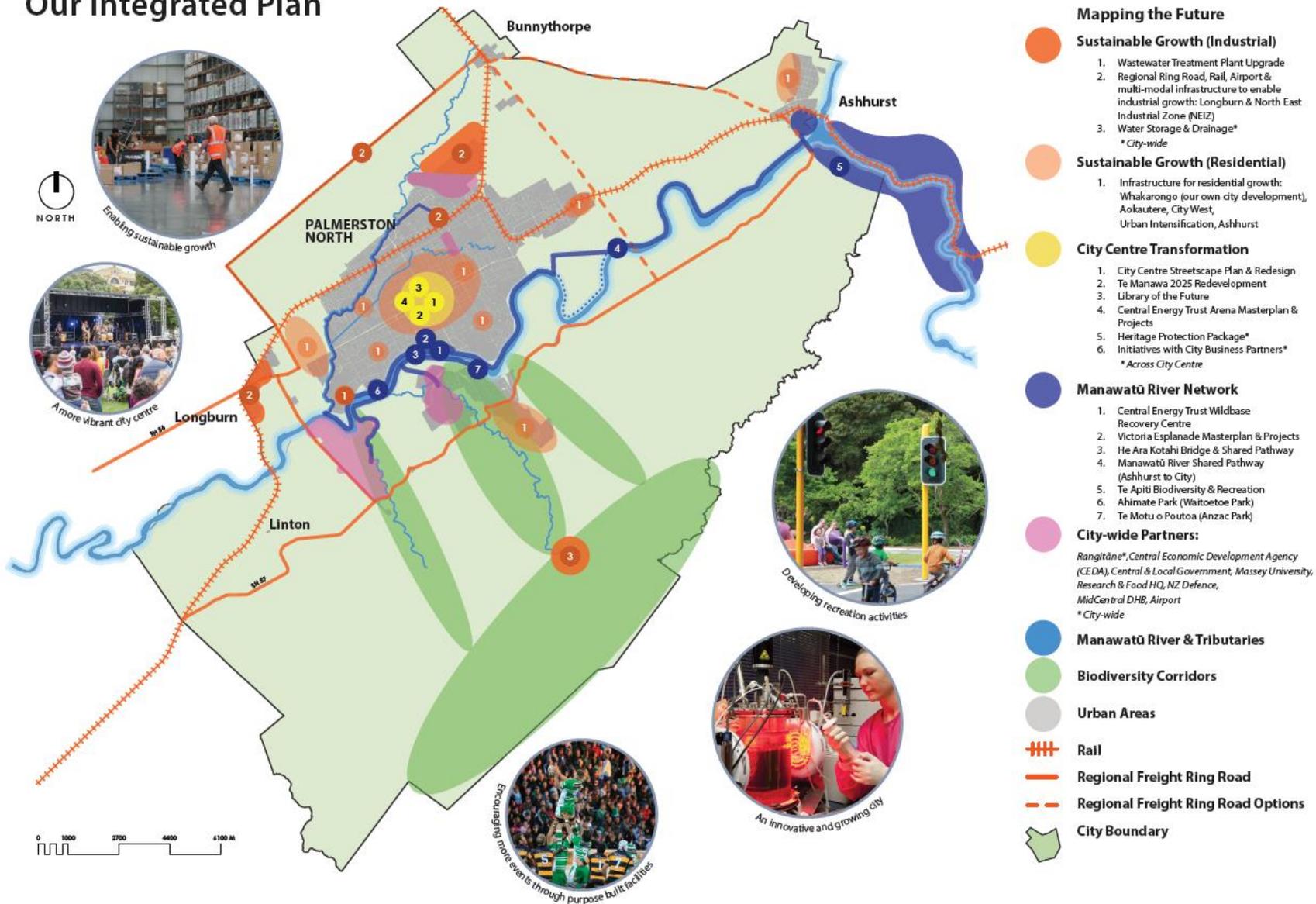
Appendices

1. 2007 Joint Industrial Land Review schematic
2. 2018 Palmerston North Spatial Plan
3. 2021 Palmerston North Spatial Plan
4. 2021 Regional Spatial Plan
5. 2010 Joint Transport Study extract
6. 2021 Palmerston North Integrated Transport Investment Network Options Report extracts - short, medium and long-term plan.

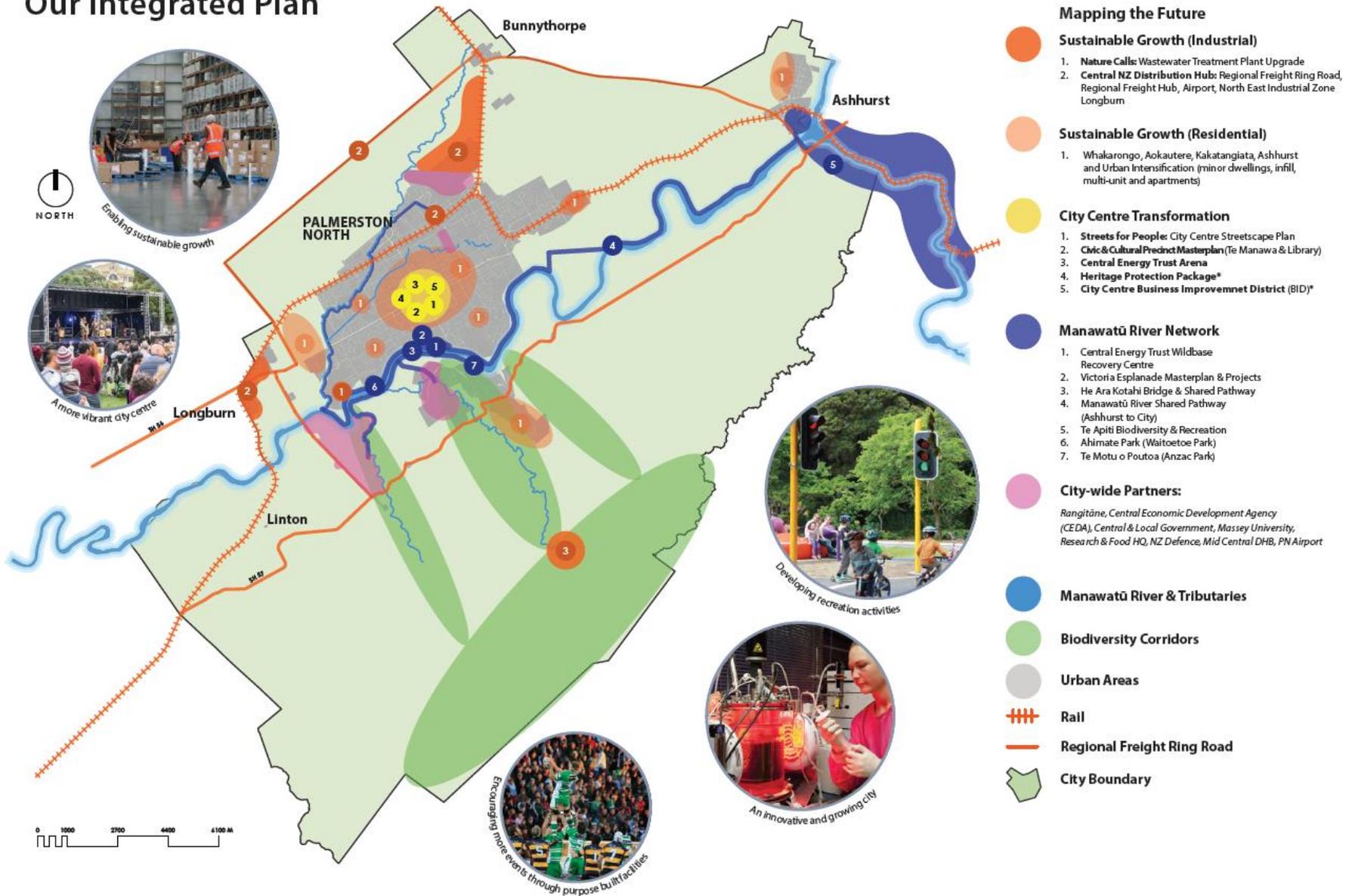
Appendix 1: 2007 Joint Industrial Land Review schematic



Our Integrated Plan



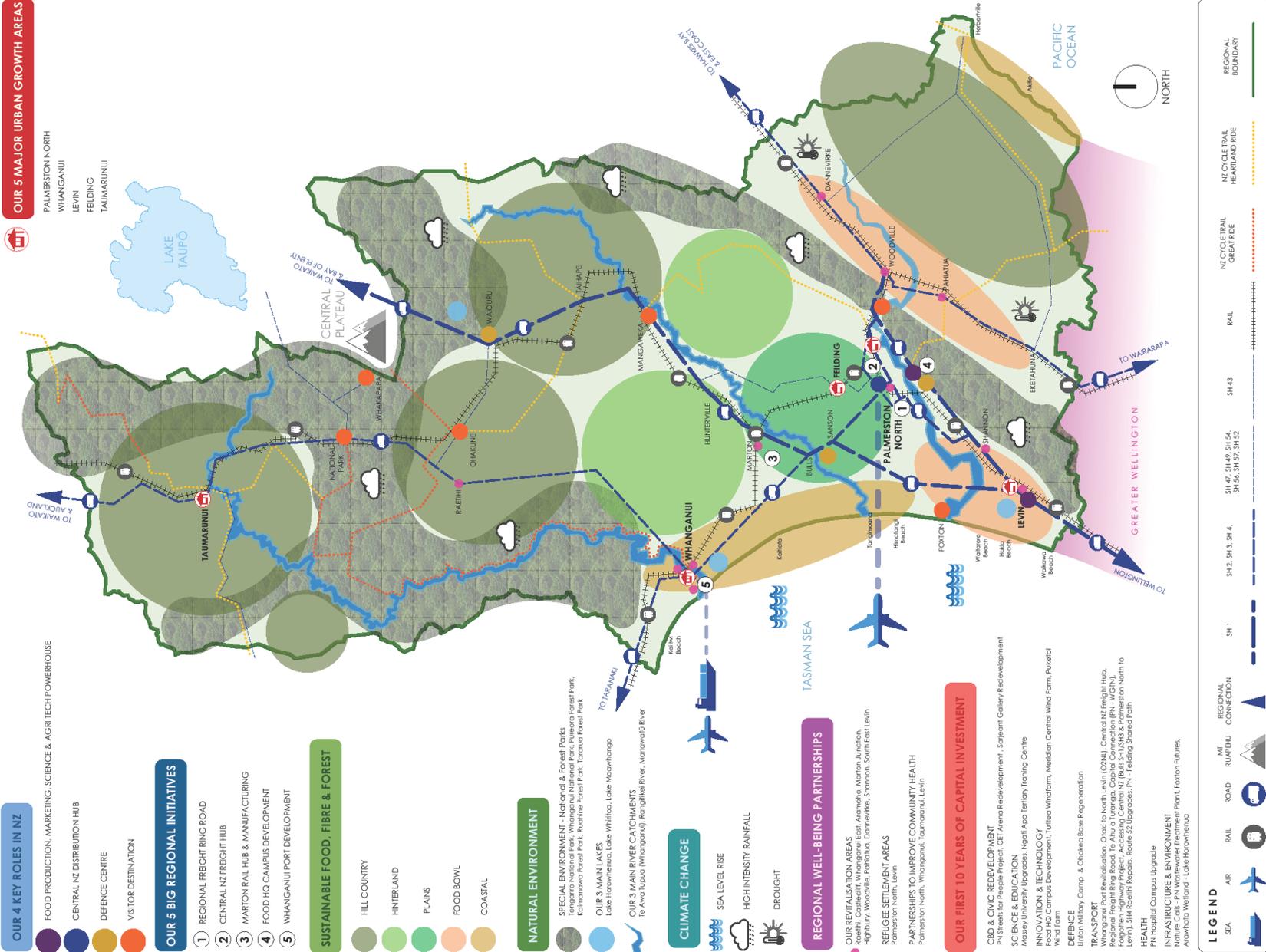
Our Integrated Plan



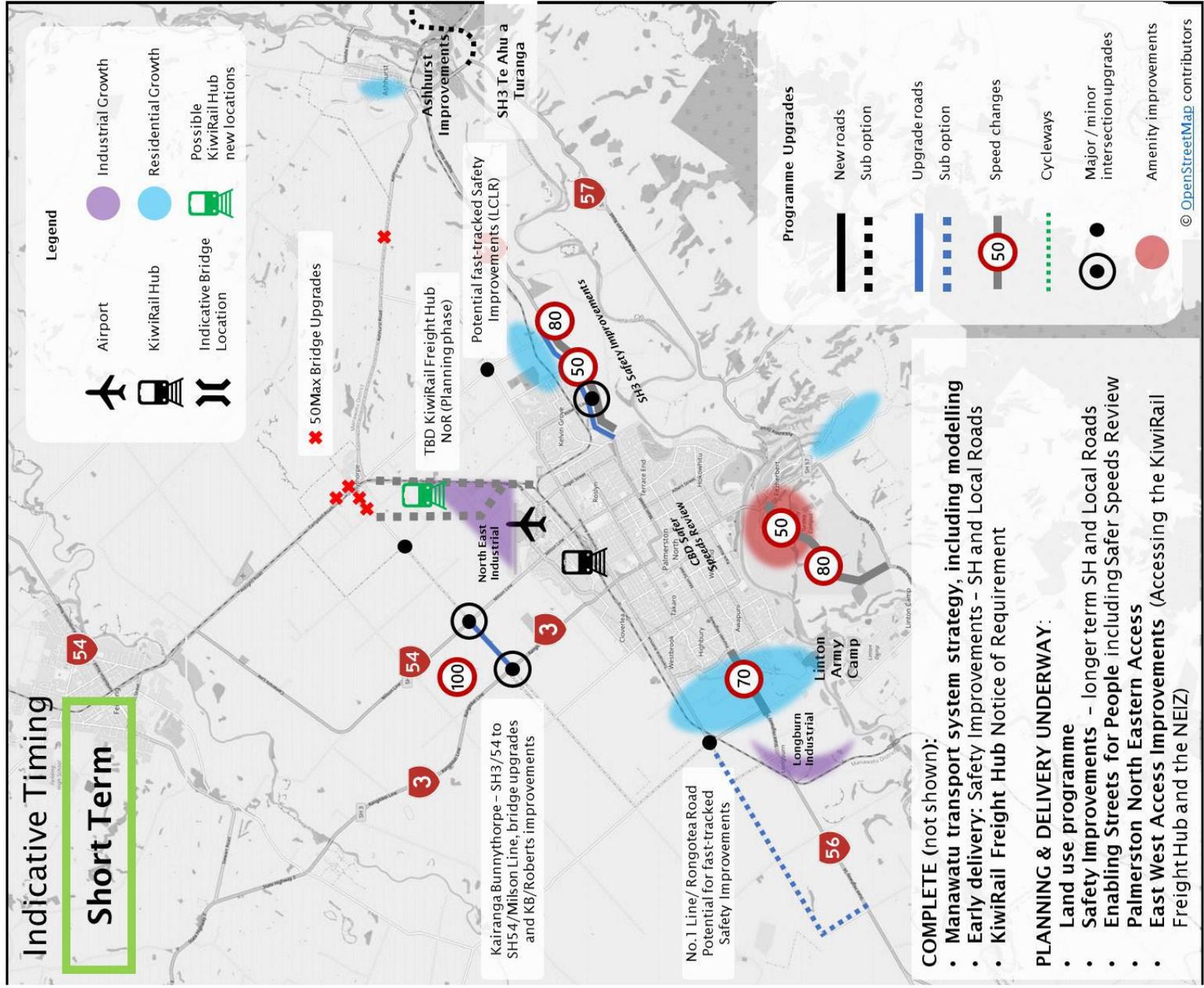
Mapping the Future

- Sustainable Growth (Industrial)**
 1. Nature Calls: Wastewater Treatment Plant Upgrade
 2. Central NZ Distribution Hub: Regional Freight Ring Road, Regional Freight Hub, Airport, North East Industrial Zone Longburn
- Sustainable Growth (Residential)**
 1. Whakarongo, Aokautere, Kakatangiata, Ashhurst and Urban Intensification (minor dwellings, infill, multi-unit and apartments)
- City Centre Transformation**
 1. Streets for People: City Centre Streetscape Plan
 2. Civic & Cultural Precinct Masterplan (Te Manawa & Library)
 3. Central Energy Trust Arena
 4. Heritage Protection Package*
 5. City Centre Business Improvement District (BID)*
- Manawātū River Network**
 1. Central Energy Trust Wildbase Recovery Centre
 2. Victoria Esplanade Masterplan & Projects
 3. He Ara Kotahi Bridge & Shared Pathway
 4. Manawātū River Shared Pathway (Ashhurst to City)
 5. Te Apiti Biodiversity & Recreation
 6. Ahimate Park (Waitoetoe Park)
 7. Te Motu o Poutoa (Anzac Park)
- City-wide Partners:**
Rangitāne, Central Economic Development Agency (CEDA), Central & Local Government, Massey University, Research & Food HQ, NZ Defence, Mid Central DHB, PN Airport
- Manawātū River & Tributaries**
- Biodiversity Corridors**
- Urban Areas**
- Rail**
- Regional Freight Ring Road**
- City Boundary**

OUR SHARED VISION: PROSPEROUS, STRONG, VIBRANT REGION FOR OUR PEOPLE, OUR MOKOPUNA, FOR NEW ZEALAND

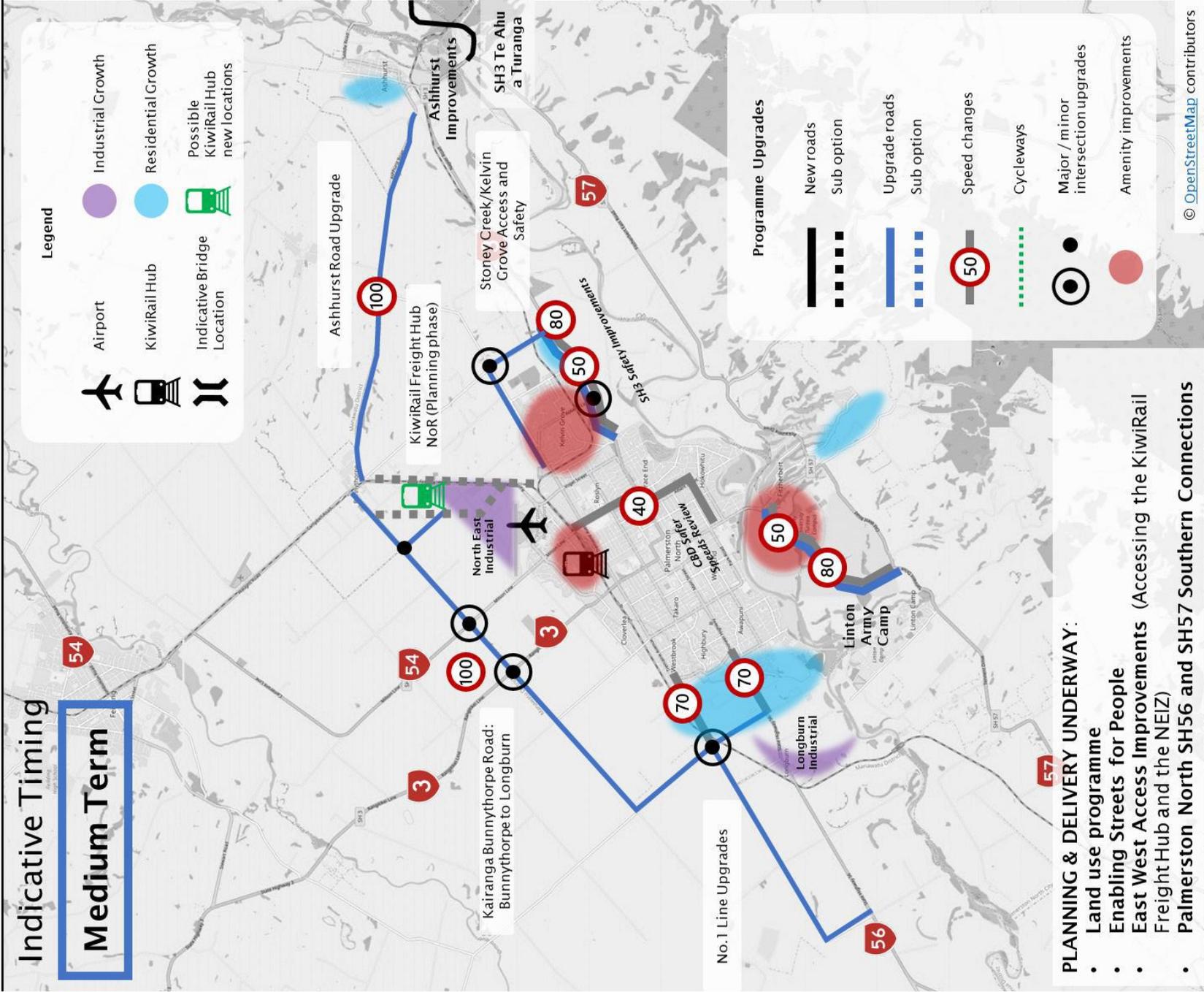


Appendix 6: 2021 Palmerston North Integrated Transport Investment Network Options Report extracts - short, medium and long-term plan.



Indicative Timing

Medium Term



Legend

- Airport
- KiwiRail Hub
- Indicative Bridge Location
- Industrial Growth
- Residential Growth
- Possible KiwiRail Hub new locations

Programme Upgrades

- New roads
- Sub option
- Upgrade roads
- Sub option
- Speed changes
- Cycleways
- Major / minor intersection upgrades
- Amenity improvements

PLANNING & DELIVERY UNDERWAY:

- Land use programme
- Enabling Streets for People
- East West Access Improvements (Accessing the KiwiRail Freight Hub and the NEIZ)
- Palmerston North SH56 and SH57 Southern Connections

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