

KiwiRail Regional Freight Hub

S92 RESPONSE LANDSCAPE AND VISUAL EFFECTS ASSESSMENT

FINAL

February 2021

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Landscape and Visual - S92 Response

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Reason given in PNCC letter	S 92 Request	Response
<p>4.1 Mitigation</p> <p>Technical Report E – Landscape and Visual Effects Assessment ("LVA") discusses several mitigation measures, with many described as "benefits" or as having positive effects (for example paragraph 10).</p>	<p><i>32. By reference to identified mitigation measures, please clearly identify and delineate between those which are predicted to mitigate adverse effects, and those which are predicted to provide distinct positive environmental effects.</i></p>	<p>The assessment provides an evaluation of effects resulting from the proposed design (as included in the application drawing set) to avoid and mitigate adverse effects and provide positive effects. These measures are considered together, as is consistent with best practice and an integrated approach to design and assessment. Some aspects of the proposal provide both mitigation and positive effects (for example, planting mitigates adverse visual amenity effects but also provides positive natural character effects). These are set out in more detail below.</p> <p>Natural character positive effects will result from:</p> <ul style="list-style-type: none"> - Proposed River Plain and wetland planting, where it is associated with the new open channel, stormwater ponds and the Mangaone stream environment. - Design to naturalise the forms of the proposed open channel and stormwater ponds. - Integration of an off-road trail to connect Railway Road with the stormwater ponds. The trail will provide enhanced experience of the proposed River Plains and wetland planting and this will increase perceptions of natural character. - Indirectly, an approach to integrate earth bunds for noise mitigation where possible (avoiding the use of vertical noise walls in close proximity to the naturalised channel). <p>Urban landscape (and associated visual amenity) positive effects will arise from:</p> <ul style="list-style-type: none"> - The nature and extent of proposed planting adjacent to the perimeter road, as part of the reconfigured arrival and departure experience for motorists travelling to Bunnythorpe and the NEI Zone. While this is mitigation, in terms of natural character and natural landscape, it will provide positive urban landscape effects, improving the 'built' condition along what is currently weed covered embankments of Railway Rd and Roberts Line. - The proposal to reinstate parts of Te Araroa Trail following integration works within the Designation extent provides a positive urban landscape effect by improving the experience of the users of the trails. In contrast to the existing trail, this will be adjacent to a planted embankment (rather than a rail corridor with naturalised exotic weeds) and include the opportunity to integrate a lookout area. Existing residential views of the weed lined corridor would also be improved by the proposed planting. Opportunities to detail the path as part of the rural path network (being discussed with PNCC) would increase these benefits.

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		<ul style="list-style-type: none">- The proposed off-road trail, connecting Railway Rd to the stormwater ponds, will also have positive urban landscape effects. Complementing the required footpaths alongside the new perimeter road, the trail introduces options for cycling and walking between Bunnythorpe and other parts of the NEI Zone. This will be a positive effect from an urban landscape perspective.- In addition, the proposed changes to the roading network have provided the opportunity to address existing issues related to the urban patterns. For example, a number of level crossings that will be closed as the result of the proposal will have safety benefits which are a result of improved urban landscape in the sense that it will result in more logical patterns of movement.
The LVA recommended future stage mitigation measures in circumstances where effects are identified as being "more than moderate" (paragraph 11). Some of these further mitigations would appear to be appropriate measures whether or not a "more than moderate" threshold is met.	<i>33. Please identify how and when an assessment will be carried out in relation to potential residual effects (as discussed), and what the resulting effects are once further mitigation has been put in place.</i>	The residual effects of the Regional Freight Hub are identified in the assessment findings along with measures recommended to identify opportunities to address these in the next stages of the project (Please refer to section 7 of the LVA report). A further assessment of effects will be carried out in the next stages of the project, in response to the Outline Plan works (once the design measures to resolve the residual effects have been confirmed).

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	<i>34) Please clearly list in a table all proposed mitigation measures for adverse landscape character, natural character and visual amenity effects, and identify which ones will be carried out as part of the proposal, and which ones depend on further future assessment.</i>	<p>The assessment provides for a summative evaluation of effects through a consideration of the proposed design measures, as included in the application drawing set and project description. The effects of future design measures are not assessed.</p> <p>As a summary of the points set out in the LVA (Ref 6.6 and 6.7)</p> <p>Natural character mitigation:</p> <ul style="list-style-type: none"> - Provision for the naturalised open channel and stormwater ponds; - Proposed River Plains and wetland planting in association with these features and the Mangaone Stream environment (as the ponds are directly connected to the stream and will be perceived as part of the immediate stream environment.) - Public access to these naturalised features, through the proposed off-road trails - Provision for fish passage through the culverted sections of the streams <p>Natural Landscape mitigation:</p> <ul style="list-style-type: none"> - The approach to limit cut and fill heights and to tie these batters into the surrounding landscape with slopes able to be planted. Gentle slopes will also apply to the rehabilitated NIMT (which will include removal of ballast and growing media added to transform this into a planted bund) embankment and the earth bunds for noise mitigation, so they can be revegetated. - Naturalised River Plain, River Terrace and wetland indigenous species planting. <p>Urban Landscape mitigation:</p> <ul style="list-style-type: none"> - The proposed layout of the Hub which locates larger scaled buildings closer to the existing NEI development. - Measures used to limit disruption to the existing urban patterns, for example, reduced legally stopped roads and through the new roading connections provided.

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		<ul style="list-style-type: none">- Reinstatement of parts of Te Araroa trail following integration works within the Designation extent, and alternative off-road path proposed, required footpath to the edges of the new perimeter road.- The use of earth embankments for noise mitigation where possible, as 'structures' that can be more easily integrated into the surrounding rural-residential landscape.- Mitigation planting within the main hub and wider Designation area, including larger scaled areas and specimen trees, to help integrate the built forms if the main Hub works, the required new road connections and the vertical concrete walls required for noise mitigation.- The rehabilitation of the existing NIMT built embankment, as linear structure within the landscape. <p>These matters combine to provide mitigation for visual amenity; as [visual amenity] results from both natural and urban landscape components.</p> <p>Further mitigation measures, recommended for consideration in the Outline Plan stage, are set out in Section 7 of the LVA report.</p> <ul style="list-style-type: none">- Opportunities for additional planting, such as in between the stormwater ponds and the naturalised channel outfall alongside the Mangaone Stream.- Opportunities to minimise perceptions of bulk and scale of the buildings and noise mitigation structures at detailed design, in accordance with the NEI Design Guide principles, but using materials and colours that integrate the development with the surrounding landscape.- Opportunities to consider integration with the surrounding character of the properties and township in roading design.- Opportunities to integrate a rural cycle path into Te Araroa Trail.

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		<ul style="list-style-type: none"> - Opportunities for additional mitigation planting to reduce visual amenity effects on particular residential properties. - Opportunities to manage visual amenity effects through lighting design, such as by number of lighting poles and lower tower type lighting.
When discussing visual amenity effects, the LVA states that "The relocation of the NIMT line will help reduce visual effects along Te Araroa Trail, as the noise mitigation wall can be located on top of the existing embankment and, providing this can be rehabilitated with growing media, the area between the wall and the Sangsters Rd reserve planted" (paragraph 6.77). The Landscape Plan shows Tall River	<i>35)Please comment on the likelihood of this embankment being planted and the likely success of this planting, and what alternatives have been considered if planting is not possible or unsuccessful.</i>	<p>The planting is required to rehabilitate the embankment. The requirement for planting along the embankment forms part of the Landscape Plan which is outlined in the proposed Designation conditions. The Landscape Plan will specify the timing of planting to maximise coverage.</p> <p>In general terms, this approach would be no different to that required to establish planted areas over a roading embankment. Earthworks would be undertaken to remove the rail lines, ballast, and any contaminated material and to establish the required fill batters (over the proposed culverts). The specification to detail the final form and finish of the embankment can be used to establish gentle slopes, good drainage and an appropriate depth of topsoil for planting.</p> <p>Species selection will be confirmed in the next stages of the project. Best practice approaches will likely combine early and long-term successional species suitable to this modified environment.</p> <p>Detailed earthwork design, in the next stages of the project, will also be used to confirm the best fit combination of vertical noise wall and embankment height (which will combine to achieve the 5m of height required for noise mitigation). For example, final plant heights could be reduced where the vertical noise wall is lower, and the embankment is sufficient to screen views, where required. Lower planting would reduce the overall perceived height of the embankment alongside Te Araroa Trail and provide some variation in experience along the path.</p>

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Plains Planting (10-15m high) along Sangsters Road. Some sections of this boundary will have a high embankment (as illustrated in Cross Section 8). Embankments can be dry, making planting difficult.		
	<i>36) Please provide information on how the absence of this planting would affect the landscape and natural character, and visual amenity effects assessment.</i>	<p>The adverse landscape and visual amenity effects would be higher. However, the planting along Sangsters Road is not relevant to effects on natural character. While the tributaries flow through the embankment, this planting does not provide any relevant mitigation because it is not associated with the margins of the streams and it does not contribute to perceptions of a naturalised stream environment. Natural Character matters are limited in this assessment to areas associated with the Mangaone stream environs as a Section 6a RMA matter.</p> <p>The requirement for planting along the embankment forms part of the proposed Designation conditions.</p>
On several occasions throughout the LVA, there is reference to "the NEIZ Design Guide". It is noted that "A detailed design, prepared in accordance with the	<i>37) Please provide confirmation of KiwRail's intention to</i> <i>(i) follow the North East Industrial Zone (NEIZ) Design Guide principles; and/or</i>	<p>The proposed Designation conditions have been updated to include a requirement for the Landscape Plan to outline the extent to which the design of the Freight Hub aligns with the values in the NEI Design Guide. Where a different approach to the Design Guide is proposed, the conditions require the Landscape Plan to outline the reasons for that departure and why the alternative approach is preferred.</p> <p>At this stage there is no intention to develop a specific design framework for the project, as the matters addressed in the NEI Design Guide are considered sufficient to manage the effects of the proposal (through, for example, the key design objectives and measures to address Site/Road Layout, NE Industrial Zone Access, Waterways, Stormwater, Boundary Setback, Planting, Site Contouring, Building</p>

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NEIZ Design Guide principles (as I understand KiwiRail intends to do), will ensure a design that minimises perceptions of bulk and scale" (paragraph 11.b). While this design guide provides some guidance, it is high level and not specific to this project.	<i>(ii)create a design framework which is specific to this project.</i>	<p>Site Layout, Building Design, Parking, Signage, Pavement and Furniture, Lighting and Fencing and any impact of the City Image and Experience). From a landscape and visual assessment perspective, consistency with the NEI Design Guide will enable the Regional Freight Hub to integrate with the wider NEI zone and adjacent rural-residential areas as well as the interface with Bunnythorpe.</p> <p>The Outline Plan of works will provide a further opportunity to review design framework requirements, in response to the detailed design. For example, additional design guidance might be required to respond to matters raised by mana whenua.</p>
4.2 Visual Amenity The visual amenity assessment discusses visual amenity effects on Maple Street: "while the Landscape Plan currently shows the bund planted, it could be retained in	<i>38)Please provide information as to whether removal of planting on the bund adjacent to Maple Street will affect assessment ratings for landscape and natural character, and, if so, what these effects will be.</i>	The removal of planting on the bund would have no substantive effect on the summative assessment of effects on landscape or visual amenity. The planting on the earth bund at Maple St would have no effects on natural character because it is not associated with any of the naturalised channel and pond features or area that will be perceived as part of the Mangaone Stream environs (it is up on a River Terrace). However, the bund itself does indirectly contribute to effects on natural character, as it avoids the use of a vertical wall near the naturalised channel, as discussed above.

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pasture, which would reduce its perceived height" (paragraph 6.91).		
Currently, the Tararua Range is visible from houses on Maple Street and the Maple Street cemetery.	<i>39) Please provide information as to whether views of the Tararua Ranges will be retained post project completion.</i>	Planting would increase the screening effects of the bund and this may impact open views towards the NIMT, including of the Tararua Ranges, from some locations. Grass cover on the bunds would retain more open views. The nature of the planting on these bunds is appropriately resolved through detailed design, once the location of the earth bund is confirmed.
The visual amenity assessment comments that residents "with unobstructed, open, views in close proximity to the Site are most likely to experience adverse visual amenity effects" (paragraph 6.78). These include properties along: Roberts Line, Clevely	<i>40) Please provide representative residential viewpoints from Roberts Line west, Clevely Line west, Te Ngaio Road, and Sangsters Road, as well as viewpoints for motorists travelling on Sangsters Road.</i>	A site visit is required to take these additional photographs. These viewpoints will be added to the Context Photograph Appendix and provided after this response to further information requested has been submitted.

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Line west, Te Ngaio Road, Maple St, Clevely Line east, Sangsters Road, Parrs Road, and Tutaki Road. However, viewpoints have not been provided for: Roberts Line west, Clevely Line west, Te Ngaio Road, or for Sangsters Road. Motorist views along Sangsters Road are also absent from the representative viewpoints.		
"Visual effects as experienced from individual properties has not formed part of this assessment process" (paragraph 6.56, LVA). Due to the potential scale of	<i>41) Please identify all individual residences at the locations specified at paragraph 6.78 (properties with unobstructed, open views in close proximity to the site),</i>	Further GIS desktop analysis and site work will be required to identify specific properties. My recommendation, as stated in the LVA report (please refer to sections 6.78 and 7 of the LVA), is that this work is carried out in the following stages of the project once the details of the design have greater certainty. This process would build on the assessment carried out to date which assesses visual amenity effects for the main viewing audience types, as informed by field work and representative viewpoint context photographs, the Landscape Plan and illustrative cross sections. The assessment of visual amenity effects has concluded that for most viewing audiences the adverse effects will be mitigated by the proposed design measures and will be no more than moderate on a 7 point scale. As listed at 6.96 of

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adverse effects it is important to look at the visual amenity effects of particularly affected properties.	<i>and identify, so far as possible, what the predicted scale of adverse visual amenity effects will be, with proposed mitigation measures</i>	<p>the LVA Report, certain individual properties have potential for high adverse effects. As part of the LVA Report further recommendations, further investigation is recommended to identify opportunities for further mitigation on properties experiencing high adverse effects, which are likely to be located:</p> <ul style="list-style-type: none"> • Between Richardson's Line to 873 Roberts Line; • No#163 Clevely Line West; • Te Ngaio Rd properties east of Maple St; and • properties directly alongside the NIMT that have an open and or elevated view towards the Site. <p>The most appropriate time to carry out this further investigation is when the details of the proposal are sufficiently resolved to provide greater certainty as to both the confirmed position, heights and articulation of the built forms within the main Hub and the timing of proposed planting within the construction programme. As stated in the LVA report, the extent to which specific properties experience high adverse visual amenity effects will depend on the extent to which there is early implementation of proposed mitigation planting. The detailed design of all buildings in line with the NEI Design Guide will also inform this. As these matters are to be worked through during detailed design, progressing this work now would not provide for an accurate assessment of effects and is not practical.</p>
	<i>42) Please provide viewpoints from individual residences at the locations specified at paragraph 6.78 (LVA)</i>	Additional viewpoints from specific properties may be identified through further investigations as outlined in the response to question 41.

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	<i>(including properties with unobstructed, open views in close proximity to the site).</i>	
	<i>43) In addition to mitigation planting, has consideration been given to any other design constraints (e.g. setbacks) or mitigation measures for affected properties (including those specified at paragraph 6.78 (LVA) with existing unobstructed, open views in close proximity to the site)?</i>	<p>The concept design for the Regional Freight Hub provides a building setback along all boundaries, that is consistent with and, along most boundaries, exceeds the NEI Design Guide (30m along Richardsons Line, 8m along Railway Road and Roberts Line). The minimum setback to any building (from the new perimeter road or marshalling yard edge) is 40m (to the south western corner of the distribution warehouses) and typically more than 50m.</p> <p>The process to confirm the preferred layout at this site has increased the setback/distance to proposed buildings in the residential areas near Bunnythorpe. The proposal to step the maximum heights of the distribution buildings from 11m along the boundary to the new perimeter road (and 14m behind) is a further design measure that considers how the built forms can be 'stepped'.</p> <p>Mitigation planting, particularly where it is established prior to the construction of the buildings, is likely to be far more effective in reducing adverse effects compared to small increases in setback. Any substantive increases in setback would impact operational feasibility and/or safety.</p> <p>The LVA recommendations (Ref Section 7) address several other matters aimed at reducing adverse visual amenity effects that are appropriate to the next stage of the project. For example, additional mitigation planting for specific residential properties, as agreed by KiwiRail and the owners, may be recommended in response to the confirmed design and construction staging (where required, and in response to further analysis and recommendations).</p>

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In the Technical Report D – Acoustic Assessment the noise mitigation wall is described as either being constructed of timber or concrete. The LVA describes it as a concrete wall.	<i>44) Please clarify what material the wall will be made of and provide further details on the effects of the appearance of the noise mitigation wall in terms of landscape character and visual amenity.</i>	Details of the wall construction and finish are to be confirmed in the next stages of the project through detailed design. The LVA provides recommendations regarding coherency and quality of finish required to avoid adverse effects and on the requirement for planting to screen the structures over time (Ref Section 7).
4.3 Graphics Technical Report E Appendix 1 - Context Photographs has provided photographs of the existing environment from identified representative viewpoints. Visual simulations of the proposal are appropriate from the identified viewpoints.	<i>45) Please provide visual simulations from the identified viewpoints and requested viewpoints (as above), preferably with a 40° field of view (as per the NZILA guidelines). Please provide two versions of the simulations, one version depicted without mitigation planting and one with mitigation</i>	<p>Photo simulations have not been prepared for this stage of the process. For the purpose of the Designation, the Context Photographs, Landscape Plan and Illustrative Cross Sections are appropriate visual guides to the assessment of landscape, visual amenity and natural character effects.</p> <p>Preparation of photo simulations would require a detailed 3-dimensional model of the ground plane works and lighting design which will be confirmed through the Outline Plan. The design for the buildings (which will be important contributors to potential adverse effects) will be developed at the detailed design stage and showing these buildings at this concept design phase as simple/shadowy boxes would overstate the potential effects. Due to the design development required, photo simulations would not act as an accurate representation of the proposal at this stage.</p> <p>Photo simulations are not required by the NZILA guidelines. Opportunities to prepare photo simulations can be considered at the Outline Plan of works stage. They can be a useful tool to assist in identifying detail design measures, for example, to reduce impacts on the night sky in the lighting design and to reduce visual clutter and dominance through the location, scale and articulation of structures. Whether</p>

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Preparation of any simulations of visual change to assist this process should be guided by best practice as identified by the NZILA. ¹	<i>planting at a growth height anticipated after three years. Please also provide comparable 'before' photographs of these viewpoints with a 40° field of view, alongside the simulations.</i>	photo simulations are prepared, and for which locations, will form part of the broader investigations set out in the response to question 41, but they are not necessarily required.
4.4 Scale of the Assessment The LVA considers the existing environment at three scales: the Manawatū Plains, the Bunnythorpe – Palmerston North environs, and the immediate site (paragraph 4.1). It would be helpful for	<i>46) Please provide an illustration depicting the extent of the three identified scale areas (ref LVA, paragraph 4.1).</i>	An Indicative Spatial Scale plan has been prepared and included in Appendix 1.

¹ NZILA Best Practice Guide 10.2.

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these areas to be depicted visually. It is also unclear which spatial extent is considered in the assessment of effects and this needs to be clarified.		
	<i>47) Please confirm which of the three scales the assessment of effects for landscape and natural character relate to (or if all scales have been considered).</i>	All scales have been considered, as relevant to the components of the proposal.
4.5 Existing Environment The existing environment description provided in the LVA is helpful for understanding the context of the	<i>48) Please identify: i) the existing landscape character values at the identified spatial scales</i>	<p>The physical, sensory and shared and recognised factors (that contribute to landscape values) are set out in the Existing Environment section of the LVA (Ref 4.2-) for each of the spatial scales (Manawatū Plains, Bunnythorpe- Palmerston North environs and the Designation extent). These matters have been considered in a holistic analysis (as set out in the methodology of the LVA, at Section 3). This approach is appropriate and considered best practice to inform the assessment of adverse and positive effects.</p> <p>An approach to document independent factors, for example through tabulated assessment record sheets, is relevant to district wide assessments, where the purpose is to identify and evaluate Special</p>

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project, but what is considered to be the existing environment (including existing natural and landscape character values) is not clearly articulated. Additionally, landscape and natural character values are not discussed independently from one another.		<p>Amenity Landscapes (SAL) and Outstanding Natural Features and Landscapes (ONFL) (which is not the case here) rather than positive and adverse effects.</p> <p>Natural character values are discussed in relation to the streams and their margins only, as set out in the methodology of the report, Section 3, LVA .</p>
	<i>ii) the existing natural character values at the identified spatial scales in the LVA; and</i>	<p>Natural character values of the streams within the Designation extent are assessed as low (on a 7 point scale); as is relevant to Section 6a RMA matters. This rating is made through a consideration best practice Department of Conservation (DOC) guidance and information provided by relevant discipline specialists for the project including ecology and hydrology. It is not considered best practice, in a project assessment, to rate the natural character values of the waterways in the sites wider context. This is a matter for a district wide assessment. The DOC guidance provides for project-based assessment of natural character, including consideration of relevant matters of perception in the wider environment.</p> <p>However, factors contributing to the natural landscape are included in the description of the existing environment in each of the spatial scales identified for the project (Ref 4.18-, LVA), as is appropriate to</p>

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		assess the effects of the project. This includes a consideration of the factors set out in the methodology (Ref Section 3, LVA) and a description of the characteristics of nearby waterways, such as the Mangaone Stream.
	<i>iii) provide assessment ratings for these existing values for the three spatial scales identified in the LVA.</i>	<p>A 3 tier rating is used to identify ONFL, SAL and 'other' landscapes in a district wide assessment. This follows an analysis of natural science (physical), sensory and shared and recognised characteristics and an overall judgement against accepted 'tests'. It is not considered best practice to approximate a district wide assessment in a proposal assessment (although best practice directs the identification of potential ONFL areas even where these have not been mapped in a district plan, but this is not the case in this context).</p> <p>Existing ratings for landscape character values are therefore relied upon in this assessment. There are no ONFL or SAL located in the vicinity of the site. The landscape of the Designation extent and that of the Bunnythorpe-Palmerston North environs is rated as an 'other landscape'; with values primarily related to Section 7 RMA matters.</p> <p>'Other' landscape values comprise the focus of the description of the projects receiving environment. Through an holistic analysis, across the 3 spatial scales relevant to project, the LVA sets out the natural and urban landscape components that collectively comprise its character and contribute natural science, sensory and shared and recognised values.</p> <p>It is not considered best practice to rate landscape character, at any scale. Landscape character results from the combination of both natural and urban (built) characteristics. There is no landscape character that equals very low or very high. All landscapes have a unique character.</p> <p>The rating of natural character values is addressed above in response to question 48 (ii).</p>

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<p>At paragraph 3.9 of the LVA the following comment is made:</p> <p>Effects are assessed against the existing environment, i.e. positive and adverse effects are assessed in relation to the landscape 'baseline' including the reasonably foreseeable future environment, as provided for by operative planning instruments such as the NEIZ within the PN District Plan</p>	<p><i>49) Please identify what was specifically considered the "landscape baseline" for the purposes of the LVA</i></p>	<p>The landscape baseline (also often referred to as a landscape characterisation) is set out in the analysis of the existing environment (Ref Section 4, LVA). Natural and urban landscape matters considered in this analysis, are set out in the methodology (Ref Section 3, LVA).</p> <p>Changes in the foreseeable future, as evidenced by recent patterns of rural residential development, and as provided by relevant planning instruments, are addressed in this analysis and in the review of the project's statutory context (Ref Section 5, LVA).</p> <p>In discussion with the Council peer reviewers (December 2020) matters of landscape sensitivity and overall degree of landscape modification were discussed as measures of a 'landscape baseline'.</p> <p>Sensitivity matters are relevant to a district or region wide assessment, for example, where there is a need to consider landscape character and value 'susceptibility' to an activity type, rather than a specific project.</p> <p>'Sensitivity' analysis has been applied in the assessment of alternative sites for the project. At the Designation stage, there is sufficient information about the project to describe the potential effects. A sensitivity rating is not needed.</p> <p>Relevant landscape modification matters are set out in the analysis of the existing environment (Ref Section 4, LVA). The Designation extent is summarised as a landscape in transition from rural landuse to rural-residential activity with industrial development anticipated by the extension of the NEI Zone. It has generally unmodified landforms (where these are not impacted by existing transport connections), highly modified waterways and very little remaining indigenous vegetation.</p>

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<p>4.6 Natural Character</p> <p>It appears that natural and landscape character elements are conflated in the natural character assessment. For example, the LVA considers planting along the perimeter road (paragraph 6.53) and earth bunds (paragraph 4) as mitigation for natural character effects. However, where these elements are not connected with the naturalised channel and its margins, they do not necessarily contribute towards natural character (but are relevant for</p>	<p><i>50)Please identify and distinguish between landscape and natural character elements considered for the LVA, giving reasons where appropriate</i></p>	<p>Natural character matters are assessed separately in relation to Section 6a of the RMA (Ref Section 6, LVA); relevant to the rivers and their margins.</p> <p>Elements of the proposal considered relevant to the assessment of natural character effects include:</p> <ul style="list-style-type: none">- the naturalised channel and its margins, which will replace the northern most tributary through the site.- the stormwater ponds and their margins, which will convey the culverted tributaries through the main Hub (and stormwater flows) to a Mangaone Stream outfall.- the planting proposed to the margins of the Mangaone Stream which, in terms of landscape experience, will be perceived as the area including the River Plain and wetland planting proposed alongside the new perimeter road and stormwater ponds.- design features related to landscape experience, which will increase the perception of these features together as an integrated Mangaone stream margin environment. In this case, the proposed off-road track from Railway Rd and the new perimeter road (alongside the stormwater pond area) will provide a sequenced journey through the stream edge environs, increasing perceptions of its natural character.- design measures which avoid additional structures near the naturalised channel and stormwater ponds. In this case, the use of earth bunding avoids the use of vertical concrete noise walls alongside the naturalised channel.

Landscape and Visual - S92 Response

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Reason given in PNCC letter	S 92 Request	Response
landscape character). Stormwater ponds are also considered as mitigating natural character but are disconnected from the streams located within the site and are not natural in themselves as they are constructed. ²		
	<i>51) What would the assessment of effects on natural character values be if the naturalised channel is not constructed?</i>	The positive natural character effects would be reduced. This feature is to be included in the next stage of the design, as per the offered conditions of consent.
Despite reference in the LVA to relevant Horizons One Plan and RMA natural	<i>52) Please provide an assessment of the proposal in relation to the relevant</i>	Direct assessment against these planning matters is included in the AEE, as is informed by the LVA.

² In the National Policy Statement for Freshwater Management 2020, under 3.21 Definitions relating to wetlands and rivers, a natural wetland is not "(a) a wetland constructed by artificial means (unless it was constructed to offset impacts on, or restore, an existing or former natural wetland)".

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Reason given in PNCC letter	S 92 Request	Response
character provisions, no direct assessment is provided.	<i>objectives and policies of Chapter 6 of the Horizons One Plan, including Objective 6.2 and Policies 6-8 and 6-9, and relevant provisions of the RMA, including Part 2.</i>	
4.7 Landscape Character The landscape character assessment considers natural landscape and urban landscape separately. It is unclear why this distinction has been made, and why rural character has not been considered in the landscape character	<i>53)Please provide information on those attributes of landscape character considered for natural landscape and urban landscape, and reasoning as to why the natural landscape and urban landscape have been assessed separately, rather than considering landscape character as a whole.</i>	<p>The attributes considered in the assessment of effects on natural and urban landscape are set out in the methodology (Ref Section 3, LVA). Natural landscape matters addressed include landforms, waterways, vegetation patterns and the habitats these support.</p> <p>Section 3.7 of the LVA clarifies the approach to assess natural character, natural and urban landscape visual amenity matters separately; as they relate to different statutory provisions. In general terms also, separate analysis is a useful tool to inform the summative evaluation. This is to ensure both the natural and urban components of landscape are addressed comprehensively. It is also useful to distinguish where the effects 'lie'; what components create natural landscape effects and urban effects. This allows for a more targeted identification of design and mitigation measures that will have the most impact on effects.</p>

Landscape and Visual - S92 Response

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assessment. It also appears that the natural landscape assessment has primarily focused on landform (which is identified in the LVA as only one aspect of landscape character).		
Cultural values have not been considered as part of the landscape character assessment, and a cultural impact assessment has not been provided to date.	<i>54) Please provide further information on cultural value effects in relation to the landscape character assessment.</i>	Known cultural values are included in the description of the existing environment (Ref Section 4.4, LVA). Further information on KiwiRail's engagement with Iwi is outlined in the response to questions 95 and 96.
There are nine houses, house sites and buildings of known or potential nineteenth century	<i>55) What is the effect of removing the identified sites in terms of landscape</i>	Matters of early history are addressed in the analysis of the existing environment (Ref Section 4, LVA) including, for example, the Clevely family connections and the vernacular of structures associated with larger productive holdings. Effects associated with the specific removal of early buildings are addressed in the Heritage assessment for the project. Adverse urban landscape effects identified for the project

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origin located within the NoR (paragraph 5.2.7.3, AEE) which have not been considered as part of the shared and recognised values in the landscape character assessment.	<i>character assessment?</i>	acknowledge the significant shift in landscape character that will result from the project including the marked changes to landuse activity and the removal of existing buildings.
4.8 Sensory Values and Factors Sensory values can include 'vividness, scenic, or transient' values. Natural character encompasses experiential attributes, such as natural darkness of the night sky, as well as wild and transient values. Sensory and	56) <i>Please identify the sensory attributes of landscape character (including both experiential and aesthetic attributes); and assess how they are affected by the proposal, with effects of noise and lighting forming part of this assessment.</i>	<p>Sensory matters are not a significant contributor to the landscape character and values of the site or the receiving environment (as they might be in an SAL or ONFL). These matters are addressed in the analysis of the existing environment, through a holistic consideration of the factors set out in the methodology (Ref Section 3, LVA). As a rural and rural-residential area set between the existing NEI Zone and township of Bunnythorpe these relate primarily to geomorphic expressiveness (as addressed in the description of the natural landscape) and legibility and coherence – the combination of natural and urban patterns that establish a mental map and sense of order and logical arrangement. The description of such matters, including landmarks, edges, distinct character areas within Bunnythorpe – Palmerston North environs, is a focus of the existing environment description. A summary of the 'mental map' or natural and urban patterns that characterise the area is included in the analysis of the Designation extent existing environment (Ref 4.21, LVA)</p> <p>The main transient values associated with the natural landscape result from existing flood patterns and waterways; as are acknowledged in the assessment. Matters associated with sensory and landscape</p>

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experiential values are not limited to visual attributes. The LVA does not clearly identify sensory factors contributing to landscape or natural character, in particular those effects on sensory aspects other than those experienced visually are not articulated.		<p>experience, relate primarily to the varied journeys (along road, rail and walking tracks) including Te Araroa Trail.</p> <p>Effects on sensory matters and the experience of landscape, other than through views, are addressed in the assessment and relate primarily to changes in the:</p> <ul style="list-style-type: none"> - way water moves through the site, in both stream and modified flood patterns; - way people can experience the landscape, through the new road network including the gateway experience to Bunnythorpe, the reinstated parts of Te Araroa Trail and integrated lookout following integration works within the Designation extent and the proposed off road path connecting Railway Rd to the naturalised stormwater ponds through planted River Terrace, River Plain and Wetland species. - noise environment, which is assessed in technical terms through the noise assessment and integrated in the LVA in the consideration of adverse urban landscape effects. - light environment, which is not assessed in detail within the LVA (as noted at Section 6.57 of the report. The lighting design will be confirmed in Outline Plan stage of the project.
	<i>57)Please identify the experiential attributes of natural character and assess how they are affected by the proposal, with effects of noise and lighting</i>	<p>The existing natural character values of the tributaries within the Designation extent are assessed as low. Their sensory and experiential attributes are limited to varied water movement patterns and limited habitats.</p> <p>While there will be a loss of existing stream length which will preclude future restoration measures (culverted streams under the main Hub) the proposal provides for enhanced experience and perception of natural character values along the margins of the Mangaone Stream and its tributaries. There is an integrated river margin environment established by the naturalised River Plain and wetland planting which connects the new open channel, stormwater ponds and Mangaone Stream environs. This</p>

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	<i>forming part of this assessment</i>	integrated river margin environment will be experienced in a sequenced journey along the new perimeter road and along the proposed off-road path and loop track from Railway Rd, enhancing perceptions of natural character.
	<i>58)Please assess lighting effects on visual amenity.</i>	As noted at Section 6.57 of the LVA report, the lighting effects are not able to be assessed at this stage of the project. Recommendations included in report, include priorities for design development to focus on this component. Lighting design is expected to generally be consistent with the NEI Design Guide (and relevant technical standards required for operations). Work undertaken through the detailed design will minimise or avoid nuisance as outlined in the s92 response (Lighting). An indicative lighting design layout has been progressed and added to the Landscape Plan and Illustrative Cross sections (Appendix 2 and 3) including 22.078m high LED floodlights and lower lighting mounted to buildings at 12m and on 7.3m poles within the Hub and required lighting along the new perimeter road. The effects of the lighting from the poles can be only be addressed as an additional structure, at this stage, noting that the layout is indicative. As structures, the indicative layout raises no further substantive issues in terms of potential adverse urban landscape effects or visual amenity, that have not already been addressed in the LVA report. The taller poles are generally internal to the site, at some distance from the Hub boundary with buildings and intervening vegetation providing partial screening and a relevant context contributing to integration (the lights are set with large scale buildings and have a logic; are clearly linked to a large scale industrial activity). The flood lights, as viewed from outside the site, often have a backdrop of large scale buildings and an obvious relationship and logical layout to support rail operations, reducing their potential adverse effects (in line with the general principle of co-location, this reduces visual dominance and clutter). The row of light poles closest to Sangsters Rd will be partially screened by the reconfigured NIMT embankment (crest/top of noise wall will be 5m above the lights) and, overtime, the vegetation proposed including trees likely to achieve heights of 5-10m. The top of the light poles, still visible above this, will generally be located well above the typical line of sight from views in close locations, and the

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		existing pattern of rail corridor poles and national grid pylons and sub stations in the wider area, provides an urban landscape and visual context within which these structures can be integrated.
4.8 Cumulative Effects The LVA has not considered cumulative effects for landscape character, natural character, or visual amenity. This is particularly important for natural character due to the loss of streams resulting from the project and considering Objective 6-2 of the Horizons One Plan.	<i>59)Please provide a cumulative effects assessment with other existing modifications within the assessed scales, for landscape and natural character, and visual amenity</i>	<p>Cumulative effects in terms of landscape and natural character are not considered relevant in this assessment. The landscape of the project receiving environment is in transition from a rural to a more urban environment including anticipated industrial development through the NEI zoning. Existing industrial development and other landscape changes in the area (including those that can be reasonably foreseen by planning instruments) have been considered in the assessment. The NEI zone applied to one third of the land assumes that there will be modifications and the level of change permitted under that zone forms part of the existing environment. The proposal is not considered to present a 'tipping point' in this environment and cumulative effects have been avoided following robust site selection, through the alternatives process.</p> <p>Objective 6-2 is addressed in the AEE, planning response.</p>
4.10 Effects Rating Scale	<i>60)Please clarify if the seven-point rating scale used to</i>	The rating guide at Section 3.3, of the LVA is relevant to the degree of natural character rather than effects. As a guide:

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	<i>assess natural character has also been applied in the assessment of effects for landscape character and visual amenity. If the seven-point rating scale has been used, please explain how the rating guide provided at paragraph 3.3 of the LVA translates for landscape character and visual amenity.</i>	<ul style="list-style-type: none"> • Very high natural character generally means near to pristine landforms and landcover, essentially no human structures or patterns, and strong experience of natural processes; • High natural character generally means a dominant presence of unmodified landforms and landcover, visually unobtrusive land management (e.g. extensive pastoral farming), few and visually integrated human structures, and strong nature based experiential aspects; • Moderately-high, moderate and moderately-low natural character will generally mean one or more of the following: Mostly modified landforms and land cover (e.g. pasture, plantations), only remnant indigenous vegetation, obvious land management patterns, obvious or prominent human structures, reduced and less evident experience of natural processes; and • Low and very low natural character would mean one or more of the following: highly modified landforms (including engineered structures), indigenous vegetation is absent, obvious intensive land management patterns (industry, urban development), diverse and prominent human structures, highly modified natural features and processes, experience of natural processes is very limited or absent. <p>As per the NZILA Best Practice Guidance, a 7 point scale is used to help explain the effects, in conjunction with the description of its nature. The effects rating is determined in response to the projects context- the existing environment, project description and policy matters.</p>

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		Consistent descriptors are not considered appropriate or useful in conjunction with the 7-point effects scale. This is because each level of effect will be the result of varied factors. For example, it would be difficult to write a generic description that covers all situations resulting in 'very low' visual amenity effects. The scale also needs to be neutral, relate to positive and adverse effects.
It appears that moderate effects represent a threshold of effects: "Where effects are identified as being more than moderate, the following matters should be considered through further technical assessment" (paragraph 11).	<i>61) Please clarify the significance of "more than moderate effects", i.e. what does this mean?</i>	Moderate effects are recognised at the mid-point of the 7 point scale. Where the Designation stage effects have been assessed as moderate or greater, it is assumed that there is a clear scope for design development to investigate further reduction. That is: while the proposal is for a significant new large scale industrial development, there are design development opportunities, as included in the recommendations, that can be worked through to further mitigate adverse effects and enhance positive effects.
4.8 Proposed Conditions The LVA notes that "Overall, and assuming mitigation planting can occur early, the adverse	<i>62) Please confirm when the intended mitigation planting will occur. If mitigation planting is to occur prior to the submission of the Landscape</i>	No mitigation planting will occur prior to either the Landscape Plan or Construction Management Plan being prepared, and those plans provide for maximisation of planting prior to construction.

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<i>effects of construction for landscape and visual amenity are likely to range from high to moderate-high. The construction process will occur over 20 years"</i> (paragraph 9). The LVA recommends early implementation of mitigation planting to reduce visual amenity effects (paragraph 11.e).	<i>Management Plan, please clarify how the timing of planting will be specified.</i>	
The proposal involves large scale earthworks and changes to the landform. From a landscape perspective, the	<i>63)Please confirm how KiwiRail will ensure that finished landforms will be well integrated with adjacent land and at suitable gradients to</i>	Works will be required to be generally in accordance with the Landscape Plan, as provided for in the conditions.

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treatment of finalised landforms is important, particularly regarding how these integrate with the surrounding landscape.	<i>enable mitigation planting.</i>	
	<i>64) A number of mitigation measures are outlined in the LVA. Please review all recommended mitigation measures in the LVA and clarify whether and how KiwiRail intends to implement the recommendations for mitigation of landscape character, natural character and visual amenity effects.</i>	The updated conditions provide for the recommended mitigation through the Landscape Plan.
5.3.8 Natural character (ecology)	<i>84) Please advise what field data (if any) was utilised to</i>	'Natural character' is not defined in the RMA. Much of the relevant caselaw and guidance to date has been in relation the 'natural character' of the coastal environment which, under Section 6a of the RMA, is also relevant to rivers and their margins. Natural character results from natural elements and

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	<i>inform the natural character assessment for the existing environment and what features/parameters were relied upon.</i>	<p>processes, and how they are experienced and perceived in that context. As such, it is a matter to be addressed in a landscape assessment (although it is informed by other disciplines).</p> <p>The matters that inform the assessment of natural character (of the streams and margins within the project site) include the underlying ecological, hydrological and geomorphological processes that shape landforms, including natural movements of water, any associated vegetation patterns and a consideration of existing structures such as culverts and bridge elements that detract from the perception of natural character. These are the features/parameters that were relied on in the assessment of the natural character of the streams in the existing environment for the Regional Freight Hub. As referenced in methodology, Section 3 of the LVA and the description of the existing environment, Section 4.</p> <p>The field data utilised to assess these includes site visits outlined in the AEE and technical assessments lodged in support of the NoR and those site visits undertaken recently as described in the ecology responses. The field data includes the results of recent macroinvertebrate sampling and the observations of streams and the assessment of the natural character of the Mangaone Stream environs.</p>
5.3.9 Natural character (LVA report) In the order of 3.8 km of stream length will be modified, primarily through culverting, to enable	<i>85) Please provide further information with clear rationale as to how culverting 3.8 km of stream will result in moderate positive natural character effects. In particular, please</i>	<p>The existing natural character values of the tributaries within the Designation extent (assumed to be within site scale referred to in the question) are in a heavily farmed existing environment and the natural character of these streams is assessed as low in the LVA. The proposed areas where water will be conveyed or held (e.g wetlands, ponds and open channels) within the Designation will be naturalised and these areas will support habitats and will add better connections. In addition, the open naturalised channel will provide habitat opportunities for fish (increased habitat and hydraulic variability, fish passage will be provided for and hydrological patterns will be at least maintained). Collectively these works, along with extensive areas of planting proposed, will result in the moderate positive natural character effects referred to.</p>

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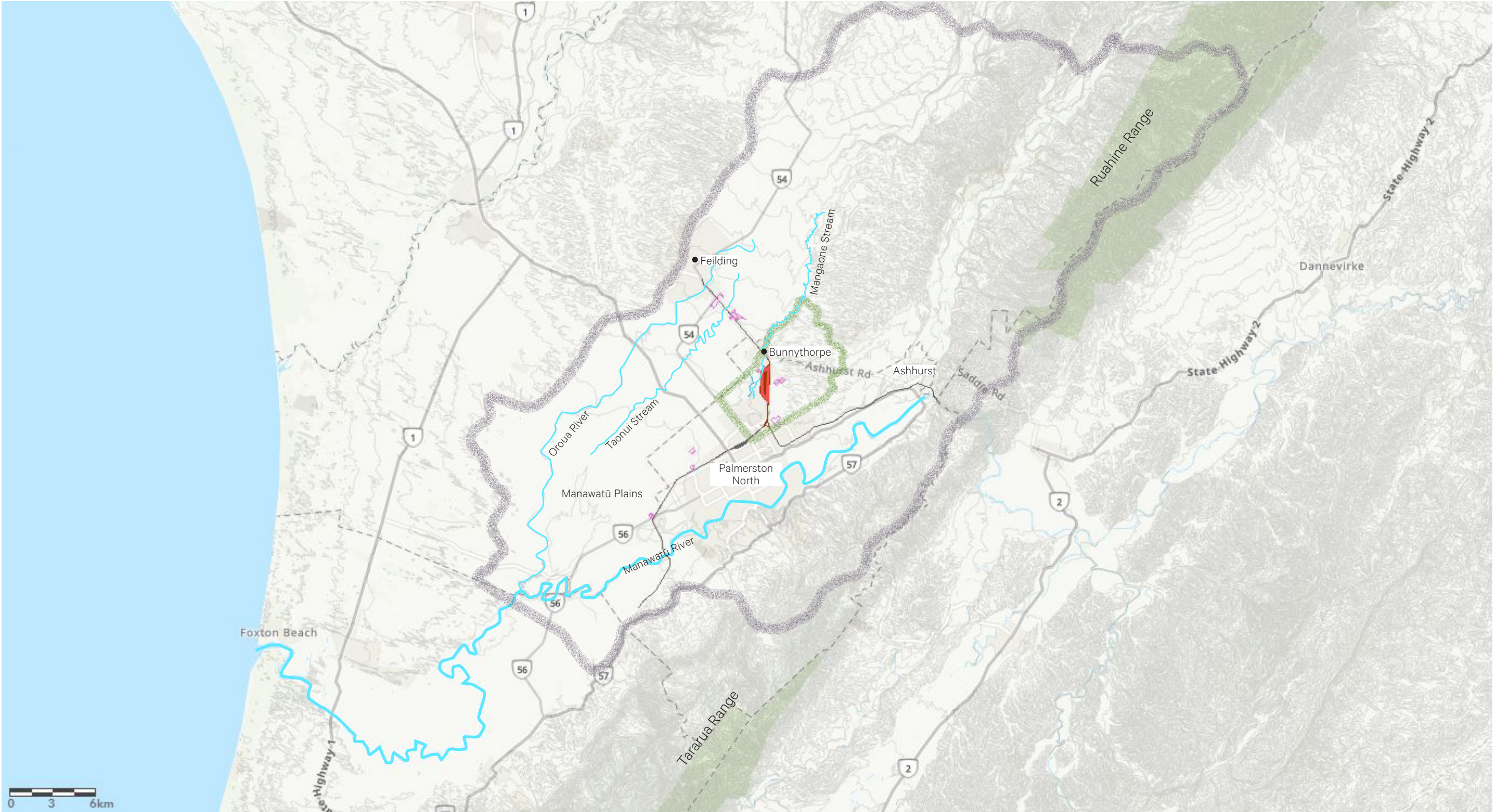
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Reason given in PNCC letter	S 92 Request	Response
development of the site. Following development, a constructed stream is proposed to remain as open channel.	<i>provide an assessment at both the reach and within site scale, with specific regard to the quantum of open stream length that will remain that could have natural character values.</i>	<p>The assessment of 'natural character' has considered the quantum of stream being culverted, the existing natural character values of these areas and the proposed design. This includes the naturalised channel, wetlands, and ponds along with the River Plain and Wetland type planting. These features will be physically connected to, and be perceived as part of, the Mangaone Stream environs. The assessment considers a range of relevant factors and values that form and contribute the natural character. In terms of best practice guidance, this cannot be limited to a consideration of stream loss.</p> <p>In response to the second part of the question.</p> <p><i>The assessment at both the reach and within site scale requested in regard to the quantum of open stream length that will remain that could have natural character values.</i></p> <p>While there will be a loss of existing stream length in the form of culverted streams as set out in the response to Q 80 (in the Ecology Assessment Response Report), the proposal anticipates provision of an integrated river margin environment. This will be established through the naturalised River Plain and Wetland planting which connects the new open channel and stormwater ponds and their discharge section in the Designation extent. These proposed works will not affect the potential for planting and other natural character improvements to the margins of the Mangaone Stream or upstream of the Designation extent. The quantum of open stream length that will exist in the proposed open channel reach is not confirmed, but it is expected the low flow channel will meander through the available wider channel extent, resulting in a longer stream channel than the straight line of this feature's banks. As set out in the stormwater assessment, the Freight Hub Site is part of the wider Mangaone Stream catchment that is in the order of 1,200Ha and while not measured as part of this project, it follows that the total length of the upstream 'reach' will be significant, and of a far greater order than 3.8km</p>

Indicative Spatial Scales - Landscape & Visual Assessment.

KiwiRail Regional Freight Hub Site.

S92 Response (ref 46). Appendix 1



- Key**
- Manawatū - Mangaone Stream Plains and Terraces
 - Bunnythorpe-Palmerston North
 - The Freight Hub Designation Extent