

19 December, 2014

District Plan Submissions
Christchurch City Council
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Christchurch 8154

By email to: dpreview@ccc.govt.nz

**SUBMISSION ON PUBLICLY NOTIFIED PROPOSALS TO REPLACE SOME
PROVISIONS OF THE OPERATIVE CHRISTCHURCH CITY PLAN AND BANKS
PENINSULA DISTRICT PLAN**

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KiwiRail Holdings Limited (KiwiRail) is the State Owned Enterprise responsible for the management and operation of the national railway network. This includes managing railway infrastructure and land, as well as rail freight and passenger services within New Zealand. KiwiRail Holdings Limited is also the Requiring Authority for land designated "Railway Purposes" (or similar) in District Plans throughout New Zealand.

The Main North Line, Main South Line and Hornby Branch Line and associated spur lines and yards form the KiwiRail railway corridors which extend through Christchurch City and Banks Peninsula. These corridors are a key part of the KiwiRail network and KiwiRail seeks to protect its ability to operate, maintain and enhance these corridors into the future.

To achieve this, KiwiRail encourages land uses near the railway corridors that do not compromise the short or long term ability to operate a safe and efficient rail network, both day and night. Where sensitive activities are proposed on land near the railway corridors, appropriate controls should be imposed to ensure their long term amenity.

KiwiRail's submissions on the Proposals are set out in the attached table. Insertions we wish to make are marked in **bold** and **underlined**, while recommended deletions are shown as ~~struck-out~~ text. All requested changes include any consequential changes to the Plan to accommodate the requested change in the stated, or alternate, location.

KiwiRail could not gain an advantage in trade competition through this submission.

KiwiRail wishes to speak to our submission and will consider presenting a joint case at the hearing with other parties who have a similar submission.

Regards



Deborah Hewett
Senior RMA Advisor
KiwiRail

8 October 2014

Submission Number	Proposed Amendment	Support/Oppose/Seek Amendment	Submission/Comments/Reasons	Relief Sought (as stated or similar to achieve the requested relief)
Chapter 2: Definitions				
1	Sensitive Activities	Seek Amendment	<p>KiwiRail seeks to incorporate reference to all relevant noise sensitive activities in the definition. These have been listed, but may be able to be combined to accommodate several within one grouping. These reflect the definition content in Chapter 2.</p> <p>Accurate inclusion of noise sensitive activities means that these activities and facilities that accommodate them can be appropriately identified relevant to any required consideration or assessment of noise effects and associated management of such effects.</p>	<p>Amend the definition of sensitive activities to include:</p> <p>b.) in relation to noise:</p> <ul style="list-style-type: none"> residential activities; including family flats and any elderly persons' housing units or complex, community housing unit, sleep outs, sheltered housing, social housing education activities including pre-schools; guest accommodation; care facility health care facilities and any elderly persons' housing units or complex. health care facilities, including hospitals or convalescent homes, that contain sleeping facilities for any person; and places of assembly for worship; spiritual facility Office Papakainga housing Student hostels
2	Strategic Infrastructure	Support	KiwiRail supports the definition to the extent it applies to rail and network utilities.	<p>Retain clauses:</p> <p>a. strategic transport networks; and</p> <p>h. other strategic network utilities</p>
3	Strategic Transport Networks	Amend	KiwiRail seeks the specific reference to its infrastructure as "strategic"; which reflects the heading; this term is applied to the road network and also the cycle network. This would also be consistent with the use of "strategic" in the critical infrastructure definition for roads and rail networks. The Canterbury RLTS identifies rail as a Strategic Transport network (e.g p20)	Amend b. the strategic rail network
4	Transport system	Support	The District Plan text in Chapter 7 Transport refers to Transport Network. The terminology needs to be consistent or definitions provided to signal a clear intention of that difference.	Confirm Transport network has the same definition as transport system or define these separately.
5	Critical infrastructure	Support	KiwiRail supports the definition including KiwiRail; however reliance on an external document to the District Plan to define this is not supported. That document is not subject to the same consultative process as the RMA.	Remove reference in parenthesis to Canterbury RLTS and specify "strategic railways network and railway infrastructure"
Chapter 3: Strategic Directions				
Key Issues and Opportunities				
6	3.4.2 Effective functioning of the transport system	Amend	The rail network is strategically significant infrastructure, equivalent to the State Highway network, by providing the distribution network (for goods and services) and freight link between key industries within the greater region, and the Lyttelton Port, and the South Island.	c. Some transport infrastructure is strategically significant at the regional or national level, including the state highway network, the rail network , Christchurch International Airport and Lyttelton Port of Christchurch. The port, in particular, sustained considerable damage in the earthquakes. The efficient and effective functioning of such strategic infrastructure is critical for both recovery and the long-term future of Christchurch.
7	3.4.4.3 Established activities and strategic infrastructure	Amend	Amendments identify reverse sensitivity effects and the rail network as a main transport route, and part of the economic support infrastructure key to the City's prosperity. This issue recognises the need to protect infrastructure and established activities from, for example, reverse sensitivity effects from new land uses.	a. As the district changes, there is a risk of new land uses coming into conflict with established or planned activities, including strategic infrastructure of local, regional or national significance. For example, there is a risk that reverse sensitivity effects such as noise complaints from nearby properties, particularly sensitive activities , could result in constraints on port and airport activities, or main transport routes, including the rail network , which are key economic support infrastructure and essential to the city's economic prosperity. There is a similar risk for established industrial activities, rural activities or the district's waste, wastewater and stormwater infrastructure.
Strategic Directions for the District				
8	3.5.2.4 The district is a good place to do business	Amend	KiwiRail supports this with a small amendment to identify the rail network as strategic infrastructure as part of the key transport routes.	a. Ensuring that Christchurch is a good place to do business will help attract people to visit, work and live in Christchurch. In part, this requires that sufficient

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				and appropriate land is available for the range of industrial and commercial needs, including tourism, and that infrastructure is in place to support sustainable economic growth. It also requires that regulatory requirements make sense and are easy to follow, which is an important objective of this District Plan. The Land Use Recovery Plan provides direction on both these matters, emphasising the need for integrated planning of land development and infrastructure, and the protection of strategic infrastructure such as key transport routes, including the rail network , the airport and port, which are critical to the local, regional and national economy. It also recognises the potential need for temporary provisions for businesses during the recovery period.
9	3.5.2.5 The transport system meets the needs of the community	Amend	KiwiRail supports this with a small amendment to include upgrading. Upgrades to the transport system contribute to resilient infrastructure.	b. The transport system also includes the movements of people and freight beyond the district. International and national access to Christchurch is provided by the Christchurch International Airport and the Lyttelton Port of Christchurch, and regional access is provided through the strategic road and rail network. To ensure the safe and efficient transport of people and freight, and to provide for continued investment in the district, existing strategies seek to ensure the effective, efficient and safe development, upgrading , operation and maintenance of an integrated transport system, particularly the strategic elements of it.
10	Objectives and Policies 3.6.2.8 Policy - Infrastructure	Support	KiwiRail supports provisions that manage the adverse effects of activities on infrastructure, including reverse sensitivity, and enabling provisions for the provision of freight hubs and activities in relation to strategic infrastructure.	Retain Policy
11	3.6.6 Objective - Amenity, health and safety	Support	KiwiRail supports provisions that manage the adverse effects of activities on infrastructure	Retain Policy a (i) and (iii)
Chapter 5: Natural Hazards				
	5.5 General natural hazards Policies			
12	5.2.2 Policy - Critical infrastructure	Amend	KiwiRail supports identified as critical infrastructure subject to amendments identified in the definition of critical infrastructure. KiwiRail considers that it is more appropriate to enable consideration of new critical infrastructure in areas subject to significant natural hazards because there are likely to be technical constraints and land requirement constraints that dictate the location of new infrastructure. To enable that consideration KiwiRail is of the view that reference to remedy and mitigate should be added, because there may be things that can done to manage the effects.	a. Avoid, remedy or mitigate new critical infrastructure locating where it is at risk of being affected by a significant natural hazard unless there is no practical and reasonable alternative location, and infrastructure is designed, maintained and managed to function to the fullest extent possible during and after natural hazard events.
13	5.5.1 Policy - Areas subject to an intolerable risk to life-safety from potential cliff collapse	Amend	Existing rail infrastructure may be located within these areas and it may not be practical or feasible to relocate it. That infrastructure may also need to be upgraded or developed. To enable consideration of the options to manage risks KiwiRail considers that it would be more appropriate to add "remedy or mitigate" to the policy. In addition, further information is sought on the KiwiRail infrastructure within these areas.	a. Avoid, remedy or mitigate subdivision, use and development at the top of and/or base of cliffs in areas subject to an intolerable risk to life-safety from the effects of cliff collapse.
14	5.5.2 Policy - Areas potentially affected by rockfall or boulder roll	Amend	Existing rail infrastructure may be located within these areas and it may not be practical or feasible to relocate it. That infrastructure may also need to be upgraded or developed. To enable consideration of the options to manage risks KiwiRail considers that it would be more appropriate to add "remedy or mitigate" to the policy. In addition, further information is sought on the KiwiRail infrastructure within these areas.	a. Avoid remedy or mitigate subdivision, use and development in areas subject to an intolerable risk to life-safety from the effects of rockfall or boulder roll. b. Control subdivision, use and development in areas subject to life-safety risk from the effects of rockfall or boulder roll, where the life-safety risk can be reduced to a tolerable level.
15	5.10.1 Activity status for Port Hills and Banks Peninsula Slope Instability Management Areas	Amend	KiwiRail has received a letter identifying that its property (at 1 Cashin Quay) is: <ul style="list-style-type: none"> located in a proposed Cliff Hazard Management Area 2 and located partly in a proposed Rockfall Hazard Management Area 1 and Partly in a Rockfall Hazard Management Area 2 	KiwiRail seeks to better understand the implication of rules on the operation, maintenance, upgrade, of the infrastructure in that location. Further information is sought on the KiwiRail infrastructure within these areas <u>KiwiRail also seeks no increased regulatory effects associated with the rail purpose activities.</u>

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			The relevant policies appear to be: 5.5.1 Policy - Areas subject to an intolerable risk to life-safety from potential cliff collapse and 5.5.2 Policy - Areas potentially affected by rockfall or boulder roll	
Chapter 7: Transport				
16	7.1.1 Objective 1: Integrated transport system	Amend	Several words have been used in the one clause that are not defined and potentially set up competing outcomes. It would be helpful to be more specific. It also specific "for people using transport modes" (a) vi. That is managed using the one network approach???	Delete the word affordable. Affordable is not an RMA term or matter of consideration. Efficient allows for that to be considered. Add effective.
17	7.1.2 Objective 2 - Adverse effects from the transport system	Amend	The Objective focuses too narrowly on the adverse effects associated with the transport system and does not recognise or address the effects on the transport system from subdivision, use and development; particularly associated with reverse sensitivity effects.	Amend the Heading to read: <u>Adverse effects from and on the Transport system</u> , or similar wording. Add b. a. Enable Christchurch's transport system to provide for the transportation needs of people and freight whilst managing adverse effects from the transport system. <u>b. Protect the strategic transport system (or network) from the adverse effects of subdivision, use and development and reverse sensitivity (or similar wording)</u>
18	Add new Policy - Reverse Sensitivity	Amend	An additional supporting policy that gives effect to the reverse sensitivity components of the changes proposed for 7.1.2 Objective 2 is proposed. The rail network east west corridor adjoins large sections of the industrial zone and business zones, but there are also substantial sections of rail corridor through residential areas, particularly in the north of the City and pockets in Heathcote Valley and Opawa. Changes as a result of the earthquake has meant that brownfield land, Industrial land, and Greenfield locations are now being considered for future residential development to provide sufficient and suitable land for future growth. Some of these areas are adjacent to the rail corridor and KiwiRail seeks to that development adequately considers and manages the effects associated with the 24/7 operation, maintenance, upgrading of the rail corridor.	Add a new policy: <u>Noise sensitive land use activities are located and/or designed to avoid, mitigate or remedy reverse sensitivity effects on the strategic transport network, including the strategic rail network.</u> The most appropriate terminology e.g network, system or infrastructure to be considered further.
19	New Objective and Policy	New	KiwiRail seeks a new objective and policy concerning the vibration effects that the railway can cause. KiwiRail notes that vibration is included as part of noise under the RMA. To provide clarity for plan users' vibration should be explicitly identified alongside noise. It may be more appropriate to include wording in the noise objective by adding "vibration" to existing objectives and policies. Further, KiwiRail has sought vibration related objectives and policies in the Proposed Hastings District Plan.	Add a new Objective 7.X and Policy 7.X.X, for Vibration (or incorporate vibration into existing noise objectives, and policies): <u>Objective 7.X</u> <u>Reduce reverse-sensitivity vibration effects arising from new development locating near to the rail transport network.</u> <u>Policy 7.X.X New buildings locating near to the rail network should include design and materials to reduce vibration to acceptable levels.</u>
20	7.1.1.1 Policy 1: Establishment of a road classification	Amend	The Policy specifically refers to road classification but talks about the transport mode and transport network for all modes, including freight. KiwiRail considers that this policy should be broader to address the transport network, including rail, to emphasise and facilitate the one network approach, and the significant transport network system.	Amend the heading to read: Description of Road <u>Transport Network</u> Classification. Identify the modal networks and show these on the Planning Maps; in particular the freight and the strategic rail network. Make amendments to clause b: Use hierarchy (modal networks): b. Use hierarchy (modal networks): In addition to the functional hierarchy, a road use hierarchy has also been defined within the Christchurch Transport Strategic Plan. These networks highlight that

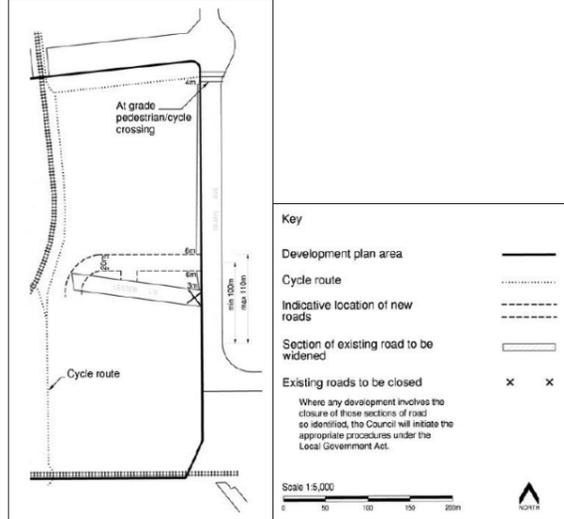
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				<p>different modes of transport have different priorities within the network. There are five modal networks defined in the Christchurch Transport Strategic Plan</p> <ol style="list-style-type: none"> the cycle network of major, local and recreational cycle routes (including on and off road cycle ways, and cycle ways within rail corridors); the core public transport route network and the rail tourist passenger link the walking network; (some may be on rail land) the freight network (including the rail network); and the strategic road and rail network. <p>Amend Item 2: Summary of the Transport road Classification categories and add Rail to the movement function category (or similar text):</p> <p><u>The rail network is an important part of the transport infrastructure providing freight and passenger links to Christchurch and to other regions and other parts of the country. The rail network within the City is based primarily on freight movement with the main yard located at Middleton, and the passenger station at Addington.</u></p> <p><u>The rail corridor also occupies significant land areas which are important in terms of their interrelationships with the land use activities adjoining those corridors.</u></p>
21	Appendix 7.1.2 Figure 7.17a - Map of Road Classification	Amend	Figure 7.17a - Map of Road Classification only shows the road classification. Movement functions should reflect the movement of people and goods.	<p>Amend the heading Figure 7.2 Map to read: <u>Road Transport Network</u> Classification</p> <p>Add the Rail network to Figure 7.2 Map and identify this as “the strategic rail network” in the legend.</p>
22	7.1.1.7 Policy 7 - Rail level crossings	Amend	<p>Assessment of the development impacts on the rail level crossing and network is an important component in maintaining the safe operation of the level crossing and identifying upgrades that may be necessary.</p> <p>Sightline controls are an important element of managing the safe and efficient operation of the level crossing and rail network.</p> <p>KiwiRail seeks to avoid new level crossings to manage the safe and efficient functioning of the rail network.</p>	<p>a. Improve and maintain safety at road/rail level crossings by:</p> <ol style="list-style-type: none"> requiring safe visibility and sightline controls at uncontrolled level crossings; managing vehicle accesses close to level crossings; and avoiding managing the creation of new level crossings. Providing grade separated level crossings <u>Assessing the impacts of development on the safe and efficient operation of the level crossing</u>
23	71.1.13 Policy 3 Vehicle Access and Manoeuvring	Support	Retain	Retain Policy (a)(ii) and Retain Policy (a)(iv)
24	Appendix 7.12 Road Classification System	Amend	<p>Appendix 7.12 Road Classification System – Description in 1(b) identifies the road use hierarchy in the CHCH Transport Strategy Plan with different modes and priorities in the network. This identifies matters relevant to rail – cycle network and routes within rail corridors (b)(i) and the freight network (including the rail network). It also identifies the strategic road network but not the strategic rail network.</p> <p>KiwiRail notes these matters, while not in the District Plan, are to be considered in the ITA assessment process.</p>	Amend (1)(b) iv. to add the <u>strategic freight and rail</u> network
25	7.2 Rules – All zones outside the Central City 7.2.3.9 Rule 9- Location of buildings and access in relation to	Amend	KiwiRail supports the inclusion of location of buildings and access in relation to road/rail level crossings. However, KiwiRail also seeks that plantings are included. It is important to maintain clear visibility around level crossings to reduce the risk of confusion, congestion, queuing over level crossings and	<p>Applicable to:</p> <p>d. Any building, <u>structure and plantings</u> located close to a <u>level crossing</u> not controlled by automated warning devices (such as alarms and/or barrier arms).</p>

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	road/rail level crossings		potential collisions. All the conditions set out in this standard apply during both the construction and operation stages of any development.	Rule: <u>Building, structures and plantings</u> shall be located outside of the sight triangles in Appendix 7.13 Amendments to standards to provide clarity and correct terminology or simplify e.g reference to controlled automated warning devices, level crossing limit line.
26	7.3 Matters of Discretion 7.3.18 Location of building and access in relation to rail/road level crossings	Support	KiwiRail supports the matters of discretion	Retain matters of discretion
	Chapter 7 Appendices			
27	Appendix 7.11- Standards for the location of vehicle crossings	Amend	KiwiRail seeks the inclusion of vehicle access standards in Appendix 7.11. We note that the matters of discretion 7.3.13 - Vehicle crossing design include the rail level crossing This buffer is designed to: i) reduce the potential for vehicles to queue over the level crossing; ii) to ensure visibility of the crossing isn't blocked by turning vehicles; and to iii) avoid congestion and confusion in the vicinity of the level crossing. The matters relating to this are somewhat different to those that apply to sightlines relevant to buildings, structure and plantings. The standard set of diagrams would still apply, but it would be clearer and specific to vehicle access.	Add the vehicle access standards that apply for rail into Appendix 7.11 and make any consequential amendments to give effect to this.
28	Appendix 7.13- Building setbacks to level crossings	Amend	On sites adjacent to rail level crossings controlled by Stop or Give Way Signs, no building, structure or planting shall be located within the shaded areas shown in Appendix 7.13. It is important to maintain clear visibility around level crossings to reduce the risk of collisions. All the conditions set out in this standard apply during both the construction and operation stages of any development.	KiwiRail seeks to make amendments to the sight triangle diagrams in Appendix 7.13 to provide clarity and accuracy to their application, including, but not limited to, the amendment of the Heading to reflect the matters to which the diagrams apply (e.g building, structures, planting and access) or to remove reference to those and Sight Triangles Amendment to the clarity and accuracy relates to the specification of the distances on the sightline triangle. The distance for approach and restart triangles will vary depending on a number of factors identified in the NZTA Traffic Control Manual – Part 9 Level Crossings, including the speed of the train. As a result the sightline requirement will change. KiwiRail can supply a list of level crossings and the train speed. Reference to building, structures, planting and access is proposed on the diagram to which sightlines apply.
29	Appendix 7.15- Integrated transport assessment requirements checklist	Amend	KiwiRail seeks to ensure that the Integrated Transport assessment includes and references the rail network. KiwiRail is part of the “one network approach” to an integrated transport system. Although the term transport network is used within this checklist, KiwiRail often finds the rail network is overlooked in most assessments, and as a consequence we are not consulted. We also see this as beneficial to the applicant and Council officers to ensure at an early stage that potential issues and possible solutions can be flagged and considered. KiwiRail supports the ITA assessment. In some cases however, the basic ITA may also trigger item i. matters, depending on cumulative effects of development impacts on the transport network.	Include reference to the rail network in Appendix 7.1.5 checklist. Add in an additional item requirement to both 1 and 2: <u>Consultation with the transport network provider (operator) and demonstration of this</u>

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Chapter 8: Subdivision, Development and Earthworks				
Objectives and Policies				
30	8.1.2 Objective - Design and amenity	Amend	KiwiRail seek the addition of a clause to manage the adverse effects on infrastructure from development and infrastructure.	<p>a. An integrated pattern of development and urban form through subdivision and comprehensive development that:</p> <ul style="list-style-type: none"> i. I provides allotments for the anticipated or existing land uses for the zone; ii. li consolidates development for urban activities; iii. lii improves people's connectivity and accessibility to employment, transport, services and community facilities; iv. promotes the efficient provision and use of infrastructure; v. <u>manages adverse effects on adjoining infrastructure</u> vi. improves energy efficiency and provides for renewable energy and use; and vii. enables the recovery of the district in identified greenfield and intensification areas.
District Wide Rules – Property Access				
31	8.3.2.1 Restricted Discretionary Activities: Property Access	Amend	<p>KiwiRail supports the restricted discretionary standard 2:</p> <p style="padding-left: 40px;">2. Access shall not be to a state highway or across a rail line.</p> <p>However, KiwiRail also seeks to include access setbacks from level crossing to provide for the safe and efficient operation of level crossings. The proposed access standard does not address the setback required to allow sufficient room for stacking of vehicles and to prevent the fouling of the rail level. The NZTA standard and identifies site access shall be 30 metres from a rail level crossing</p> <p>KiwiRail seeks a new rule which will set out expectations surrounding setback distances which must be applied to railway level crossings. Level crossing accidents, whilst rare, are severe and as such require strict safety design criteria. To facilitate good integrated planning KiwiRail seeks a new rule which requires developers to provide a minimum of 30 metres separation between new vehicle access ways and railway level crossings.</p> <p>This buffer is designed to:</p> <ul style="list-style-type: none"> iv) reduce the potential for vehicles to queue over the level crossing; v) to ensure visibility of the crossing isn't blocked by turning vehicles; and to vi) avoid congestion and confusion in the vicinity of the level crossing. <p>One of the primary reasons for seeking this 30 metre control is to allow space for vehicles to wait/stop at level crossings (including longer milk trucks and rural heavy goods vehicles), without frustrating someone trying to get in or out of an adjacent property. Frustration, leading to risk-taking behaviour by drivers at intersections can be reduced by providing adequate waiting distances. The requested control is designed to avoid these conflicts and thus promote better road safety. It is acknowledged that there are existing vehicle accesses which are within 30m of a railway level crossing. These accesses must be maintained so that they do not encroach on the sightline standards.</p>	<p>Add rules to RD1 Access:</p> <ol style="list-style-type: none"> 1. All sites shall have access which is able to accommodate a driveway to a formed road, and such access shall be in accordance with Appendix 8.6.2 to this chapter and the standards set out in Chapter 7. 2. Access shall not be to a state highway or across a rail line. 3. <u>The distance that any new vehicle access to a property in any zone may be sited from a rail level crossing shall be a minimum of 30 metres</u> 4. <u>Existing vehicle access that are within 30 metres of a railway level crossing must be maintained so that the sightline standards detailed in Appendix A</u> 5. In case of multiple site subdivision where parking is provided as a common facility, that parking area shall have access to a formed road.
32	New Rule – Rail Level Crossing Sightlines	New Rule	KiwiRail seeks a new rule which determines the safe sightline distances for intersections. Again sightline distances are equally applicable to railway level crossings. KiwiRail is concerned with safety, including sight lines at level crossings. Although level crossing accidents make up a low proportion of accidents, they have a greater probability of a death or serious injury than other road accidents. This is largely to do with the mass and speed of a	<p>Insert a new rule into Chapter 8 as follows:</p> <p><u>8.X All existing and new accesses and roads that cross the rail network via a level crossing must be maintained in accordance with the sight triangles provided in Appendix X (Railway level Crossing Sight Triangles and Explanations)</u></p> <p>[A new appendix is to be added, entitled 'Railway Level Crossing Sight Triangles</p>

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			<p>train and an inability of the train to brake or take evasive action.</p> <p>One of the key factors in maintaining safety is to ensure vehicle drivers are presented with sufficient visibility along the rail tracks, and that traffic needing to gain access to adjacent properties and through-traffic do not conflict with one another. It is also important to ensure that obstructions do not block the visibility of level crossing signs or alarms to approaching drivers.</p> <p>KiwiRail has developed an access way restriction and 'sight triangles'; which create areas free of physical obstructions (erected, placed or grown). Diagrams detailing these sight triangles are attached as Appendix A of this submission. These diagrams are sought to be included in the District Plan to address the need to avoid the poor location of land uses including structures, vegetation and signage which can obstruct the required safety sightlines for railway level crossings.</p>	and Explanations'. This new appendix shall replicate Appendix A of this submission]
33	New Rule	New	KiwiRail seek to have a restricted discretionary activity provision to ensure that any non-compliance with proposed rules are restricted discretionary activities. The assessment criterion will require any applicant requiring a resource consent due to a non-compliance with one of the aforementioned provisions relating to effects on the railway to consult with KiwiRail and gain KiwiRail's written approval gained before any resource consent can be granted.	Insert a new Restricted Discretionary rule into Chapter 8 as follows: <u>8.X: Any activity which cannot comply with Rules 8XX etc must have the written approval of KiwiRail Holdings Limited. Discretion is restricted to the safety and efficiency effect the proposed access may have on the railway line</u>
34	8.3.2.3 Matters for discretion: Property Access	Support	<p>KiwiRail supports, in particular the following matters of restricted discretion. These seek to manage adverse effects on adjoining properties and any necessary upgrades to the transport network.</p> <p>2. Any impact on waterways, ecosystems, mahinga kai, drainage patterns or the amenities of adjoining properties.</p> <p>14. Any impact on waterways, ecosystems, drainage patterns or the amenities of adjoining properties.</p> <p>16. Whether any road network provision or upgrade is required in relation to any network utility, state highway or rail line.</p>	Retain matters of discretion 2,14 and 16
35	Servicing 8.3.4.1 Restricted Discretionary Activities: Servicing Restricted discretionary standards	Amend	Add a new standard to manage the effects of stormwater ponds adjoining or adjacent to the rail corridor to manage adverse effects such as undermining the stability of the ballast or create flooding on the rail corridor.	<p>RD2 Surface water management</p> <p>4. Creation of stormwater drainage ponding areas shall not occur within three kilometres of the edge of the Christchurch International Airport Runways.</p> <p><u>5. Creation of stormwater drainage ponding areas shall not occur within 15 metres of the edge of the rail corridor.</u></p>
Chapter 10: Designations and Heritage Orders				
36	Schedule of Designations	Amend	KiwiRail supports the inclusion of KiwiRail Holdings Limited designations E1, E2, E3, E4 listed in the Schedule of Designations in the Christchurch City Plan. However, KiwiRail seeks amendments to reflect the accuracy, nature or extent of the rail designation.	<p>KiwiRail seeks an amendment to E2 Site Name to"</p> <p><u>Main South Line and the Lyttelton Tunnel</u></p> <p>Or</p> <p>A separate designation number specified for the Lyttelton Tunnel</p>
37	Schedule of Designations	Amend	Christchurch's rail infrastructure is now owned by KiwiRail Holdings Limited (the assets were transferred from the New Zealand railways Corporation in 2013). KiwiRail seeks amendments to reflect the accuracy and nature and	Provision of Council's GIS shape files to enable KiwiRail to check the accuracy and extent of the rail designations, and that those match KiwiRail's records (and reflect KiwiRail's assets and landholdings, including NZRC land, and other land

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			extent of the rail designation The extent of the designations need to be accurately defined to ensure KiwiRail has the authority to undertake works throughout the corridor. The planning maps are at a scale that does not enable that accurate checking of the designation to be undertaken. KiwiRail seeks GIS files to undertake the check to assist with identifying any discrepancies prior to the Hearing.	necessary for rail purposes). Rail designations to reflect any changes to the extent of the City's boundary that has occurred since the Plan Review. Rail designations to include the Lyttelton Rail Tunnel. Council's GIS files need to be checked to ensure the extent of designation matches those held in KiwiRail's files (and that they reflect KiwiRail's assets and landholdings) and other relevant land necessary for rail purposes. Where a discrepancy occurs the City Plan should be amended.
Chapter 14: Residential (part) – Objectives and Policies and Rules				
38	14.1.1.7 Policy - Recovery housing - social housing redevelopment	Amend	A number of Industrial zoned areas adjoin or are adjacent to the rail corridor where recovery housing development could occur. Reverse sensitivity arising from incompatible land uses, particularly sensitive activities such as housing and residential activities can create complaints that lead to restraints on the rail operation and, reduced amenity values for lineside residents. KiwiRail seeks reverse sensitivity effects on the rail operation and rail corridor is managed. This is particularly pertinent where increased residential density is proposed as in this case.	Add to 14.1.1.7 a. Enable comprehensive redevelopment of social housing in areas where: i) natural hazards can be adequately mitigated; ii) adequate infrastructure services and capacity are available; and iii) reverse sensitivity effects on existing industrial areas and the rail corridor are managed.
39	14.1.4 Objective - Strategic infrastructure	Amend	The definition of strategic infrastructure identifies "strategic transport networks", and KiwiRail considers that its infrastructure is strategic infrastructure. However to confirm this and avoid doubt KiwiRail seeks the addition of the rail network.	Add to 14.1.4 a. Residential development that does not adversely affect the efficient operation, use, and development of Christchurch International Airport and Port of Lyttelton, the rail network and other strategic infrastructure.
40	14.1.4.1 Policy - Avoidance of adverse effects on strategic transport infrastructure	Amend	The definition of strategic infrastructure identifies "strategic transport networks", and KiwiRail considers that its infrastructure is strategic infrastructure. However to confirm this and avoid doubt KiwiRail seeks the addition of the rail network. Therefore an addition is sought to the list of regionally significant infrastructure in Appendix 1.7 of the Proposed Plan.	a. Avoid reverse sensitivity effects on strategic transport infrastructure including: i. Christchurch International Airport; ii. The rail network iii. the major and minor arterial road network; and iv. the Port of Lyttelton. v.
41	14.1.5.1 Policy - Neighbourhood character, amenity and safety	Amend	KiwiRail supports the policy in that it seeks to achieve a high quality residential environments, including internal and external amenity a (ii) and minimising noise effects from traffic and others sources where necessary to protect residential amenity.	Retain and amend a iii and iv: i. providing a high level of internal and external amenity; ii. minimising noise effects from traffic, railway activity , and other sources where necessary to protect residential amenity;
42	14.1.5.4 Policy - Best practice for health, building sustainability, energy and water efficiency	Amend	Transport related noise can have an adverse effect on residents, especially where the operations are 24/7. The opportunity to address this is when new residential buildings are proposed adjacent to the rail corridor or other transport networks. WHO sets out guidelines for an acceptable level of noise before, for example, sleep interruptions create the potential for adverse health effects.	a. Ensure that all new residential buildings: i. provide for occupants' health, changing physical needs, and life stages; and ii. are energy and water efficient. iii. Provide acoustic insulation and noise attenuation to a level consistent with WHO guidelines, for transport noise
43	14.1.6.9 Policy - Separation of incompatible activities	Support	KiwiRail supports the management of adverse effects including reverse sensitivity effects on strategic infrastructure. The definition of strategic infrastructure identifies "strategic transport networks", and KiwiRail considers that its infrastructure is strategic infrastructure.	Retain policy. Clarify rail is strategic infrastructure a. Ensure adverse effects (including reverse sensitivity) on existing businesses, strategic infrastructure, and rural activities are avoided or adequately mitigated.
44	14.1.6.6 Policy - Stormwater networks	Amend	KiwiRail seeks the addition of a clause in the policy to avoid adverse effects of stormwater on the rail corridor and ballast. Stormwater runoff and loads where redirected or increased can have, for example, adverse effect on the stability of the rail ballast, while the location	a. Ensure that stormwater management: i. utilises "soft" engineered solutions that limits stormwater loads on waterways and enables the development of multi-purpose amenity areas that integrate with the parks and open space networks; ii. improves water quality and infiltration;

Submission Number	Proposed Amendment	Support/Oppose/Seek Amendment	Submission/Comments/Reasons	Relief Sought (as stated or similar to achieve the requested relief)									
			of stormwater retention ponds can pose a hazard should they collapse or break their banks.	<ul style="list-style-type: none"> iii. reduces the potential for bird strike to aircraft; iv. encourages stormwater swales, wetlands, and retention basins planted in native species (rather than left as grass) that are appropriate to the specific use, recognising the ability of particular species to absorb water and filter waste; and v. has sufficient capacity to meet the required level of service in the infrastructure design standard. vi. Avoids adverse effects on the rail corridor and ballast 									
45	Appendix 14.10.4 – Development Plan Addington	Oppose	<p>KiwiRail has significant concerns with a proposal to provide a cycle route along and under the Blenheim Road over bridge. Investigations indicate there is insufficient room to accommodate a cycle route and the requirements for operating rail. Safety is a paramount consideration for KiwiRail. As such this proposal cannot be supported.</p> <p>The diagram also appears to show a crossing point on the curve by the Station, which would be fraught with issues.</p> 	Delete Appendix 14.10.4 - Development Plan Addington and reference to this in the provisions of the proposed CHCH City Plan or alternatively identify this is a prohibited activity, or an provide an appropriate vires alternative.									
	Rules and Matters of Discretion Chapter 14, 15 and 16												
46	<p>Chapter 14:</p> <p>14.2 Residential Suburban Zone and Residential Suburban Density Transition Zone</p> <p>14.3 Medium Density Zone</p> <p>14.6 New Neighbourhood Zones</p> <p>14.8 Community Housing Redevelopment</p> <p>Chapter 15 Commercial</p>	New Rule	<p>KiwiRail is unclear whether noise rules relevant to rail have been incorporated in Phase 1 or are intended to be incorporated in Phase 2. Appendices 14.10.1 address noise measurement and assessment, however they seem to be specific to construction standards for all central city zones, rather than zones outside of the central city.</p> <p>KiwiRail has developed noise standards relevant to the rail corridor. These are performance standards rather than construction standards (specifying materials) which enable flexibility in how the noise limits can be met. In general, the further away from the rail the less acoustic attenuation is required.</p> <p>It is not the intention of KiwiRail to introduce a raft of new noise standards where proposed standards are to be included, so those can be considered in the first instance, with the potential for amendments where necessary. We have included these as a placeholder until some clarification is provided on whether noise (relevant to rail) is to be addressed at a latter stage.</p>	<p>Add a new subsection to the relevant noise subsections in Chapters 14, 15 and 16</p> <p><u>X.X Noise Sensitive Activities within 100m of the Rail Network</u></p> <p><u>i) Airborne Noise:</u></p> <p><u>New, relocated and altered noise sensitive activities shall be considered a Permitted Activity if they are designed, constructed and maintained to ensure the following internal design noise limits shall not be exceeded, and shall take into account future use of the rail corridor, by the addition of 3dB to existing measured or calculated sound levels.</u></p> <table border="1" data-bbox="1902 1738 2804 1900"> <thead> <tr> <th><u>Receiving Environment (New, relocated or altered)</u></th> <th><u>LAeq, 1 hour</u></th> <th><u>Compliance Distance (no less than)</u></th> </tr> </thead> <tbody> <tr> <td><u>Residential – Bedrooms</u></td> <td><u>35 dB</u></td> <td><u>100m</u></td> </tr> <tr> <td><u>Residential – Habitable Spaces</u></td> <td><u>40 dB</u></td> <td><u>100m</u></td> </tr> </tbody> </table>	<u>Receiving Environment (New, relocated or altered)</u>	<u>LAeq, 1 hour</u>	<u>Compliance Distance (no less than)</u>	<u>Residential – Bedrooms</u>	<u>35 dB</u>	<u>100m</u>	<u>Residential – Habitable Spaces</u>	<u>40 dB</u>	<u>100m</u>
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	<p>Chapter 16 Industrial (part):Where noise sensitive activities are proposed</p> <p>Industrial General Industrial Heavy Zone Industrial Office Zone</p>		<p>The objective and policies have sought to address reverse sensitivity effects on the transport network, and the amenity of residents where noise sources exist that are likely to reduce the high level of amenity sought, and this needs to be carried through into the rules, including appropriate standards.</p> <p>For the Residential Zone Matters of discretion relevant to noise are identifies as:14.9.13 Acoustic Insulation and 14.9.34 (Lyttelton Port Influences Overlay)</p> <p>Future residential development and noise sensitive activities are also proposed for Brownfield and Greenfield locations, and Industrial and Business zones, some of which will be sited near to the rail corridor. For those locations KiwiRail would like to ensure that reverse sensitivity matters in general, and also noise and vibration matters are adequately considered and managed.</p> <p>As such, KiwiRail seek noise and vibration reverse sensitivity provisions to be inserted in the relevant zone chapters, requiring acoustic treatment for any noise sensitive activity located within the relevant distance of the railway network. The provision is consistent with the objectives and policies of the proposed District Plan.</p> <p>While some of the Zones have requirements identified for noise sensitive activities, some are restricted to within the Noise Boundary and therefore the changes sought are to provide for consistency across all zones in relation to noise and noise sensitive activities. KiwiRail consider the most appropriate place for the noise sensitive activities standards is within the noise provisions in each Zone, unless a district wide approach is adopted, and as the Plan Change as notified seeks to alter the noise standards within the zones identified, the inclusion of standards for noise sensitive activities at this time is considered appropriate.</p> <p>The provision places the onus on the noise sensitive activity developer/owner to mitigate against these effects. The rule should apply to all new, altered or relocated buildings used for noise sensitive activities, not just habitable rooms. This means that should a school or a hospital renovate the internal layout of their buildings, rooms that previously did not fall within the definition of “habitable rooms” but due to a change of use would be defined as habitable do not require extra work to make them acoustically insulated. The change will also create an enduring level of compliance during the new/altered or relocated building’s ‘whole-life’.</p>	<table border="1" data-bbox="1902 289 2810 516"> <tr> <td><i>Primary Outdoor Amenity Areas</i></td> <td><i>60 dB</i></td> <td><i>60m</i></td> </tr> <tr> <td><i>Teaching spaces</i></td> <td><i>40 dB</i></td> <td><i>100m</i></td> </tr> <tr> <td><i>All other sensitive activity building spaces e.g.:</i></td> <td colspan="2"><i>To comply with satisfactory sound levels AS/NZS 2107:2000 (nearest specified equivalent).</i></td> </tr> <tr> <td>• <i>Hospital and Dementia Care Spaces</i></td> <td colspan="2"></td> </tr> <tr> <td>• <i>Commercial Spaces</i></td> <td colspan="2"></td> </tr> </table> <p><u>Where part of a habitable space straddles the noise and vibration boundary it shall meet the relevant criteria above.</u></p> <p><u>Where it is necessary to have windows closed to achieve the acoustic design requirements, an alternative ventilation system shall be provided. A ventilation system installed shall comply with the following:</u></p> <p><u>i) Consist of an air conditioning unit(s) provided that the noise level generated by the unit(s) must not exceed 40dB LAeq(30s) in the largest habitable room (excluding bedrooms) and 35dB LAeq(30s) in all other habitable rooms, when measured 1 metre away from any grille or diffuser; or</u></p> <p><u>ii) A system capable of providing at least 15 air changes per hour (ACH) in the largest habitable room (excluding bedrooms) and at least 5 air changes per hour (ACH) in all other habitable rooms; and</u></p> <p><u>iii) The noise level generated by the system must not exceed 40dB LAeq(30s) in the largest habitable room (excluding bedrooms) and 35dB LAeq(30s) in all other habitable rooms, when measured 1 metre away from any grille or diffuser; and</u></p> <p><u>iv) The internal air pressure must be no more than 10 Pa above ambient air pressure due to the mechanical ventilation; and</u></p> <p><u>v) Where a high air flow rate setting is provided, the system shall be controllable by the occupants to be able to alter the ventilation rate with at least three equal progressive stages up to the high setting.</u></p> <p><u>Compliance for noise shall be demonstrated by providing the Council and KiwiRail Holdings Limited with a design report and a design certificate prepared by an experienced and qualified acoustic specialist, and an experienced and qualified mechanical engineer with respect to the ventilation system.</u></p> <p><u>(ii) Restricted Discretionary Activity</u></p> <p><u>If a noise sensitive activity does not comply with the provisions of Rule X(i), it is considered to be a Restricted Discretionary Activity. Council’s discretion is restricted to the following matters:</u></p> <p><u>a) The degree of noise attenuation achieved at the noise sensitive activity</u></p> <p><u>b) The effects of reverse sensitivity on the operation of the rail network and depot and the ability and suitability of mitigation measures to enable the continued and uninterrupted operation of the rail network.</u></p> <p><u>c) The written approval of KiwiRail Holdings Limited.</u></p> <p><u>d) A reverse sensitivity covenant provided by KiwiRail Holdings Limited.</u></p> <p><u>(iii) Ground-borne Noise: Annoyance</u></p> <p><u>New, relocated, or altered noise sensitive activities/buildings within 60 metres of the rail corridor shall be considered a Permitted Activity if they are designed and constructed to ensure the following levels of vibration from trains shall not be exceeded based on the procedures specified in the Norwegian Standard NS 8176E: 2nd edition September 2005 Vibration and Shock Measurement of Vibration in Buildings from Land Based Transport and Guidance to Evaluation of its Effects on Human Beings.</u></p>	<i>Primary Outdoor Amenity Areas</i>	<i>60 dB</i>	<i>60m</i>	<i>Teaching spaces</i>	<i>40 dB</i>	<i>100m</i>	<i>All other sensitive activity building spaces e.g.:</i>	<i>To comply with satisfactory sound levels AS/NZS 2107:2000 (nearest specified equivalent).</i>		• <i>Hospital and Dementia Care Spaces</i>			• <i>Commercial Spaces</i>		
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<u>Sensitive activities/ buildings</u>	<u>0.3 mm/s</u>							
47	New Amenity Rules	New	KiwiRail seeks to contribute to Christchurch's by maintaining a higher level of amenity along the rail corridor. We also seek to actively manage encroachments, pest plants, trespass and safety of the rail corridor. Building setbacks from the rail corridor allow for them to be maintained without accessing the rail corridor thereby managing trespass and safety matters. It also reduces the interruptions to the operation of the rail. The narrow and lineal nature of the corridor results in a significant interface with adjoining neighbours. In time it is also possible that parts of the rail network could be electrified and setbacks would allow for the space required for compliance with electrical safe distance.	<p data-bbox="1902 1230 2825 1314">Add new rail related amenity components set out below to the amenity rules for Chapters 14, 15 and 16, or introduce them where they do not presently exist.</p> <p data-bbox="1902 1398 2825 1430">Non- compliance with these would lead to restricted discretionary activity.</p> <p data-bbox="1902 1461 2825 1493">Matters of discretion to be provided.</p> <p data-bbox="1902 1524 2825 1577">For clarification purposes the matters of restricted discretion are intended to address items 47a-d.</p> <ul data-bbox="1947 1608 2825 1894" style="list-style-type: none"> • The extent of reverse sensitivity effects on the safe, efficient operation of the rail network or maintenance of the rail corridor • Ability to maintain buildings without requiring access above, over or on the rail corridor • The extent to which balconies or decks are enclosed or protrude beyond the building facade • Electrical safe distances • The nature, type and extent of fencing • The location of plantings, type, form, spread, height of trees and shrubs (at maturity) and potential for encroachment of the rail corridor 				

Submission Number	Proposed Amendment	Support/Oppose/Seek Amendment	Submission/Comments/Reasons	Relief Sought (as stated or similar to achieve the requested relief)
				<ul style="list-style-type: none"> The extent and nature of nuisance effects, or biosecurity pest related effects such as spread of vegetation onto the rail corridor
47a	Building, Balcony and Deck Setbacks	New	To minimise encroachment, enable buildings to be maintained without accessing the rail corridor.	Buildings, balconies and decks shall be setback at least 5 metres from the rail corridor boundary
47b	Vegetation Setbacks	New	To minimise encroachment and pest plants	Trees and shrubs shall be setback at least 5 metres from the rail corridor boundary and shall not comprise nuisance or weed species. Trees and shrubs shall be maintained such that they do not encroach into the setback
47c	Fences or walls Fences	New	Access to the rail corridor is restricted Maintain a high standard of amenity where fenced areas of the rail corridor can be publicly viewed.	Fences or walls adjoining the rail corridor boundary shall be <ul style="list-style-type: none"> setback or sited in a way that enables maintenance to be undertaken without requiring access to the rail corridor, and <ul style="list-style-type: none"> Maintained in a good state of repair fit for purpose, and free of graffiti where publicly visible.
47d	Storage and/or Service Areas - Screening	New	To prevent wind-blown rubbish on the rail corridor and maintain a high standard of amenity, especially where the areas can be publicly viewed.	Storage and service areas and shall be screened so they are not contained and visible from the rail corridor. Where buildings, other than residential, are developed introduce appropriate screening and other provisions (enclosed bins or contained spaces) for service areas and storage areas facing the rail corridor.
Chapter 16: Industrial (part)				
	Industrial General Zone – North Belfast Activity Status Tables –			
48	16.2.7.1.1 Permitted activities	Amend	Appendix 16.7.5 Outline Development Plan involves future works adjoining the rail corridor at North Belfast. In particular a proposed level crossing and the closure of an existing level crossing. Also proposed is a pedestrian and cycle route adjoining the rail corridor. These are structural elements that should be considered in the activity status. This will have a bearing on the provision on the access within and out of the site. KiwiRail has had some discussion with the Council on the North Belfast proposal regarding level crossings and pedestrian cycleways adjoining the rail corridor, and seeks to have input through the plan process to address the detailed design and logistics of the ODP. KiwiRail seeks that activities associated with the level crossing closure and replacement crossing are restricted discretionary activities.	<p>KiwiRail seeks that:</p> <p><u>The closure of Factory Road level crossing and the replacement level crossing is a restricted discretionary activity.</u></p> <p>Matters of discretion to be included/ provided to reflect level crossing related matters.</p> <ul style="list-style-type: none"> Reverse sensitivity effects level crossing related matters Location of the level crossing. For signalling reasons the location of the proposed level crossing will need to take into account the location of the Belfast Crossing Loop mainline turnout. The proposed level crossing would ideally need to be just north of mainline turnout (approx. 360m north of factory Rd). Further discussion on this matter is necessary. Technical constraints (signaling and consideration of sightlines, traffic levels, appropriate protection system(alarms/barriers) Technical approval from KiwiRail Location of the Pedestrian/Cycleway. The Plans shows these going into Belfast Railway Yard at south end which is a safety conflict issue for KiwiRail. Location, extent and nature of fencing (including height, type, material) KiwiRail would need to see a detailed cycleway/pedestrian proposal-route fencing <p>Any application arising from non-compliance with this rule will only require written approval from Christchurch International Airport Limited and KiwiRail.</p>
49	16.2.7.1.3 Restricted discretionary activities	Supports	Pedestrian and cycle routes are identified as a restricted discretionary activity. KiwiRail seeks to be identified as an affected party and to be consulted on the location, setback, fencing of the adjoining boundary to prevent trespass across the rail corridor	Retain restricted discretionary activity status KiwiRail seeks to be identified notified as an affected party <u>The written approval of KiwiRail Holdings Limited is required</u>

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	Matters of Discretion			
50	16.2.7.3.1 Outline development plan	Amend	KiwiRail supports 16.2.7.1(b) but seeks a minor amendment to identify the Main North Line rail corridor, given this is the integral to the provision of collector Road access for the site.	Retain 16.2.7.1(b) and add reference to the <u>Main North Line railway corridor</u>
51	16.2.7.3.1 Outline development plan	Support	KiwiRail supports 16.2.7.1(b), however seeks some amendments to protect the rail corridor from adverse effects of the stowmwater retention basin on the rail corridor.	f. The degree to which stormwater retention basins and swales are located so as to provide an effective buffer between activities, <u>and to avoid adverse effects on the rail corridor, to the satisfaction of KiwiRail.</u>
52	16.2.7.3.6 Pedestrian and cycle routes	Amend	To manage the potential for trespass onto the rail corridor KiwiRail requires fencing of the rail corridor boundary where pedestrian or cycle routes are located adjacent to the rail corridor. This deters trespass from occurring and a potential for an accident to occur.	Add an additional matter of discretion: <ul style="list-style-type: none"> a. The degree to which safe and efficient pedestrian and cycle access is provided for through the <u>site</u>, enables connections with the wider transport network, and is integrated with stormwater basins and/or open space. b. <u>The provisions of suitable fencing along the length of the rail corridor boundary adjacent to the pedestrian and cycle way to prevent trespass across the rail corridor to the satisfaction of KiwiRail.</u>
53	Restricted Discretionary Activity RD3	Amend	Add a new standard to manage the effects of stormwater ponds adjoining or adjacent to the rail corridor to manage adverse effects such as undermining the stability of the ballast or create flooding on the rail corridor.	Add new activity in RD3, or a separate rule, as follows: <p><u>The creation of any surface water management structure adjacent to the rail corridor.</u></p> Any application arising from non-compliance with this rule will only require written approval from Christchurch International Airport Limited and <u>KiwiRail.</u>
54	Appendices: <ul style="list-style-type: none"> • Appendix 16.7.5 - Industrial General Zone (North Belfast) • Appendix 16.7.2 - Industrial General Zone (Islington Park) • Appendix 16.7.7 - Industrial Heavy Zone (Sir James Wattie Drive) 	Amend	The appendices identify Outline Development Plans that involve future works adjoining the rail corridor at North Belfast, Islington Park - Waterloo Road. <p>KiwiRail has had some discussion with the Council on the North Belfast proposal regarding level crossings and pedestrian cycleways adjoining the rail corridor, and seeks to have input through the resource consent process to address the detailed design and logistics of the ODP.</p>	KiwiRail seeks to be identified notified as an affected party <p><u>The written approval of KiwiRail Holdings Limited is required</u></p>
Proposed Planning Maps				
55	Designation depiction – various maps		The Council’s GIS shape files need to be checked against KiwiRail’s GIS records and the planning maps to identify any anomalies or errors that require correction.	Make amendments to the Planning Maps for KiwiRail designations where there are anomalies or errors, including those identified in submissions to Chapter 10.

Appendix A:

Insert the following into Appendix 21 – Access and Sightline Distances of the Operative District Plan:

Level Crossing Sight Triangles and Explanations

Developments near Existing Level Crossings

It is important to maintain clear visibility around level crossings to reduce the risk of collisions. All the conditions set out in this standard apply during both the construction and operation stages of any development.

Approach sight triangles at level crossings with Stop or Give Way signs

On sites adjacent to rail level crossings controlled by Stop or Give Way Signs, no building, structure or planting shall be located within the shaded areas shown in Figure 1. These are defined by a sight triangle taken 30 metres from the outside rail and 320 metres along the railway track.

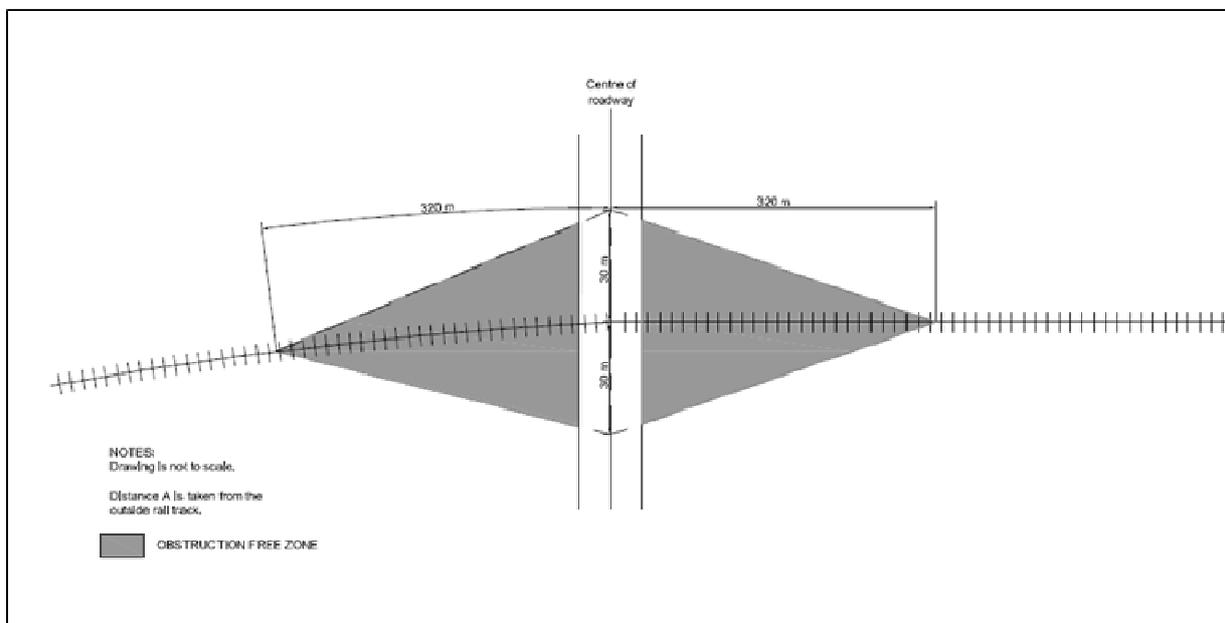


Figure 1: Approach Sight Triangles for Level Crossings with “Stop” or “Give Way” Signs

Advice Note:

The approach sight triangles ensure that clear visibility is achieved around rail level crossings with Stop or Give Way signs so that a driver approaching a rail level can either:

- See a train and stop before the crossing; or
- Continue at the approach speed and cross the level crossing safely.

Of particular concern are developments that include shelter belts, tree planting, or a series of building extensions. These conditions apply irrespective of whether any visual obstructions already exist.

No approach sight triangles apply for level crossings fitted with alarms and/or barrier arms. However, care should be taken to avoid developments that have the potential to obscure visibility of these alarm masts. This is particularly important where there is a curve in the road on the approach to the level crossing, or where the property boundary is close to the edge of the road surface and there is the potential for vegetation growth.

Restart sight triangles at level crossings

On sites adjacent to all rail level crossings, no building, structure or planting shall be located within the shaded areas shown in Figure 2. These are defined by a sight triangle taken 5 metres from the

outside rail and distance A along the railway track. Distance A depends on the type of control (Table 1).

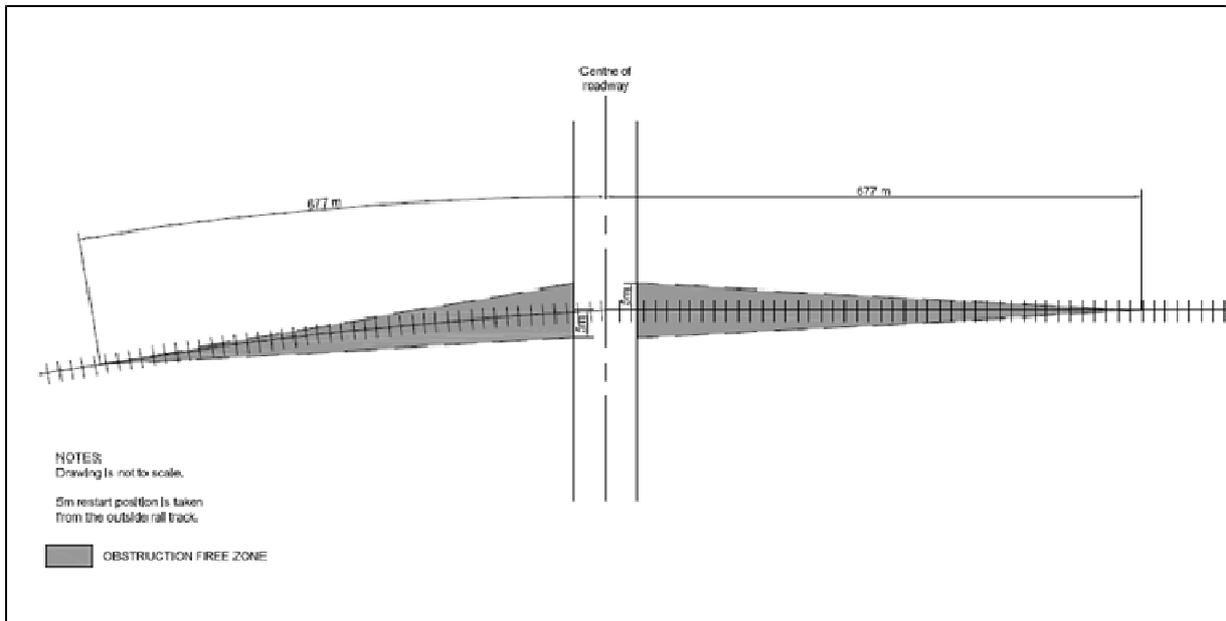


Figure 2: Restart Sight Triangles for all Level Crossings

Table 1: Required Restart Sight Distances For Figure 2

Required approach visibility along tracks A (m)		
Signs only	Alarms only	Alarms and barriers
677 m	677 m	60 m

Advice Note:

The restart sight line triangles ensure that a road vehicle driver stopped at a level crossing can see far enough along the railway to be able to start off, cross and clear the level crossing safely before the arrival of any previously unseen train.

Of particular concern are developments that include shelter belts, tree planting, or a series of building extensions. These conditions apply irrespective of whether any visual obstructions already exist.

Notes:

- Figures 1 and 2 show a single set of rail tracks only. For each additional set of tracks add 25 m to the along-track distance in Figure 1, and 50 m to the along-track distance in Figure 2.
- All figures are based on the sighting distance formula used in NZTA Traffic Control Devices Manual 2008, Part 9 Level Crossings. The formulae in this document are performance based; however the rule contains fixed parameters to enable easy application of the standard. Approach and restart distances are derived from a:
 - train speed of 110 km/h
 - vehicle approach speed of 20 km/h
 - fall of 8 % on the approach to the level crossing and a rise of 8 % at the level crossing
 - 25 m design truck length
 - 90° angle between road and rail