From:	Kieran O"Connor
To:	Saritha Shetty
Cc:	Kirsty Dibley; Arsh Kazi
Subject:	KiwiRail - Hearing 7 - Further Information
Date:	Thursday, 15 October 2026 4:06:05 pm
Attachments:	Kainga Ora - Homes and Communities v Auckland Council [2022] NZEnvC 218.pdf Kiwirail Holdings Ltd v Whangārei District Council [2023] NZEnvC 4.pdf HD Land Ltd v Waikato District Council [2024] NZEnvC 54.pdf joint-witness-statement-of-acoustic-experts-for-internal-noise-insulation-standards (2).pdf PC5E-Section-32.pdf

Good afternoon Saritha

We act for KiwiRail Holdings Limited in relation to the Hutt City Proposed District Plan. KiwiRail appeared at Hearing 7 (Other Matters) this morning, where the Panel requested the provision of:

- a copy of the cases referred to in KiwiRail's legal submissions;
- the acoustics JWS for the Wellington City PDP referred to by Dr Chiles; and
- the audit undertaken of the Christchurch District Plan, in relation to the acoustic approaches discussed at the hearing.

These are **attached**. In particular, we draw the Panel's attention to [91]-[92] of *KiwiRail Holdings Ltd v Whangārei District Council,* and [78] of *Kāinga Ora – Homes and Communities v Auckland Council*.

Ngā mihi nui
Kieran

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IN THE ENVIRONMENT COURT
AT AUCKLAND

I TE KŌTI TAIAO O AOTEAROA
KI TĀMAKI MAKAURAU

Decision [2023] NZEnvC 004

IN THE MATTER OF	appeals under clause 14 of the First Schedule of the Resource Management Act 1991 relating to Plan Change 109 – Transport of the Urban and Services plan change package
BETWEEN	KIWIRAIL HOLDINGS LIMITED (ENV-2020-AKL-000131) WAKA KOTAHI NEW ZEALAND TRANSPORT AGENCY (ENV-2020-AKL-000132) MARSDEN CITY LIMITED PARTNERSHIP (through its general partner MARSDEN CITY DEVELOPMENT LIMITED) (ENV-2022-AKL-000151) Appellants
AND	WHANGĀREI DISTRICT COUNCIL Respondent
AND	KĀINGA ORA – HOMES AND COMMUNITIES FOODSTUFFS NORTH ISLAND LIMITED THE UNIVERSITY OF AUCKLAND

SOUTHPARK CORPORATION LIMITED

Section 274 parties

Court: Environment Judge J A Smith sitting alone under s 279 of the Act

Date of Order: 18 January 2023

Date of Issue: 18 January 2023

CONSENT DETERMINATION

A: Under section 279(1)(b) of the Resource Management Act 1991, the Environment Court, by consent, orders that:

(1) The Noise and Vibration chapter and the Marsden City Precinct chapter of the Operative Whangarei District Plan are amended in accordance with Annexure 1;

(2) The Planning Maps are amended in accordance with Annexure 2;

(3) The District Wide – Noise topic is resolved in its entirety;

(4) The appeals by KiwiRail Holdings Limited and Waka Kotahi New Zealand Transport Agency are resolved in their entirety;

(5) The appeal by Marsden City Limited Partnership (through its general partner Marsden City Development Limited) is resolved through this determination and that in relation PC150 issued contemporaneously, except as to the issue of internal roading covered by the appeal on PC 150.

B: Under section 285 of the Resource Management Act 1991, there is no order as to costs.

C: I commend the Whangārei District Council on the prompt and reasonable resolution of the appeals and direct the amendments are incorporated into the plan Change. I understand the Change can then be made fully operative.

REASONS

Introduction

[1] This consent order relates to:

(a) The appeals by KiwiRail Holdings Limited (**KiwiRail**) and Waka Kotahi New Zealand Transport Agency (**Waka Kotahi**) against the decision of the Whangārei District Council (**the Council**) on Plan Change 109 – Transport (**PC109**) of the Urban and Services plan change package (**the Urban and Services plan changes**) to the Operative Whangārei District Plan (**the Plan**); and

(b) Consequential amendments associated with an appeal by Marsden City Limited Partnership through its general partner Marsden City Development Limited (**Marsden City Limited Partnership**) against the decision of the Council on Private Plan Change 150 – Marsden City (**PC150 – Marsden City**) to the Plan. This appeal is largely resolved by this determination and a separate determination issued contemporaneously in relation to PC150 but for one aspect relating to internal roading.

PC109 Appeals

[2] The relevant aspects of the appeals by KiwiRail and Waka Kotahi seek new provisions to protect amenity and human health, and to manage reverse sensitivity effects, for noise sensitive activities in close proximity to the state highway and rail networks across Whangārei district.

[3] These aspects of the appeals were allocated to the District Wide Noise topic of the appeals against the Urban and Services plan changes.

[4] These are the last remaining appeals, and this is the last remaining appeals topic, against the Urban and Services plan changes.

[5] This consent order resolves the remainder of the KiwiRail and Waka Kotahi appeals and the entirety of the District Wide Noise topic.

Marsden city PC150 appeal

[6] The Whangārei District Council are also processing appeals relating to change PC150 which in part deals with growth issues at Marsden Point and surrounding area. Marsden City Limited (through its general partner) filed appeals seeking more liberal provisions for development. Most issues have been resolved in a contemporaneous determination issued by this court on PC150.[1]

[7] In the course of discussions, it was agreed that noise sensitive activities (close to rail) at Marsden would be better dealt with as part of a district wide control rather than separately. Thus, the parties now agree and seek that this control be in the district wide provisions and also resolve the Marsden City appeal on this issue under PC150.

PC109

Operative Plan

[8] The Plan contains a Noise and Vibration (**NAV**) chapter including:

(a) Permitted activity sound insulation requirements for noise sensitive activities located within certain zones;[2] and

(b) Controlled activity rules for the construction of additional habitable rooms and new residential units within the mapped Outer Control Boundary of Whangārei Airport.[3]

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[1] [2023] NZEnvC 5.
[2] NAV.6.5 Sound Insulation Requirements.
[3] NAV.6.6 Activities Establishing near the Airport Zone.

[9] The only existing requirements in the Plan managing noise sensitive activities in close proximity to the state highway and rail networks apply to mapped locations at Marsden.[4]

[10] There are no district wide requirements in the NAV chapter (or elsewhere in the Plan) managing noise sensitive activities in close proximity to the state highway and rail networks across Whangārei district.

Notification

[11] The notified Urban and Services plan changes did not introduce any provisions managing noise sensitive activities in close proximity to the state highway and rail networks across Whangārei district.

Submission

[12] KiwiRail and Waka Kotahi made complementary submissions (**the submissions**) on PC109 seeking a new suite of provisions (an objective, a policy and a rule) to ensure that new activities which locate in close proximity to transport networks are protected from potential adverse health and amenity effects. The proposed rule would apply to new buildings, or alterations to existing buildings, that contain an activity sensitive to noise with reference to:

(a) Road noise effects on noise sensitive activities in outdoor spaces, within 100m of a state highway carriageway;

(b) Road and rail noise effects on new or altered buildings containing noise sensitive activities, within 100m of a state highway carriageway or 100m from the legal boundary of a rail corridor; and

(c) Road and rail vibration effects on new or altered buildings containing noise sensitive activities, within 40m of a state highway carriageway or 60m from the legal boundary of a rail corridor.

[4] NAV.6.5 Sound Insulation Requirements - Marsden Primary Centre Noise Zone 1 and Noise Zone 2A; Marsden City Precinct provisions.

Decision

[13] The Council decisions on the Plan Changes (**the Decisions**) did not introduce the new provisions requested in the submissions.

[14] The Decisions noted that further work was required to justify in section 32 terms the proposed provisions, including with reference to existing built development.

Appeal

[15] KiwiRail and Waka Kotahi appealed the Decisions seeking:

(a) relief consistent with the submissions; or

(b) alternative, additional or consequential relief to address the issues identified in the appeals.

Parties

[16] There are common s274 parties to the relevant aspects of the KiwiRail and Waka Kotahi appeals: Foodstuffs North Island Ltd, Kāinga Ora – Homes & Communities, Southpark Corporation Ltd, and University of Auckland. KiwiRail and Waka Kotahi are also s274 parties to each other's appeals.

[17] As we have noted Marsden City's interest arises from their appeal to PC150. Although this is specific to Marsden it raises the same issues as the PC109 appeals in this respect.

Agreement reached

[18] Following mediation and subsequent direct discussion the parties have reached agreement on a proposal to resolve the appeals.

[19] The agreement is founded on locating new provisions in the NAV chapter rather than in the Transport (**TRA**) chapter as sought in the appeals. The parties are agreed that the provisions are better located in the NAV chapter to align with the other plan objectives, policies and rules for noise, and that the National Planning Standards (**the Standards**) now require such provisions to be located in the NAV

chapter. The parties are satisfied that there is scope for this solution as both NAV and TRA are district wide chapters, and therefore there is no difference in application of the proposed rules. This is further addressed in the s32AA assessment below.

[20] The agreed amendments relate to the following provisions:

(a) No new objectives or policies are required as the NAV chapter contains operative objectives and policies which appropriately support new provisions to protect human health and amenity, and to manage reverse sensitivity effects, for noise sensitive activities in close proximity to the state highway and rail networks across Whangārei district;

(b) Noise effects from road traffic on state highways and rail traffic on noise sensitive activities in new buildings or alterations to existing buildings will be managed by:

(i) Throughout the Whangārei district, mapping a State Highway Noise Control Boundary overlay within the modelled 53dB noise contour (and up to a maximum width of 100m) from the state highway carriageway;

(ii) From the Whangārei rail yards south, mapping a Rail Noise Control Boundary overlay within the modelled 53dB noise contour (and up to a maximum width of 100m) from the legal boundary of the rail corridor;

(iii) Including new provisions within existing NAV.6.5 Sound Insulation Requirements applying to the State Highway Noise Control Boundary and the Rail Noise Control Boundary overlays, including new permitted activity sound insulation requirements and an appendix containing alternative construction standards, a restricted discretionary activity, advice notes, compliance standards, and a notification rule;

(iv) North of the Whangārei rail yards, mapping a Rail Noise Alert Area overlay within the modelled 53dB noise contour (and up to a

maximum width of 100m) from the legal boundary of the rail corridor, and including a new permitted activity rule and accompanying advice note in the NAV chapter.

(c) Rail vibration effects on noise sensitive activities will be managed by mapping throughout the Whangārei district a Rail Vibration Alert Area overlay within 60m from the legal boundary of the rail corridor, and including a new permitted activity rule and accompanying advice note in the NAV chapter.

(d) Waka Kotahi will not pursue provisions relating to:

(i) Noise effects on noise sensitive activities in outdoor spaces; or

(ii) Vibration effects from traffic on state highways.

[21] Waka Kotahi, KiwiRail and the Council do not consider the statement in paragraph [22] of this order to be necessary but in the interests of an efficient settlement have agreed to its inclusion.

[22] The proposed provisions are for the purposes of addressing modelled noise effects from the North Island Main Trunk Line and State Highway Network, and reflect the particular circumstances of this District. Those provisions are not to be taken as a binding precedent for any other private or public plan change. The parties also agree that this statement does not preclude similar provisions being sought by any party in any other private or public plan change.

PC150 – Marsden City

[23] An area of land at Marsden, bounded by a rail designation to the north and SH15 Port Marsden Highway to the south east, is identified in the Plan as Marsden Primary Centre zone. The zone chapter includes mapped noise zones which are listed in the operative NAV sound insulation requirements.[5]

[5] NAV.6.5 Sound Insulation Requirements - Marsden Primary Centre Noise Zone 1 and Noise Zone 2A.

[24] PC150 – Marsden City sought to replace the Marsden Primary Centre chapter with a suite of National Planning Standards zones used elsewhere in the Plan (and a new Town Centre Zone) together with a Marsden City Precinct.

[25] The Council decision on PC150 – Marsden City (**the PC150 Decision**) pre-dated the agreement to introduce district wide noise provisions through resolution of the KiwiRail and Waka Kotahi appeals.

[26] The PC150 Decision included:

(a) Site-specific provisions and noise zones in the Marsden City Precinct chapter and updated nomenclature in the NAV chapter to protect human health and amenity, and to manage reverse sensitivity effects, for noise sensitive activities in close proximity to State Highway 15A and the rail designation adjacent to the Marsden City Precinct; and

(b) An extension of the proposed Commercial zone at Marsden City (from approximately 70m from the northern boundary to 100m from the northern boundary) as a further response to potential rail noise effects.

[27] Following mediation of the Marsden City Limited Partnership appeal the parties to that appeal have agreed that, as a consequence of the agreed district wide provisions, the PC150 – Marsden City site-specific noise provisions (and relocation of the Commercial zone boundary at Marsden City) are no longer necessary or efficient and should be deleted. The agreed district-wide provisions will instead apply to Marsden City.

[28] The parties agree that jurisdiction for deleting the site-specific Marsden City provisions arises consequentially from the KiwiRail and Waka Kotahi appeals against PC109 which are intended to apply a consistent approach across the district.

[29] There are common parties to the two sets of appeals:

(a) KiwiRail and Waka Kotahi are s274 parties to the relevant aspects of the Marsden City Limited Partnership appeal; and

(b) Southpark Corporation Ltd, which has a beneficial interest in Marsden City Limited Partnership, is a s274 party to the relevant aspects of the KiwiRail and Waka Kotahi appeals.

[30] The removal of the PC150 - Marsden City site-specific noise provisions is therefore sought as a consequential amendment of the KiwiRail and Waka Kotahi appeals against PC109. The agreed changes relate to the following provisions:

(a) Deletion of site-specific provisions in the Marsden City Precinct chapter in the Plan to protect human health and amenity, and to manage reverse sensitivity effects, for noise sensitive activities in close proximity to State Highway 15 and the rail designation adjacent to the Marsden City Precinct as these have been replaced by the district wide provisions; and

(b) Deletion of references to Marsden Primary Centre Noise Zone 1 and Noise Zone 2A in the NAV chapter and addition of references to Town Centre Zone, to reflect PC150 – Marsden City nomenclature.

[31] The Commercial zone boundary in the Marsden City Precinct is addressed in separate consent documents with respect to PC150. A contemporaneous determination will be issued.[6] This consent determination should be read in conjunction with that consent determination.

Section 32AA Evaluation

[32] Section 32AA of the Act requires a further evaluation for any changes to a proposal since the initial s 32 evaluation report. In this instance the changes are the introduction of specific provisions (through use of Noise Control Boundary and Alert Area overlays) for managing modelled road and rail noise effects on noise sensitive activities within new and altered buildings and any rail vibration effects on noise sensitive activities in close proximity to the state highway and rail networks across the Whangārei district.

[6] [2023] NZEnvC 5.

[33] The issue as to PC109 vis a vis PC150 is of no substantive moment in my view. Both appeals deal with the same issue albeit only for Marsden in PC150 and there are some common parties. I conclude resolution in the general provision is more effective and efficient.

[34] The parties provided a joint memorandum covering s32AA and advised as follows:

National Policy Statement on Urban Development

[35] Whangārei is a "tier 2" urban environment under the National Policy Statement on Urban Development (**NPS-UD**).

[36] In April and August 2021 consent determinations for rezoning of land within urban environments in the Whangārei district, which give effect to the NPS-UD, were issued. Those include General Residential Zone and Medium Density Residential Zone in proximity to state highways and the rail corridor.

[37] Objective 1 of the NPS-UD provides:

> **Objective 1:** New Zealand has well-functioning urban environments that enable all people and communities to provide for their social, economic, and cultural wellbeing, and for their health and safety, now and into the future.

[38] The agreed amendments to the Plan manage modelled road and rail noise effects on noise sensitive activities within new and altered buildings and any rail vibration effects on noise sensitive activities. Waka Kotahi, KiwiRail and the Council consider that the provisions do not compromise the ability to give effect to the NPS-UD, including by providing for permitted activity and consenting pathways. Kāinga Ora considers that the NPS-UD is not compromised in this particular context, due to the modelling exercise undertaken which results in a relatively limited spatial extent of provisions which attract consenting requirements and which apply over residentially zoned land (in particular the limited application of the Rail Noise Control Boundary over such land).

Regionally Significant Infrastructure

[39] State highways and railway lines are recognised as Regionally Significant Infrastructure (**RSI**) in the Regional Policy Statement for Northland[7] and in the Plan.[8]

[40] In March 2021 the consent determination for the RSI objectives and policies in the Plan, which give effect to the RPS, was issued. The RSI objectives and policies are located in the District Growth and Development (**DGD**) chapter of the Plan.

[41] The relevant RSI objectives and policies are:

> **DGD-O13 – Identification and Protection**
> Regionally Significant Infrastructure is identified and protected.
>
> **DGD-O14 – Recognised Benefits**
> The benefits of Regionally Significant Infrastructure are recognised and provided for.
>
> **DGD-P15 – Benefits of Regionally Significant Infrastructure**
> To recognise and provide for the social, economic and cultural benefits of Regionally Significant Infrastructure by enabling its ongoing operation, maintenance, development, and upgrading where adverse effects are managed

[42] The agreed amendments to the Plan give effect to the RSI objectives and policies by recognising the benefits of the state highway and rail networks and managing effects from traffic using those networks.

Incompatible Activities and Reverse Sensitivity

[43] Objectives and policies with respect to incompatible activities and reverse sensitivity are located in the DGD chapter and in the NAV chapter. The relevant objectives and policies are:

> **DGD-O5 – Incompatible Activities and Reverse Sensitivity**
> Avoid conflict between incompatible land use activities from new subdivision, use and development.

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[7] Part operative 9 May 2016, fully operative 15 May 2018.
[8] The Plan defines RSI as that listed in Appendix 3 to the RPS.

DGD-P2 – Incompatible Land Uses and Reverse Sensitivity

To manage the establishment and location of new activities and expansion of existing activities to avoid conflicts between incompatible land uses.

NAV.3 Objectives

NAV.3.1. To enable a mix of activities to occur across a range of Zones, while ensuring that noise and vibration is managed within appropriate levels for the health and wellbeing of people and communities, and for the amenity and character of the local environment.

NAV.3.2. To ensure that activities that seek a high level of acoustic and vibration amenity do not unduly compromise the ability of other lawful activities to operate.

NAV.4 Policies

NAV.4.2. To avoid reverse sensitivity effects by:

a. Requiring suitable acoustic design standards for noise sensitive activities located in or adjacent to areas anticipating high noise levels.

b. Restricting noise sensitive activities in Zones where they could unduly compromise the continuing operation of appropriate business activities.

c. Considering the use of other mechanisms, such as noise control boundaries, buffer areas or building setbacks, as appropriate tools to protect existing or future activities.

[44] The parties submit the agreed amendments to the Plan give effect to the objectives and policies with respect to incompatible activities and reverse sensitivity by mapping those areas where road and rail noise effects on noise sensitive activities within new and altered buildings and rail vibration effects on noise sensitive activities may occur and assisting to manage reverse sensitivity effects on RSI.

National Planning Standards

[45] The Standards include direction 7 – District wide Matters Standard which provides as a mandatory direction:

33. If provisions for managing noise are addressed, they must be located in the Noise chapter. These provisions may include:

…

> c. sound insulation requirements for sensitive activities and limits to the location of those activities relative to noise generating activities.

[46] The parties have therefore agreed that – while the appeals seek that the new provisions be located in the TRA chapter – the provisions must be located in the NAV chapter in order to comply with the Standards.

[47] As TRA and NAV are both district wide chapters the parties are satisfied that there is no difference in effect and no issue as to jurisdiction.

Overlays

[48] The Standards include direction 12 – District Spatial Layers Standard which provides:

> An overlay spatially identifies distinctive values, risks or other factors which require management in a different manner from underlying zone provisions

[49] The Standards specify that "provisions" introduced by the spatial layer must be located in the appropriate district wide chapter.

[50] The Standards define "provisions" as:[9]

> all content in a policy statement or plan, including but not limited to background content, issues, objectives, policies, methods, rules, and anticipated environmental results.

[51] The agreed amendments include both rules and non-rule methods (mapping, advice notes, compliance standards).[10]

Mapping standard

[52] The Standards include direction 13 - Mapping Standards, with a mandatory direction that a plan must use the symbols in table 20 of the Standards wherever maps

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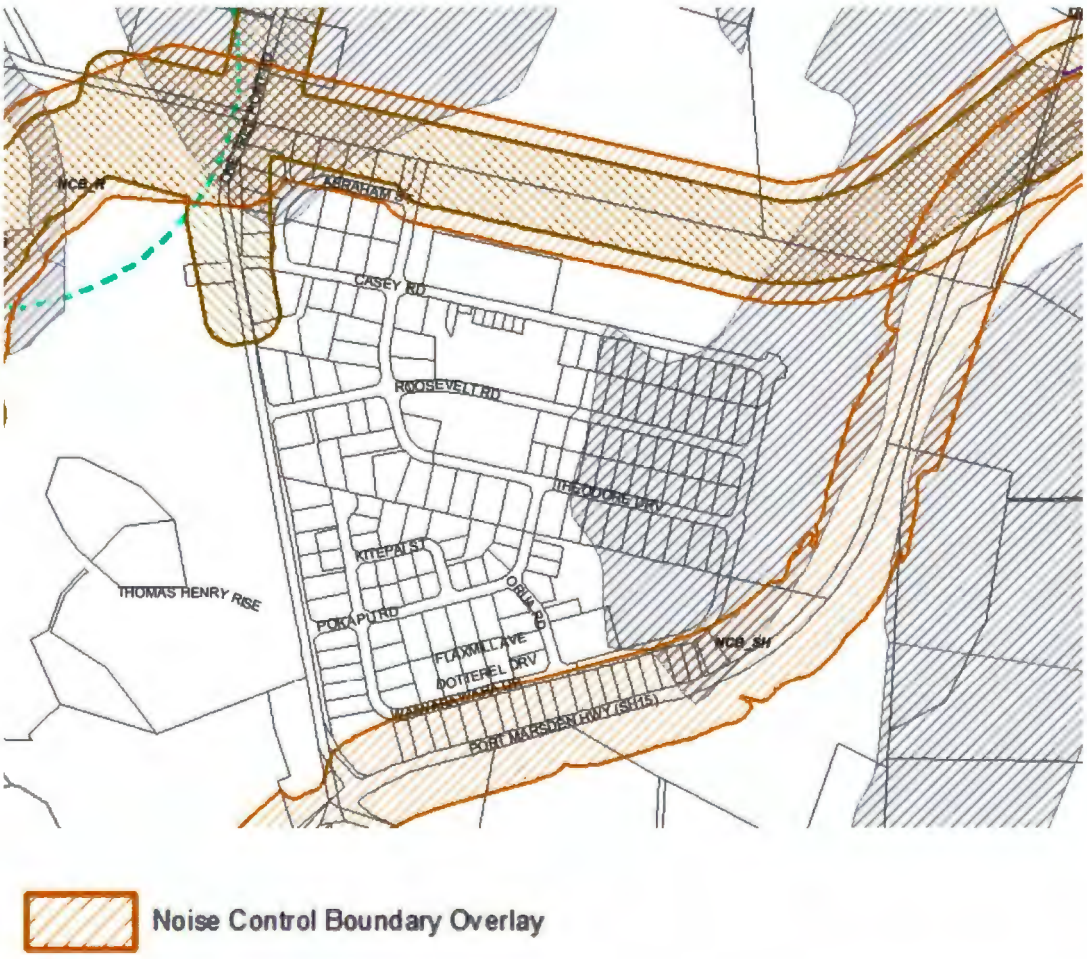
[9] Standards direction 1 – Foundation Standard - Interpretation
[10] RMA s75(1)(c) and (2)(b).

display the features listed in that table and, if required, that symbols may be labelled on maps.

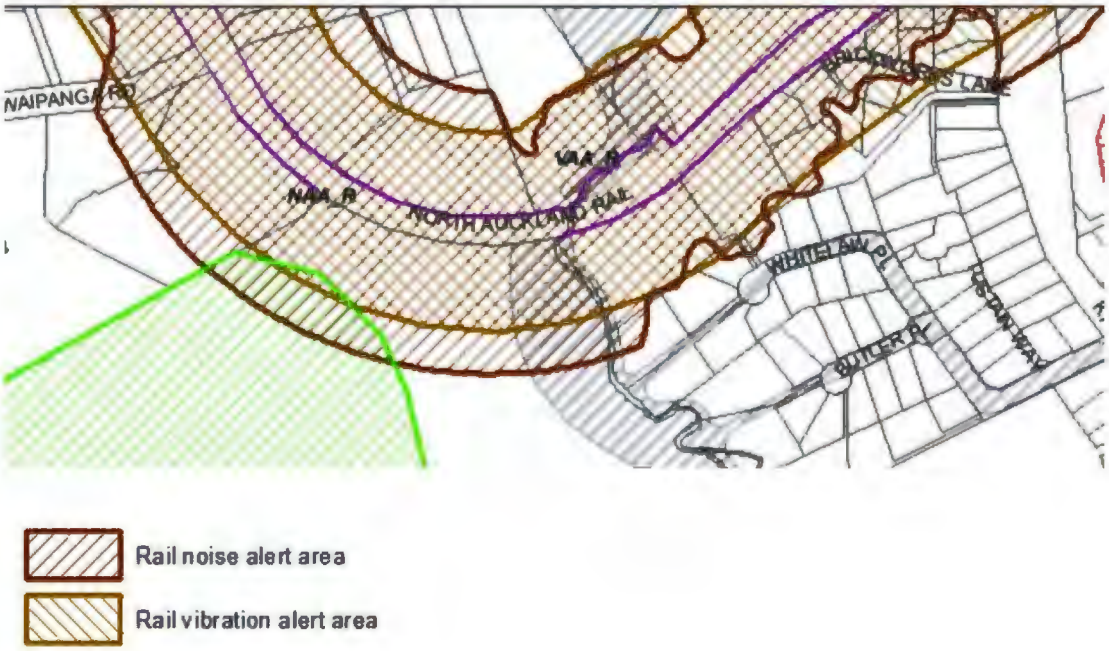
[53] Standards Table 20 – Symbol representation includes orange diagonal hatching for noise control boundary overlays:

Noise control boundary overlay		Polygon Fill: None Angle: 45.00 Line width: 1 pts	Line separation: 5 pts RGB 245, 130, 33 Outline width: 2 pts

[54] The agreed State Highway Noise Control Boundary and Rail Noise Control Boundary overlays have been mapped by the Council using the appropriate Standards symbology with the addition of labels to differentiate between the two overlays. A sample Plan map is included below (with the rail corridor at top denoted "NCB_R" and the state highway at bottom denoted "NCB_SH"):

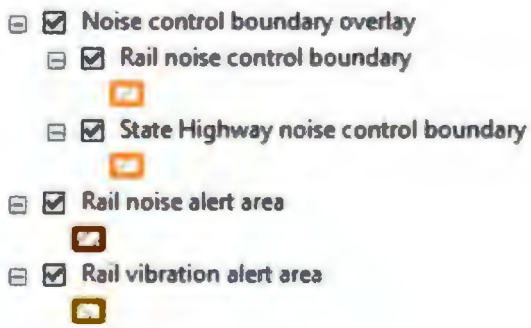


[55] The agreed Rail Noise Alert Area and Rail Vibration Alert Area overlays are not noise control boundaries and therefore do not fall within the mandatory mapping symbols in Table 20. These overlays have been mapped by the Council using notation and labels to differentiate between the two overlays. A sample Plan map is included below (with the vibration overlay denoted as "VAA_R" and the noise overlay denoted as "NAA_R"):



[56] When the Plan maps are viewed via the Council's GIS, the four overlays (state highway and rail Noise Control Boundaries, and rail noise and rail vibration Alert Areas) can be turned on and off as separate layers to assist Plan users. The GIS menu showing the separate layers is included below:

e-plan layers:



Spatial mapping

[57] The appeals sought provisions managing road and rail noise effects on new and altered buildings containing noise sensitive activities within 100m of a state highway carriageway or the rail corridor, and road and rail vibration effects on new and altered buildings containing noise sensitive activities within 40m of a state highway carriageway or 60m of the rail corridor.

[58] The agreed spatial mapping includes:

(a) Throughout the Whangārei district, mapping a State Highway Noise Control Boundary overlay within the modelled 53dB noise contour (and up to a maximum width of 100m) from the state highway carriageway;

(b) From the Whangārei rail yards south, mapping a Rail Noise Control Boundary overlay within the modelled 53dB noise contour (and up to a maximum width of 100m) from the legal boundary of the rail corridor;

(c) North of the Whangārei rail yards, mapping a Rail Noise Alert Area overlay within the modelled 53dB noise contour (and up to a maximum width of 100m) from the legal boundary of the rail corridor; and

(d) Throughout the Whangārei district, mapping a Rail Vibration Alert Area overlay within 60m from the legal boundary of the rail corridor.

[59] The parties consider that mapping the Noise Control Boundary overlays to the modelled 53dB noise contour is more efficient and effective than applying provisions within a blanket 100m from a state highway carriageway or the rail corridor. The use of a mapped overlay ensures that the rules apply to locations and sites which may be subject to a level of noise that could cause adverse effects, rather than standard distances. The overlay ensures that sites which bear the costs (e.g., cost of consents, noise reports and insulation) are the sites that experience the effects generated by the road and rail corridors and receive the benefits (through improved health and amenity). The use of a noise control boundary is consistent with existing provisions in the Plan regarding Whangārei Airport.

[60] The methodology for the noise contour modelling was prepared by noise experts for the Appellants and reviewed by experts for the Council and other parties. The modelling has taken into account topography, buildings, road and rail alignments, existing noise barriers, and ground absorption; traffic data and road surfaces; and train volumes, train speeds, train types, tracks and tunnels.

[61] Overall, the noise contour methodology has produced mapping (and therefore effects management) which is targeted to the properties where the effects are most likely to be experienced.

[62] With respect to rail noise, mapping has been split into northern and southern portions due to the difference in rail movements (and therefore rail noise effects) on different parts of the network:

(a) The Rail Noise Control Boundary overlay applies from the Whangārei rail yards south. This overlay incorporates the rail designation for the Marsden line (to Northport). Existing rail movement data and future predictions indicate that this will be a relatively busy line in the Whangārei district context (including the addition of the Marsden line). That analysis (being the significant increase in predicted movements and the associated noise effects) supports this part of the network being mapped as a noise control boundary subject to sound insulation requirements;

(b) The Rail Noise Alert Area overlay applies north of the Whangārei rail yards. Existing rail movement data and future predictions indicate that this is currently and will continue to be a relatively quiet line in the Whangārei district context. That analysis supports this part of the network being mapped as an Alert Area subject to advisory management tools rather than sound insulation requirements.

[63] With respect to rail vibration, existing data and knowledge indicates that rail vibration effects in the Whangārei district context are also most appropriately managed by mapping an Alert Area subject to advisory management tools rather than through vibration isolation requirements.

[64] The various provisions are addressed further below.

[65] The noise contour methodology, together with rail movements analysis, has resulted in mapping tailored to the Whangārei district context.

Rules

[66] The agreed amendments to the Plan comprise two different sets of rules - for the Noise Control Boundary overlays, and for the Alert Area overlays.

Noise Control Boundary overlays

[67] For the Noise Control Boundary overlays, new provisions have been agreed to be added to existing NAV.6.5 Sound Insulation Requirements for new buildings, or alterations to existing buildings, containing noise sensitive activities. This includes a new permitted activity rule, a restricted discretionary activity, advice notes, compliance standards specifying how measurements are undertaken, and a notification rule. The existing Plan definition of "noise sensitive activities" is used in the provisions.

[68] Activities captured by the Noise Control Boundary overlay mapping have five pathways to compliance with the permitted activity rule:

(a) The space is designed, constructed and maintained to achieve the specified indoor design noise levels.[11]

(b) The space is designed, constructed and maintained in accordance with the construction schedule contained in a new appendix.[12]

(c) An acoustician demonstrates, by prediction or measurement, that the noise at all exterior façades is no more than 15 dB above the indoor design noise levels.[13]

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[11] NAV.6.5.3.
[12] NAV.6.5.4(d); NAV Appendix 1: NAV.6.5.4(d) Alternative Construction Schedule for Road and Rail Noise Control.
[13] NAV.6.5.4(b).

(d) The nearest exterior façade of the building is at least 50m from the formed carriageway or railway track, and a solid building, fence, wall or landform blocks line of sight from all windows and doors to the formed carriageway or track.[14]

(e) The construction is an alteration or extension to an existing building and:

(i) For buildings other than residential units, or for external alterations to residential units, does not increase the gross floor area of the noise sensitive activity within the mapped noise control boundary.[15] This option enables alterations which are outside the spatial area of concern (such as on the façade of the building facing away from the road or rail corridor).

(ii) For internal alterations to residential units, does not increase the gross floor area of the noise sensitive activity within the mapped noise control boundary by more than 5m^2 per 10 year period (that is, the life of the Plan).[16] This enables re-allocation of space between existing habitable rooms (such as partitioning or combining of existing bedrooms), and modest conversion of non-habitable space to habitable space (such as incorporation of a hallway or linen cupboard into an adjacent bedroom), in order to improve the function of a residential unit[17] at minimal cost; but ensures that the conversion of larger non-habitable spaces into habitable space (such as conversion of attached garaging into additional bedrooms) provides appropriate sound insulation.

[69] The permitted activity acoustic standards have been developed with acoustic advice from independent acousticians for Waka Kotahi and KiwiRail, the Council, Kāinga Ora, and University of Auckland.

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[14] NAV.6.5.4(a).
[15] NAV.6.5.4(c) and (d).
[16] NAV.6.5.4(e).
[17] Such as to relieve overcrowding.

[70] The parties have agreed that where compliance is not achieved via the permitted activity pathways a restricted discretionary activity consent is required, with matters of discretion including effects on health and indoor amenity, alternatives, whether it will lead to undue constraints on the continuing operation of the state highway and rail corridors, mitigation provided by natural or built features, and the outcome of any consultation with Waka Kotahi or KiwiRail. These matters appropriately focus an application for resource consent on the relevant effects and potential site-specific responses.

[71] A notification rule specifies that restricted discretionary activities shall not be publicly notified or limited notified unless Waka Kotahi or KiwiRail is determined to be an affected person or special circumstances exist. The notification rule assists the provisions to be efficient and effective by providing clarity and increasing certainty.

[72] The parties consider that it is more appropriate to manage these noise effects through sound insulation requirements with multiple permitted activity pathways, rather than more limited pathways (the more restrictive alternative) or to leave the effects entirely unmanaged (the more permissive alternative).

Rail Noise Alert Area and Rail Vibration Alert Area overlays

[73] For the Noise Alert Area and Rail Vibration Alert Area overlays, new permitted activity rules and accompanying advice notes have been agreed to be added to the NAV chapter.

[74] The Alert Area overlays make existing and prospective property owners aware of the potential presence of effects so that they can make informed decisions about the construction or alteration of buildings containing noise sensitive activities, without placing obligations on those landowners. While KiwiRail considers the effects in these Areas still require management, for the purposes of settlement the parties have agreed the current and predicted level of rail noise and/or vibration in these locations do not justify the introduction of provisions which impose sound insulation and vibration isolation requirements on noise sensitive activities at this time.

[75] For each overlay a new permitted activity rule has been drawn from similar permitted activity rules in the Urban and Services plan changes chapters of the Plan.[18] These new rules clarify to Plan users and Council consents planners that activities within the mapped Alert Area overlays remain a permitted activity.[19]

[76] The accompanying advice notes to the permitted activity rules:

(a) Explain that the Rail Noise Alert Area identifies the noise-sensitive area within a 53dB rail noise contour each side of the rail corridor, and that the Rail Vibration Alert Area identifies the vibration-sensitive area within 60metres each side of the rail corridor;

(b) Explain that no specific district plan rules or notification requirements apply as a result of the Alert Areas; and

(c) Advise that properties within the mapped overlays may experience rail noise and rail vibration.

[77] The parties consider that it is more appropriate to manage these noise and vibration effects through Alert Area overlays subject to advisory management tools which signal that higher levels of noise and vibration may be experienced in this location, rather than by imposing sound insulation and vibration isolation requirements on landowners (the more restrictive alternative) or leaving the effects entirely un-addressed (the more permissive alternative).

[78] The parties considered as an alternative method mapping the Alert Areas only in the Council's GIS (which is used to inform both LIMS and PIMs) rather than in the Plan. However, on balance, there are efficiencies in having all of the rail noise and vibration mapping (Noise Control Boundaries and Alert Areas) kept together in the Plan.

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[18] For example the General Residential Zone rule GRZ -R1 Any Activity Not Otherwise Listed in This Chapter.

[19] NAV.6.5A Activities within the Rail Noise Alert Area and NAV.6.5B Activities within the Rail Vibration Alert Area.

PC150 Consequential Amendments

[79] As a consequence of the agreed district wide provisions, the PC150 – Marsden City site-specific noise provisions sought by Marsden city Limited in their appeal to PC150 are no longer necessary or efficient.

[80] The agreed changes relate to the following provisions:

(a) Deletion of site-specific provisions in the Marsden City Precinct chapter in the Plan as these have been replaced by the district wide provisions.

(b) Replacement of outdated references to Marsden Primary Centre Noise Zone 1 and Noise Zone 2A in the NAV chapter with references to Town Centre Zone to reflect PC150 – Marsden City nomenclature.

Sufficient information

[81] The parties agree that this is not a situation where there is uncertain or insufficient information such that the risk of acting or not acting needs to be evaluated. The location of the state highway and rail corridors, and the adverse effects of road and rail noise with respect to noise sensitive activities, are well understood.

[82] As described earlier, since filing of the appeals the parties have worked collaboratively to develop the noise contour mapping methodology, and to achieve an appropriate balance between costs and benefits in the Whangārei district context through adoption of sound insulation requirements within the targeted modelled noise contour Noise Control Boundaries and advisory management tools within the Alert Areas.

Court Evaluation

[83] In making this order the Court has now read and considered the appeals and the consent memorandum of the parties dated 30 November 2022.

[84] The Court is making this order under section 279(1) of the Act, such order being by consent, rather than representing a decision or determination on the merits pursuant to section 297. The Court understands for present purposes that:

(a) all parties to the proceedings have executed the memorandum requesting this order;

(b) all parties agree that the agreed amendments to the Noise and Vibration chapter resolve the KiwiRail and Waka Kotahi appeals in relation to the District Wide – Noise topic in full;

(c) all parties agree that the agreed consequential amendments to the Noise and Vibration chapter and the Marsden City Precinct chapter resolve the appeal by Marsden City Limited Partnership (through its general partner Marsden City Development Limited) in part; and

(d) all parties are satisfied that all matters proposed for the Court's endorsement fall within the Court's jurisdiction, and conform to the relevant requirements and objectives of the Act including, in particular, Part 2.

[85] This determination does not represent the outcome of a full hearing by the Court, but rather an agreement reached between parties represented by experienced counsel.

[86] The parties have provided an analysis under s 32AA regarding why the change in position is justified. I am satisfied that there is sound rationale for the changes.

[87] I am of the view that the inclusion of amendments into the NAV chapter rather than the TRA chapter is within scope. This gives effect to National Planning Standards directions 7 and 12, and the provisions apply district wide. Similarly, I have already concluded that the Marsden PC150 appeal on Noise is best addressed in the district wide provisions. This aids with certainty (uniform rule and clarity (in NAV section)).

[88] I agree that the amendments do not compromise the ability to give effect to the NPS-UD. There is a limited spatial extent, and the purpose of the amendments is consistent with Objective 1 NPS-UD in that the focus of the changes is on protecting human health, wellbeing and amenity.

[89] I agree with the parties that the agreed amendments to the Plan give effect to the RSI objectives and policies by recognising the benefits of the state highway and rail networks and managing effects from traffic using those networks.

[90] The agreement reached gives effects to the NAV objective and policies which provide for noise, vibration, noise sensitive activities and reverse sensitivity.

[91] The agreed State Highway Noise Control Boundary and Rail Noise Control Boundary overlays have been mapped by the Council using the appropriate Standards symbology with the addition of labels to differentiate between the two overlays. The agreed Rail Noise Alert Area and Rail Vibration Alert Area overlays are appropriately differentiated and labelled. The ability to turn on and off the layers is practical and helpful.

[92] The overlays are efficient and will be effective in ensuring the rules have a focused application to locations which may be the subject of adverse effects, rather than standard distances. There is a balance of cost and benefit. I am satisfied that the noise contour modelling had expert input and the methodology and rail movement analysis has enabled targeted mapping.

Conclusion

[93] I am of the view that it is beneficial to have pathways to compliance for activities within noise control boundary overlays. I am satisfied that the restricted discretionary matters of discretion focus on relevant effects and are targeted.

[94] I agree that the notification rules provide clarity and certainty.

[95] I consider the advisory management tools adopted in the alert area overlays strike an appropriate balance to ensure management without imposing obligations.

[96] I agree with the parties that as a consequence of the agreed district wide provisions, the PC150 – Marsden City site-specific noise provisions are no longer necessary or efficient.

[97] I conclude the parties have taken a robust and workable approach, and the agreed amendments are the most appropriate way to achieve the purpose of the Act and the objectives in the Plan. Overall, I consider the sustainable management purpose and the other relevant requirements of the Act are broadly met.

Orders

[98] Therefore the Court orders, by consent, that:

(a) the Noise and Vibration chapter and the Marsden City Precinct chapter of the Operative Whangarei District Plan are amended in accordance with Annexure 1;

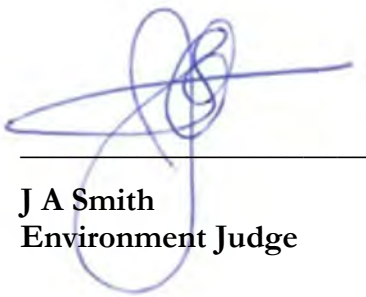
(b) The Planning Maps are amended in accordance with Annexure 2;

(c) The District Wide – Noise topic is resolved in its entirety;

(d) The appeals by KiwiRail Holdings Limited and Waka Kotahi New Zealand Transport Agency are resolved in their entirety;

(e) The appeal by Marsden City Limited Partnership (through its general partner Marsden City Development Limited) is resolved through this determination and that in relation PC150 issued contemporaneously, except as to the issue of internal roading covered by the appeal on PC 150.

(f) There is no order as to costs.



J A Smith
Environment Judge



IN THE ENVIRONMENT COURT
AT AUCKLAND

I TE KŌTI TAIAO O AOTEAROA
KI TĀMAKI MAKAURAU

Decision [2024] NZEnvC 054

IN THE MATTER OF	an appeal under clause 14 of the First Schedule 1 of the Resource Management Act 1991
BETWEEN	HD LAND LIMITED HAMPTON DOWNS (NZ) LIMITED (ENV-2022-AKL-000037) KIWIRAIL HOLDINGS LIMITED (ENV-2022-AKL-000044) WAKA KOTAHI NEW ZEALAND TRANSPORT AGENCY (ENV-2022-AKL-000048) Appellants
AND	WAIKATO DISTRICT COUNCIL Respondent

Court:	Alternate Environment Judge L J Newhook sitting alone under s 279 of the Act
Last case event:	22 December 2023
Date of Order:	25 March 2024
Date of Issue:	25 March 2024

CONSENT ORDER

A: Under section 279(1)(b) of the Resource Management Act 1991, the Environment Court, by consent, orders that:

(1) The various chapters in the Proposed Waikato District Plan be amended in accordance with Appendix 1 to this order (additions marked as underlined and deletions as ~~strikethrough~~;

(2) the planning maps are amended in accordance with Appendix 2 to this order; and

(3) the appeals are otherwise dismissed.

B: Under section 285 of the Resource Management Act 1991, there is no order as to costs.

REASONS

Introduction

[1] This consent order relates to appeals by New Zealand Transport Agency Waka Kotahi (**NZTA**), KiwiRail Holdings Ltd (**KiwiRail**) and HD Land Limited & Hampton Downs (NZ) Limited (**Hampton Downs**) against parts of the decisions of the Waikato District Council (**Council** or **Respondent**) in respect of the Proposed Waikato District Plan (**PDP**).

Background

[2] The specific relief sought by NZTA, KiwiRail and Hampton Downs with respect to Topic 5.1 and the Independent Hearings Panel's (**IHP**) decision on this are addressed below.

NZTA and KiwiRail

[3] NZTA and KiwiRail both made a submission and further submission on the PDP seeking a variety of amendments to numerous PDP chapters, from the strategic direction chapter through to submissions on various zone provisions where either

state highways or rail corridors traverse that zone. The scope of issues raised in both appeals include concerns about safety, provision for regionally significant infrastructure, the need for integrated land use and transport planning, managing the interaction between land use activities and the state highway/rail corridor network.

[4] The main points advanced in both NZTA's and KiwiRail's submissions and further submissions were that the PDP required new provisions requiring all new buildings, or alterations to existing buildings containing a sensitive activity, within 100m of a state highway carriageway or legal boundary of a railway corridor to be appropriately mitigated in relation to noise and vibration.[1] The rationale for this was that state highway and rail networks operate 24 hours a day, seven days a week and have the potential to impact people's health and wellbeing by reducing the amenity and enjoyment of their properties and disrupting sleep. NZTA and KiwiRail argued it was critical to ensure that undue restrictions were not placed on the operation of these transport networks, and that the health and wellbeing of those residing in, or occupying, nearby sites is protected.

[5] KiwiRail's submission also sought that the 5m setback which had been applied to sensitive land uses in the notified Residential, Rural, Countryside Living and Village zones apply to all new buildings and structures (not just buildings containing sensitive land uses), or alterations to existing buildings or structures. KiwiRail further requested that the 5m setback be applied to all zones traversed by a rail corridor, not just zones which enable residential activities. They sought this relief on the basis that managing the safety effects of landowners using land adjacent to the rail corridor to maintain or repair their buildings, which is the purpose of the proposed setback, is an issue relevant to *all* zones.

[6] Decision Report 13: Infrastructure (**Decision Report 13**) addressed the management of land transport linear infrastructure (i.e., the state highway and rail networks) and reverse sensitivity concluding that:[2]

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[1] See KiwiRail's submission, dated 9 October 2018, page 8; and NZ Transport Agency submission, dated 9 October 2018, Attachment 3.
[2] Decision Report 13: Infrastructure at [203].

> … it was inherently unfair that the burden of mitigating the noise generated by the railway or state highway would be borne by the adjoining landowners.

[7] Based on this assessment, the IHP rejected the relief sought by NZTA and KiwiRail with respect to the introduction of noise and vibration controls and the relief sought by KiwiRail in relation to expansion of the 5m rail corridor setback to all zones. The key reasons for the IHP's decision to reject the relief sought can be summarised as follows:[3]

(a) Neither NZTA nor KiwiRail provided a satisfactory costs assessment of the proposed provisions;

(b) The variables which affect noise generation are entirely beyond the control of adjoining landowners (e.g., the surface of the road, the frequency and type of traffic, surrounding topography and the width of the gap between the infrastructure and the edge of the designation);

(c) The absence of any rules in the PDP requiring NZTA and KiwiRail to minimise the noise and vibration effects of their infrastructure on adjoining landowners;

(d) The fact that NZTA and KiwiRail sought to apply the noise and vibration provisions to both new and existing buildings when, arguably, alterations to existing buildings do not create a new sensitive activity, nor a new reverse sensitivity effect;

(e) The blunt nature of the 100m acoustic effects area when, particularly in the case of state highways, it is likely that this area would capture some areas of land where road noise is already at acceptable levels;

(f) The lack of effort to create a set of provisions tailored specifically to the state highway and rail corridor noise experienced in the Waikato District; and

[3] Decision Report 13: Infrastructure at [203] – [207].

(g) The number of properties potentially affected by the proposed provisions and the likelihood that the landowners affected by the proposed provisions were not aware of the consequences of NZTA and KiwiRail's submissions.

Hampton Downs

[8] Hampton Downs made a submission and further submission on the PDP seeking a variety of amendments to provisions relating to the special purpose zone – Hampton Downs Motorsport and Recreation Zone (**MSRZ**). In relation to setbacks, the submission expressed support for the building setbacks in the MSRZ insofar as they apply to external zone boundaries with roads or other properties, however they did not think that internal setbacks should be imposed. Hampton Downs did not make any specific submission on the need to remove the word 'structure' from Rule 26.3.5 – Building Setbacks – All Precincts (which is now known as MSRZ-S18).

[9] In Decision Report 25: Hampton Downs Motorsport and Recreation Zone (**Decision Report 25**), the IHP noted that the interested parties to the MSRZ topic (being Council, Hampton Downs and NZTA) had worked together to create an agreed package of provisions resolving all of the issues raised in the submissions and further submissions. This package of provisions was included as Attachment 1 to Decision Report 25 and recommended no changes to MSRZ-S18.[4]

[10] The above parts of the appeals have been assigned to Topic 5.1: Linear infrastructure (energy and transport), and the consent order resolves KiwiRail's interest in this topic. The draft consent order also resolves NZTA and Hampton Downs' appeals entirely.

[11] The following parties have given notice of an intention to become a party to the NZTA, KiwiRail and/or Hampton Downs' appeal:

NZTA	KiwiRail	Hampton Downs
• Kāinga Ora Homes and Communities	• Kāinga Ora Homes and Communities	• NZTA

[4] Rule 26.3.5 in the notified version of the PDP.

• Brenda & Gavin Butcher • KiwiRail • Murray Fullerton • Steven & Teresa Hopkins • Tony & Cindy Young • Top End Properties Ltd • Federated Farmers • Perry Group Ltd	• NZTA • Lakeside Developments Ltd • Meridian Energy Ltd • Ports of Auckland Ltd	

[12] It is noted that the section 274 notice filed by NZTA limited their interest in the Hampton Downs' appeal to specific points of relief which have been settled by way of consent order.[5] There are no section 274 parties to the Hampton Downs' appeal in relation to MSRZ-S18.

Agreement reached

[13] Following the filing of the appeals, NZTA, KiwiRail and Hampton Downs have entered into direct discussions with Council (Council, NZTA and KiwiRail have also had direct discussions with Kāinga Ora Homes and Communities) regarding the matters raised in their respective appeals and have now agreed on various proposals which will resolve their interests in Topic 5.1: Linear infrastructure (energy and transport).

[14] The amendments to the various chapters of the PDP decisions version as a result of the agreement reached are set out in **Appendix 1** to this order (additions marked as <u>underlined</u> and deletions as ~~strikethrough~~).

[15] The changes made to the planning maps are shown in **Appendix 2** and detailed below:

[5] *HD Land Limited & Hampton Downs (NZ) Limited v Waikato District Council* [2023] NZEnvC 101.

(a) Insert two noise control boundary overlays titled:

(i) "State Highway Noise Control Boundary" showing the areas of land modelled as being subject to elevated levels of noise (ranging from between 20m and 100m from the formed carriageway of the state highway); and

(ii) "Rail Corridor Noise Control Boundary" showing all land within 100m of the Northern and Eastern Main Trunk Lines.

(b) Show the 100m Rail Corridor Noise Area along the Hautapu and Rotowaro branch lines and 60m Rail Vibration Alert Area from the designation boundary of the rail corridor within the district, as 'information layers'.

Section 32AA evaluation

[16] Section 32AA of the Act requires a further evaluation of any changes to a proposed plan change since the initial section 32 evaluation report and the IHP's decision.

[17] Council has prepared a separate section 32AA assessment, which is contained in **Appendix 3** to this order. In preparing the s32AA, Council has considered a range of information provided by the appellants and Kāinga Ora and has considered their different positions on the issues being negotiated. The analysis contained within the s32AA is not reflective of the position of any individual party, rather it is Council's assessment of the agreed provisions against the requirements of s32AA.

[18] To briefly summarise, the section 32AA assessment concludes that:

Management of noise and vibration related effects

(a) The agreed amendments to AINF-P27 are effective and efficient because they clarify that the intention of the policy is to minimise effects on indoor amenity and health and reverse sensitivity effects, and that the mechanism to achieve this policy includes mapping and design controls;

There is no additional cost associated with this amendment as it merely provides policy level support for the new NOISE provisions;

(b) Inclusion of the new acoustic provisions (NOISE-R44 and NOISE-R45, supported by new technical standards in APP1 and the noise control boundary mapping) will support an efficient outcome as the provisions address health and amenity effects and minimise reverse sensitivity effects which, if not addressed, could lead to the inefficient operation of nationally significant infrastructure (in NZTA and KiwiRail's view). This in turn gives effect to Objective AINF-O2 of the PDP, which requires that infrastructure is protected from reverse sensitivity effects, and its construction, operation, maintenance, repair, replacement and upgrading is not compromised;

(c) Acoustic provisions with multiple permitted activity pathways, as proposed, are more efficient and effective than more limited pathways (the more restrictive alternative) or leaving the effects entirely unmanaged in the PDP (the more permissive alternative);

(d) The inclusion of the new acoustic provisions (NOISE-R44 and NOISE-R45, supported by new technical standards in APP1 and the noise control boundary mapping) will require additional assessments for some buildings and activities in some locations, with associated costs. Construction costs associated with the new provisions potentially involve installing upgraded glazing, mechanical ventilation, and other mitigation features. It is noted however that the proposed performance standards are not set at idealistic stringent levels which would prevent *all* adverse noise effects. Instead, they are set at pragmatic reasonable levels designed to avoid the worst noise effects which could have the biggest impact on human health and amenity. The acoustic provisions have been developed with input from acoustic and ventilation experts engaged by Council, NZTA, KiwiRail and Kāinga Ora Homes and Communities;

Rail Corridor setback for buildings and structures

(e) The benefits of the insertion of the rail corridor setback standards into the PDP include providing a safer and more efficient rail network and reducing the potential costs incurred by railway operations regarding obstructions within the railway corridor. The proposed setback standards will also enable greater certainty around the provision of a safe environment for owners and occupiers to undertake maintenance activities on their properties;

(f) While the setback standards may limit buildings and structures in some locations (with associated costs), this will depend on a range of considerations such as the topography of the site, design of the building/structure, amenity and geotechnical constraints etc. The cost of the proposed setback provisions are not considered in the Council's s32AA to be unreasonable nor disproportionate as landowners can develop their land within the setback through the resource consent process;

(g) The proposed setback standards give effect to objective AINF-O2 of the PDP, which requires that the construction, operation, maintenance, repair, replacement and upgrading of infrastructure not be compromised. They also give effect to Waikato Regional Policy Statement (**WRPS**)[6] objective UFD-O1 which requires that development and associated land use occurs in an integrated, sustainable and planned manner which enables positive environmental, social, cultural and economic outcomes;

Rail Corridor Noise Alert Area and Rail Corridor Vibration Alert Area

(h) Using alert area layers to manage potential adverse effects generated by the rail corridor will be efficient and effective at balancing the

[6] It is noted that Change 1 to the WRPS was publicly notified 15 November 2023 and the parties have reviewed the associated changes to the WRPS in light of the proposed amendments.

infrastructure and health and amenity considerations resulting from development. Alert area layers are an efficient and effective mechanism to provide valuable information to current and prospective owners to allow them to elect to manage the effects they will experience themselves. There are no rules or other PDP provisions associated with the alert layers and therefore no costs arising from their inclusion in the PDP; and

(i) Using an alert area layer places existing and prospective property owners on notice about the potential presence of effects and allows them to make informed decisions about the construction or alteration of buildings containing sensitive land uses. This is considered more appropriate than the alternative option of imposing consenting obligations on landowners to demonstrate compliance with technical standards.

Consideration

[19] In making this order the Court has read and considered the notices of appeal dated 1 March 2022 and the Joint Memorandum of the parties dated 22 December 2023.

[20] The Court is making this order under section 279(1) of the Act, such order being by consent, rather than representing a decision or determination on the merits. The Court understands for present purposes that:

(a) All parties to the proceedings have executed the memorandum requesting this order except Tony and Cindy Young and Brenda and Gavin Butcher who withdrew their section 274 notices on 22 December 2023; and

(b) All remaining parties are satisfied that all matters proposed for the Court's endorsement fall within the Court's jurisdiction, and conform to the relevant requirements and objectives of the Act including, in particular, Part 2.

Order

[21] The Court orders, by consent, that:

(a) The various chapters of the Proposed Waikato District Plan be amended in accordance with **Appendix 1** to this order (additions marked as underlined and deletions as ~~strikethrough~~);

(b) The planning maps are amended in accordance with **Appendix 2** to this order;

(c) The appeals in their entirety are otherwise dismissed; and

(d) There is no order as to costs.



L J Newhook
Alternate Environment Judge



IN THE ENVIRONMENT COURT
AT AUCKLAND

I TE KŌTI TAIAO O AOTEAROA
KI TĀMAKI MAKAURAU

Decision [2022] NZEnvC 218

IN THE MATTER OF	appeals under clause 14 of the First Schedule of the Resource Management Act 1991
BETWEEN	KĀINGA ORA - HOMES AND COMMUNITIES (ENV-2022-AKL-000125) AUCKLAND COUNCIL (ENV-2022-AKL-000126) KĀINGA ORA – HOMES AND COMMUNITIES (ENV-2022-AKL-000127) AUCKLAND COUNCIL (ENV-2022-AKL-000128) KĀINGA ORA – HOMES AND COMMUNITIES (ENV-2022-AKL-000129) AUCKLAND COUNCIL (ENV-2022-AKL-000130) FRANCISCA JOSEPHINE KLEINSMAN (ENV-2022-AKL-000131) AUCKLAND TRANSPORT (ENV-2022-AKL-000132) KIWIRAIL HOLDINGS LIMITED (ENV-2022-AKL-000133)

THE SEAL OF THE ENVIRONMENT COURT OF NEW ZEALAND

Proposed Private Plan Change 48 to the Auckland Unitary Plan (Drury Centre Precinct, PPC 48) - Future Urban Zone, Drury

	AUCKLAND TRANSPORT (ENV-2022-AKL-000134)
	KIWIRAIL HOLDINGS LIMITED (ENV-2022-AKL-000136)
	AUCKLAND TRANSPORT (ENV-2022-AKL-000137)
	Appellant
AND	AUCKLAND COUNCIL
	Respondent
AND	KIWI PROPERTY NO.2 LIMITED
	FULTON HOGAN LAND DEVELOPMENT LIMITED
	OYSTER CAPITAL LIMITED
	Applicants

Court: Environment Judge J A Smith sitting alone under s 279 of the Act

Date of Order: 1 November 2022

Date of Issue: 1 November 2022

CONSENT DETERMINATION

A: Under s 279(1)(b) of the Resource Management Act 1991, the Environment Court, by consent, orders that:

(1) Private Plan Change 48 (PC 48) Drury Centre Precinct to the Auckland Unitary Plan Operative in part is approved with modifications as set out in **Appendix 2** to this order;

(2) Private Plan Change 49 (PC 49) Drury East Precinct to the Auckland Unitary Plan Operative in part is approved with modifications as set out in **Appendix 3** to this order;

(3) Private Plan Change 50 (PC 50) Waihoehoe Precinct to the Auckland Unitary Plan Operative in part is approved with modification as set out in **Appendix 4** to this order; and

(4) the appeals are resolved in full.

B: Under s 285 of the Resource Management Act 1991, there is no order as to costs.

REASONS

Introduction

[1] Five private plan changes have been proposed in the Drury area; Plan Changes 48, 49, 50, 51 and 61.

[2] This consent determination relates to three private plan changes in the Drury East area. Collectively, Plan Changes 48, 49 and 50 propose introducing live urban (business, and residential and open space) zonings to adjacent blocks of land at Drury that are currently zoned Future Urban Zone in the AUP. The proposed urban zonings, servicing arrangements and transportation arrangements are complementary and:

(a) take account of a comprehensive structure planning process undertaken by the applicants, together with the proponent of PC 51 at Drury West; and

(b) are largely consistent with and give effect to the Council's Drury Opāheke Structure Plan 2019.

[3] Most of the appeals lodged on Plan Changes 48 – 50 raised largely the same or very similar issues. The parties to each of the appeals have worked together to

resolve the appeals and the amendments are consistent across the three plan changes (to the extent that the appeals raised the same issues).

Plan Change 48

[4] Plan Change 48 (**PC 48**) proposes the rezoning of approximately 95 hectares of Future Urban Zoned land in Drury East generally in the area bound by Great South Road, Waihoehoe Road, Fitzgerald Road and the Hingaia Stream. The proposed zoning includes a mix of business (Metropolitan Centre and Mixed Use) and Open Space zoning.

[5] Appeals were lodged by:

(a) Kāinga Ora-Homes and Communities;[1]

(b) Auckland Council;[2]

(c) Auckland Transport;[3] and

(d) KiwiRail Holdings Limited.[4]

Plan Change 49

[6] Plan Change 49 (**PC 49**) proposes the rezoning of approximately 184 hectares of Future Urban Zoned land (**FUZ**) in Drury East generally in the area generally bounded by Waihoehoe Road, Drury Hills Road and Fitzgerald Road to a combination of:

(a) Residential – Terrace Housing and Apartment Building zone (**THAB**);

(b) Residential – Mixed Housing Urban Zone (**MHU**);

(c) Residential – Mixed Housing Suburban Zone (**MHS**); and

(d) Business – Neighbourhood Centre Zone.

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[1] ENV-2022-AKL-000125.
[2] ENV-2022-AKL-000130.
[3] ENV-2022-AKL-000132.
[4] ENV-2022-AKL-000133.

[7] Appeals were lodged by:

(a) Kāinga Ora-Homes and Communities;[5]

(b) Auckland Council;[6] and

(c) Auckland Transport.[7]

Plan Change 50

[8] Plan Change 50 (**PC 50**) proposes the rezoning of approximately 48.9 hectares of Future Urban zoned land located to the north of Waihoehoe Road to THAB. The PC50 area is bound by Waihoehoe Road to the south, North Island Main Trunk Railway Network (**NIMT**) to the west, Waihoihoi stream to the north-east and farmland to the north and east.

[9] Appeals were lodged by:

(a) Auckland Council;[8]

(b) Kāinga Ora-Homes and Communities;[9]

(c) Francisca Jospehine Kleinsman;[10]

(d) KiwiRail Holdings Limited;[11] and

(e) Auckland Transport.[12]

Plan Change 51

[10] Under Private Plan Change 51 (**PC 51**) Karaka Drury Limited sought to introduce a Drury 2 Precinct and rezone 33.65 ha of land currently zone Future

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[5] ENV-2022-AKL-000127.
[6] ENV-2022-AKL-000128.
[7] ENV-2022-AKL-000134.
[8] ENV-2022-AKL-000126.
[9] ENV-2022-AKL-000129.
[10] ENV-2022-AKL-000131.
[11] ENV-2022-AKL-000136.
[12] ENV-2022-AKL-000137.

Urban. The south-eastern boundary of the PC 51 land directly adjoins State Highway 22.

[11] Waka Kotahi appealed the Council's decision to approve PC 51.[13] The appeal was limited to amending noise-related provisions of the Drury 2 Precinct, as approved in accordance with PC 51, to ensure appropriate management of traffic noise effects between the PC 51 land and SH22. The balance of PC 51, excluding the noise-related provisions, was made operative in part on 12 August 2022.

[12] A consent determination dated 27 September 2022 recorded the parties to the PC 51 appeal had reached agreement on all matters.[14]

Plan Change 61

[13] Under Private Plan Change 61 (**PC 61**) Lomai Properties Limited (**Lomai**) proposed the rezoning of 56 ha of Future Urban Zoned land in Drury West in the area generally bounded by Jesmond Road and Future Urban Zoned land to the east, Oira Road to the west, Future Urban Zoned land to the north and Karaka Road/State Highway 22 to the south. The proposed zoning included a mix of business, residential and open space zoning.

[14] Lomai appealed the decision of Auckland Council to decline PC 61.

[15] A consent determination dated 7 June 2022 recorded the parties to the PC 61 appeal had reached agreement on all matters, except for the noise attenuation provisions.[15] The consent determination confirmed the inclusion of interim provisions, which applied to the parts of the PC 61 land that was still the subject of discussion regarding whether noise attenuation provisions should apply. This approach enabled PC 61 to become operative in part on 8 July 2022.

[16] A consent determination dated 27 September 2022 recorded the parties to the PC 61 appeal had reached agreement on noise attenuation matters.[16] The agreement reached settled the Lomai appeal in full.

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[13] ENV-2022-AKL-000100.
[14] *Waka Kotahi New Zealand Transport Agency v Auckland Council* [2022] NZEnvC 177.
[15] *Lomai Properties Limited v Auckland Council* [2022] NZEnvC 95.
[16] *Lomai Properties Limited v Auckland Council* [2022] NZEnvC 178.

Negotiations across the Drury Plan Changes

[17] Negotiations for the five plan changes have been separate. However there are multiple parties who are party to multiple appeals across multiple plan changes, such as Auckland Council, Auckland Transport, Kāinga Ora, Waka Kotahi. This introduced a level of artificiality to the separate negotiations and the need for consistency in approach. The Court suggested a combination of the appeals to expedite outcomes, but this was resisted by various parties.

[18] This placed the Court in a difficult position as some appellants sought to resolve their appeals early in circumstances where the Court had no knowledge of the actual levels of commonality between the appeals. It can be difficult to ensure a consistent approach across an area with private plan changes. The Court must try to avoid conflicts with appeals yet to be decided and maintain consistency. In making the orders as sought for PC 51 and 61 I reserved leave for any party to return to the Court if they considered the making of the orders gave rise to inconsistency or required review in light of the outcome of the appeals on PC 48 – 50. No persons have contacted the Court with such concerns.

[19] As stated above, most of the appeals lodged on Plan Changes 48 – 50 raised largely the same or very similar issues. The parties to each of the appeals have worked together to resolve the appeals and the amendments are consistent across the three plan changes (to the extent that the appeals raised the same issues). Many parts of the consent orders sought in relation to Plan Changes 48 – 50 are the same or very similar.

[20] The court will also need to be satisfied that this proposed resolution is consistent with the resolved provisions of PC51 and PC61 to the extent of any common issues.

Appeals

[21] The Appeals lodged on PC 48, PC 49 and PC 50 raised largely the same or very similar concerns. The Appeals variously concern:

(a) broadly, issues relating to the timing of urbanisation, the extent of transport infrastructure required to support urban subdivision and

development of the plan change land, the integration and coordination of urban subdivision and development with that accompanying infrastructure, and consistency with the national and regional policy framework in relation to these matters (being issues raised by Auckland Council and Auckland Transport in relation to PC 48, 49 and 50);

(b) details of the open space provisions / tenure arrangements (raised by Auckland Council in relation to PC 48, 49 and 50);

(c) activities in close proximity to the North Island Main Truck rail corridor (raised by Kāinga Ora and KiwiRail in relation to PC 48 and 50);

(d) activities sensitive the noise within 40m of Waihoehoe future arterial road (raised by Kāinga Ora in relation to PC 49);

(e) activities sensitive to noise within 75m of an existing or future arterial road, being future arterial Waihoehoe Road and Opāheke North-South FTN Arterial (raised by Kāinga Ora, Kleinsman and Auckland Transport in relation to PC 50); and

(f) provisions addressing infrastructure including indicative notations on Precinct Plan 1, and rules and criteria relevant to three waters infrastructure (raised by Kleinsman in relation to PC 50).

[22] The parties listed in **Appendix 1** joined the Appeals in accordance with s 274 of the RMA.

Agreement reached between the parties

[23] Following direct discussions and Court-assisted mediation, the parties have reached agreement on a proposal to resolve the Appeals in full.

[24] The parties have agreed that the Precinct Provisions should be amended as shown in **Appendix 2, 3 and 4**. In summary, this involves:

Auckland Council & Auckland Transport Appeals - Transport infrastructure and open space issues

(a) Amendments to the *Precinct description*[17] to specify the ways in which the precinct manages the integration of land use and transport; record the fact that there are a range of potential ownership arrangements for open space zoned land; and make clear that there is currently insufficient funding for the ultimate build out of Drury East;

(b) Amendments to the Precinct Provisions to ensure that development and subdivision enabled by Plan Changes 48 – 50 occurs in a way which is integrated with the delivery of the necessary transport infrastructure related upgrades, including:

(i) Refinement of the *Precinct objectives and policies*[18] by requiring mitigation rather than management of adverse traffic effects; requiring the transport network to be designed in accordance with the detail provided in the 'Road Function and Required Design Elements Table (Appendix 1 of the Precinct Provisions); adding reference to the provision of separated cycleways for arterial roads (in addition to collector roads); inclusion of references to safe operation of the transport network; clarifying the extent of the progressive upgrade requirements; and introducing a policy reference to connections to new schools within the Drury East area.

[17] IX.1 Precinct Description.
[18] PC 48: Objective IX.2(6); Policy IX.3(3); Policy IX.3(6); Policy IX.3(8); Policy IX.3(9); Policy IX.3(14); Policy IX.3(16)-(20); Policy IX.3(22); and Policy IX.3(27). PC 49: IX.2 – IX.3. PC 50: IX.2 – IX.3.

(ii) Amendments to the *Precinct activity table*[19] to:

- Introduce new activities for non-compliance with the newly substituted road upgrade table (Appendix 1 to the Precinct) and new standard requiring:
    - the progressive upgrade of Fitzgerald and Brookfield Roads to an urban standard for PC 48; and
    - the progressive upgrade of existing rural roads within the adjoining Drury East Precinct to an urban standard for PC 49.
- Adopt a more onerous activity status for non-compliance with the transport triggers (being non-complying for the short-term upgrades and discretionary for the longer-term upgrades and the direct connection to the Drury Centre from SH1).

(iii) Amendments to the *Precinct standards*[20] to tighten up the intent of the staging standard and its interpretation and amendments the associated Transport Triggers to clarify that the various upgrades include provision of pedestrian connections and walking and cycling access across Waihoehoe Road Bridge, a pedestrian connection from Waihoehoe Road to the rail station and, if Mill Road goes ahead, the ultimate upgrade of Waihoehoe Road East to Mill Road in its full and final form.

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[19] PC 48: IX.4.1 Activity table (A5) and (A6) (Non-compliance with triggers); (A7) and (A8) (non-compliance with road upgrade table and progressive upgrade). PC 49: IX.4.1. PC 50: IX.4.1.

[20] PC 48: Standard IX.6.2, including Table IX.6.2.1 (Staging Standard and Triggers). PC 49: IX.6.1. PC 50: IX.6.1.

(iv) Elevating the road design and upgrade criteria to a new standard[21] requiring that development be undertaken in accordance with Appendix 1 to the Precinct, and that Fitzgerald and Brookfield Roads (PC 48) and the existing rural roads withing the adjoining Drury East Precinct (in PC 49) be progressively upgraded to an urban standard as development and/or subdivision occurs.

(v) Amendments to *matters of discretion*[22] to: enable ownership and maintenance arrangements to be considered as part of the development of large publicly accessible open space; add matters of discretion associated with the new road design and upgrade standard; delete matters of discretion associated with infringement of the transport triggers; and incorporate those matters as information requirements (as an infringement of transport triggers now attracts either discretionary or non-complying activity status).

(vi) A number of changes / additions to the *assessment criteria*, including:

- Alterations to the criteria for the development of private roads to reference consideration of land ownership patterns and the ability of roads to be constructed beyond property boundaries.[23]

- Amendments to the criteria dealing with sequencing to: convert the criteria regarding progressive upgrades and the design of roads in accordance with Appendix 1 into new development standards (see (iv) above); introduce a new criterion dealing with the temporary cycle connection to Drury South; and introduce a new criterion to address

[21] PC 48: Standard IX.6.2D. PC 49: IX.6.2A. PC 50: IX.6.2A.

[22] PC 48: Matters of Discretion IX.8.1(2) (Open Space); IX.8.1(14) (Road design and upgrade). Deletion of IX.8.1(5). PC 49: IX.8.1(8) and Deleted assessment criterion IX.8.1(2). PC 50: IX.8.1(11) and Deleted assessment criteria IX.8.1(2).

[23] PC 48: Assessment Criteria IX.8.2(1)(b). PC 49: IX.8.2(1)(a). PC 50: IX.8.2(1)(a).

construction effects and whether there is a need for interim works.[24]

- New criteria for development of public open space enabling consideration of ongoing maintenance arrangements.[25]

- Deletion of transport staging criteria (and the relocation of these to the special information requirement section).[26]

- New criteria dealing with infringements to the new road design and upgrade standard.[27]

(vii) New *special information requirements* including:

- Additional requirements regarding travel plans (PC 48);[28]

- A new monitoring requirement to ensure Council has an accurate record of the total number of dwellings and GFA within the Drury East area to ensure correct operation of the Transport Trigger standard;[29]

- A new transport design report requirement relating to the safety and function of existing roads during the development period;[30] and

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[24] PC 48: IX.8.2(1)(n) and (o) (temporary cycle connection and construction effects). PC 49: Deleted assessment criteria IX.8.2(1)(g) – (h) and IX.8.2(1)(h) – (i). PC 50: IX.8.2(1)(i).
[25] PC 48: Assessment Criteria IX.8.2(2)(g).
[26] PC 48: Deletion of Assessment Criteria IX.8.2(5), relocated to Information Requirement IX.9(4). PC 49: Deleted assessment criterion IX.8.2(2). PC 50: Deleted assessment criteria IX.8.2(2).
[27] PC 48: Assessment Criteria IX.8.2(17). PC 49: IX.8.2(8). PC 50: IX.8.2(11).
[28] PC 48: Special Information Requirements IX.9(3) Travel Plan.
[29] PC 48: Special Information Requirements IX.9(5) Monitoring of Rule IX.6.2 Staging of Subdivision and Development with Transport Upgrades and Rules IX.6.2A Maximum Parking Rate. PC 49: IX.9(5). PC 50: IX.9(5).
[30] PC 48: Special Information Requirements IX.9(6) Transport Design Report. PC 49: IX.9(6). PC 50: IX.9(6).

- Additional information requirements for Integrated Transport Assessments requirements (being consideration of the matters which were previously restricted discretionary activity criteria).[31]

- A new special information requirement to provide evidence of consultation with KiwiRail where the relevant standards are infringed.[32]

(c) Amendments to *Precinct Plans*[33] to identify the future key intersections, future road closing, and the location of future arterial and collector roads. New 'Notes' have been added regarding ownership of open space land and the design of future key intersections;

(i) For PC 50: clarification that Opāheke North-South Arterial Road is a future arterial road (with a note recording it is designed as an interim collector, future arterial long term).

(d) Replacement of the table at Appendix 1,[34] concerning road design details;

(e) Alterations to the indicative roading cross sections at Appendix 1a;[35] and

(f) Alterations to the *Proposed Interim Waihoehoe Road Typical Cross Section* and *Waihoehoe Road Bridge Crossing Typical Cross Section* for PC 50.[36]

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[31] PC 48: Special Information Requirements IX.9(4) Integrated Transport Assessment. PC 49: IX.9(4). PC 50: IX.9(4).
[32] PC 48: IX.9(7). PC 50: IX.9(8).
[33] PC 48: IX.10.2(1) Drury Centre: Precinct plan 2 – Structuring Elements. PC 49: IX.10.1 Drury East: Precinct Plan 1. PC 50: IX.10.1 Waihoehoe: Precinct plan 1 – Indicative Road and Open Space Network (Structuring Elements).
[34] PC 48: IX.11 Appendices Appendix 1: Design Details. PC 49: IX.11 Appendix 1: Design. PC 50: IX.11.
[35] PC 48: Appendix 1a: Interim Design Details for Existing Roads. PC 49: IX.11 Appendix 1a: Interim Design Details for Existing Roads.
[36] PC 50: IX.11 Appendix 2 Interim Upgrade to Waihoehoe Road.

(g) Amendments to provisions relating to the management of noise issues related to the proximity of parts of the PC 48 and 50 land to North Island Main Trunk Railway (**NIMT**) and building setbacks, including:

(i) Amendments to the provisions (precinct description,[37] objectives,[38] policies,[39] standards (including purpose statements),[40] matters of discretion,[41] assessment criteria[42] and special information requirements[43]) relating to noise sensitive activities to enable consideration of the potential for such activities to unduly constrain the operation of the rail corridor.

(ii) Amending the *standard*[44] for building setback along the rail corridor to increase the minimum setback from 2.5m to 5m and amendments to the associated assessment criteria to provide additional guidance for assessment of infringements.

(iii) A *new Precinct plan*[45] identifying a 'Rail Vibration Notation' mapped to 60m from the edge of the rail corridor, showing an area that may experience vibration levels higher than would normally be expected, because of proximity to the rail corridor. This is designed to inform property owners that the area may be subject to rail vibration, and is purely an information layer.

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[37] PC 48: IX.1 Precinct Description. PC 50: IX.1.
[38] PC 48: Objective IX.2(10). PC 50: IX.2(7).
[39] PC 48: Policy IX.3(28). PC 50: IX.3(18).
[40] PC 48: Standard IX.6(3); Standard IX.6.5. PC 50: IX.8.2(10), IX.6(3); IX.6.7.
[41] PC 48: Matters of Discretion IX.8.1(11). PC 50: IX.8.1(8).
[42] PC 48: Assessment Criteria IX.8.2(10) and (16). PC 50: IX.8.2(8).
[43] PC 48: Special Information Requirements IX.9(7) Activities sensitive to noise proposed within 60m of the rail corridor which infringe Standard IX.6.5 and/or buildings proposed within 5 metres from any boundary which adjoins the North Island Main Trunk Line which infringe Standard IX.6.11. PC 50: IX.9(8).
[44] PC 48: IX.6.11 Safe operation of the NIMT. PC 50: IX.6.9; IX.8.2(10).
[45] PC 48: IX.10.5 Drury Centre: Precinct plan 5 – Rail Vibration. PC 50: IX.10.4 Waihoehoe: Precinct Plan 4 – Rail Vibration.

Kleinsman and Auckland Council Appeals – Notations on Precinct Plan and three waters provisions (PC 50)

(h) Amendment to provisions relating to notations on Precinct Plan 1 and three waters assessment and management including:

(i) Amendments to the Precinct plan,[46] and an adjustment to the location of the indicative neighbourhood park. These amendments provide additional information and clarity but do not substantively change any elements of PC 50 or the approach to open space provision in the precinct; and

(ii) Amendments to policies,[47] matters of discretion,[48] assessment criteria[49] and special information requirements[50] to improve clarity and certainty with respect to provisions addressing management of stormwater and flooding effects.

Kāinga Ora Appeal – Activities sensitive to noise within 40m of any current or future arterial roads (PC 49)
Kāinga Ora, Kleinsman and AT Appeals – Activities within 75m of any current or future arterial roads (PC 50)

(i) Amendment to provisions relating to the management of activities sensitive to noise concerning proximity of parts of the land to arterial roads (namely future Waihoehoe arterial road (PC 49 and 50) and future Opāheke North-South FTN arterial road (PC 50), including:

(i) Amending the *Precinct description* to reference the inclusion of provisions to manage activities sensitive to noise adjacent to the

[46] PC 50: IX.10.1 Waihoehoe: Precinct plan 1 – Indicative Road and Open Space Network (Structuring Elements).
[47] PC 50: IX.3(16).
[48] PC 50: IX.8.1(1)(d).
[49] PC 50: IX.8.2(1)(j); IX.8.2(6)(b).
[50] PC50: IX.9(7).

future Waihoehoe arterial road and future Opāheke North-South FTN arterial road.[51]

(ii) Amending the *standard* for activities sensitive to noise in proximity to existing or future arterial roads including:[52]

- For PC 49 retaining the setback within which the standard applies (40m);
- For PC 50, amendment of the setback within which the standard applies, increasing it to 75m;
- Amendment of the heading to utilise the relevant defined term in the AUP Definitions;
- Clarification that the standard is intended to apply to Waihoehoe Road and the Opāheke North-South FTN arterial road which are planned to be upgraded to arterial status in the future; and
- Clarification of how existing or predicted noise levels are to be identified for the purpose of this standard.[53]

(iii) Expanding *matters of discretion* and *assessment criteria* to include consideration of matters such as building location, topography and noise mitigation measures.[54]

Kāinga Ora Appeal on PC 48

[25] No changes are required to address the issues raised in Kainga Ora's appeal on PC 48.[55]

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[51] PC 49: IX.1. PC 50: IX.1.
[52] PC 49: (IX.6.7). PC 50: IX.6.8
[53] PC 49: IX.6.7.
[54] PC 49: IX.8.1(7) and IX.8.2(7). PC 50: IX.8.1(9); IX.8.2(9).
[55] Affidavit of Nicholas Jon Roberts affirmed 6 October 2022 at [4.1].

Not binding precedent

[26] The parties agree that the provisions agreed to resolve the appeals are for the purposes of addressing issues raised in the appeals and reflect the particular circumstances of the sites. The provisions are not to be taken as binding precedent for any other private or public plan change in Auckland. The parties also agree that this does not preclude similar provisions being sought by any party in any other private or public plan change.

Noise attenuation – consistency of provisions

[27] In accordance with the integrated approach adopted to the three Drury East plan changes, the proposed amendments to the noise attenuation provisions for PC 49 have been developed alongside those for PC 50 (there being no equivalent provisions in PC 48) and the proposed noise attenuation provisions for PC 49 and 50 take a consistent approach, aside from a difference in setback distance.

[28] Although the negotiations concerning the Drury East Plan Changes have been conducted separately to those in respect of PC 51 and 61, the parties have employed the same basic framework and approach to noise attenuation provisions as for PC 51[56] and 61[57] to the Auckland Unitary Plan, which concern the rezoning of land in Drury West. In particular:

(a) The provisions apply within a fixed distance of an existing or future arterial/state highway and require activities sensitive to noise within this corridor to be designed to achieve indoor design noise levels of 40 dB LAeq (24 hour) for residential activities.[58]

(i) For PC 49, the distance is determined by the expected future road traffic noise from the arterial road or state highway, as shown by noise modelling after various model inputs such as low noise surfacing is factored in. Roads with lesser traffic flows and therefore noise have smaller distance. This is why there are

[56] *Waka Kotahi New Zealand Transport Agency v Auckland Council* [2022] NZEnvC 177.
[57] *Lomai Properties Limited v Auckland Council* [2022] NZEnvC 178.
[58] IX.6.8(1) in PC50; IX.6.7(1) in PC 49; IX.6.6(1) in PC51; I447.6.7(1) in PC61.

differences between the spatial extent of rules in PC 49 and other plan change areas.[59]

(b) The relevant objectives and policies have slightly different wording (reflecting the differences in the decisions versions of the provisions) but have the same intent, i.e. they are focused on health and amenity outcomes;[60]

(c) The standards require that if windows must be closed to meet the design noise levels, mechanical ventilation is required which meets specified standards;[61]

(d) Applicants for resource consent are required to submit a design report to the Council demonstrating compliance with the standards prior to the construction;[62]

(e) For the purpose of the design report, road noise may be based on current measured or modelled noise levels plus 3dB, or future predicted noise;[63]

(f) Restricted Discretionary activity status is applied to non-compliance with the standards; and

(g) The matters of discretion and assessment criteria address largely the same matters.[64]

[29] There are some minor differences in the provisions for PC 49 as compared with those for PC 51 and 61. Whereas the PC 51 and PC 61 appeals provided broad scope to amend the noise provisions, the only appeal raising noise issues on PC 49 was the Kāinga Ora appeal which sought the deletion of the provisions. The

[59] IX.6.7(1) in PC 49; IX.6.6(1) in PC 51; I447.6.7(1) in PC 61.
[60] IX.2(8) and IX.3(15) in PC 49; IX.2(7) and IX.3(18) in PC50; IX.3.8 in PC51; I447.2(7) and i447.3(12) in PC61.
[61] IX.6.7(2) in PC 49; IX.6.8(2) in PC50; IX.6.6(2) in PC 51: I447.6.7(2) in PC61.
[62] IX.6.7(3) in PC 49; IX.6.8(3) in PC50; IX.6.6(3) in PC 51; I447.6.7(3) in PC 61.
[63] IX.6.7(3) in PC 49; IX.6.8(3) in PC50; IX.6.6(3) in PC 51; I447.6.7(3) in PC 61.
[64] IX.8.1(7) and IX.8.2(8) in PC49; IX.8.1(9) and IX.8.2(9) in PC50; IX.8.1 and IX.8.2(4) in PC 51 and I447.7.1(5) and I447.7.2(5) in PC 61.

amendments agreed to PC 49 were informed by the scope of that appeal.[65] The parties agree that the differences are minor in nature and the parties consider that they are acceptable and appropriate to address the particular context of PC 49.

[30] There are some minor differences in the provisions for PC 50 as compared with those for PC 51 and 61 which the parties agree are acceptable and appropriate to address the particular context of PC 50.

[31] The principal difference between the noise attenuation provisions for PC 49 and 50 and those for PC 51 and 61 are as follows:

(a) The PC 51 and PC 61 provisions contain detailed tables (Table I447.6.7.1 and Table IX.6.6.1) which set out indoor noise levels to be achieved for various different activities including a number of non-residential building types. These were included for PC 51, where a broader range of non-residential activities are enabled under the Business Town Centre Zone subject to the traffic noise attenuation provisions. No such detailed tables are included in the PC 49 and 50 provisions. The inclusion of similar tables was discussed by the parties, however it was considered that the scope to replicate this in PC 49 was tenuous. Auckland Transport's expert acoustic advice is that the application of a 40 dB LAeq (24 hour) limit for all activities is acceptable, and in any event FHLD's development scheme for the PC 49 land and the THAB zoning and Oyster's development scheme for the PC 50 land means that the likelihood of activities other than residential development locating in the setback area is low;

(b) In the case of PC 51 and 61, future predicted noise levels are to be those modelled by Waka Kotahi and Auckland Transport for the relevant designations.[66] The road noise provisions for PC 49 and 50 allow applicants the options of utilising the modelling prepared for the designations or undertaking their own modelling of future predicted

[65] Kāinga Ora notice of appeal, paragraphs 8 and 9(b).
[66] Advice note to IX.6.6(3) in PC 51; Advice note to I447.6.7(3) in PC 61.

noise levels, adopting the same key parameters utilised for the designation modelling.[67] This issue was raised only by the applicants for the Drury East plan changes who have independent acoustic experts engaged as part of their development team. While this provides an additional modelling option, the parties do not consider that this amounts to an inconsistency which necessitates changes to the agreed provisions;

(c) In the case of PC 51 and 61, the details in respect of how "future predicted noise levels" are to be identified are set out in an "Advice Note",[68] whereas in PC 49 and 50 the text forms part of the standard.[69] The issue was raised in the context of PC 49 and 50 as to whether it was appropriate to refer to an "advice note" in the context of a plan provision (as distinct from a resource consent). To address this, the words "advice note" have been deleted in PC 49 and 50. The parties consider that this is a very minor difference, which does not necessitate changes to the agreed provisions. The matters of discretion and assessment criteria in PC50 otherwise generally mirror those contained in PC 51 and 61; and

(d) The matters of discretion and assessment criteria for PC 51 and 61 include reference to any technical advice from an acoustic expert specialising in operational traffic noise mitigation or the road controlling authority.[70] Such provisions were not proposed as part of the negotiations on PC 49 and PC 50 and are therefore not included in PC 49 and 50. The parties consider that this is a minor difference, which does not necessitate changes to the agreed provisions. The matters of discretion and assessment criteria in PC 49 and 50 otherwise generally mirror those contained in PC 51 and 61.

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[67] PC 49: IX.6.7(3). PC 50: IX.6.8(3).
[68] Advice note to IX.6.6(3) in PC 51; Advice note to I447.6.7(3) in PC 61.
[69] PC 49: IX.6.7(3). PC 50: IX.6.8(3).
[70] IX.8.1 and IX.8.2(4) in PC 51 and I447.7.1(5) and I447.7.2(5) in PC 61.

[32] In addition, whereas setback distances provided in PC 50, 51 and 61 is 75m, the setback in PC 49 is 40m. The Decision provided for a setback distance of 40m. No party appealed that provision, which was informed by the advice of Auckland Transport that a 40m setback from Waihoehoe Road is sufficient based on the future traffic noise modelling undertaken as part of the designation process. In this regard, Auckland Transport's acoustic expert Clair Drewery stated in her supplementary statement of evidence for the Council hearing dated 2 December 2021 that a "shorter setback is sufficient for PPC 49 as the predicted traffic noise levels for the Waihoehoe Road East Upgrade are lower than those predicted for the Waihoehoe Road West FTN".[71] In summary therefore this difference was agreed by all parties, confirmed in the Decision and was outside the scope of the appeals.

Agreement met the relevant AUP RPS objectives and policies

[33] The Decision found that PC 48 – 50 would give effect to the AUP RPS (notably Auckland Unitary Plan Parts B2 – Urban Growth and Form and B3 – Infrastructure, Transport and Energy) and the relevant provisions of the NPS-UD.[72]

[34] While the Drury-Opāheke Structure Plan is not a formal RMA document,[73] the Decisions found that PC 48 – 50 will also assist the Council to realise the development that it signals. The Decisions record that Commissioners placed "considerable weight" on the Drury-Opāheke Structure Plan in light of the robust and comprehensive basis on which it was formulated and adopted by the Council.[74]

[35] The parties agree that there are no changes to the Precinct Provisions which are inconsistent with the conclusion reached in the Decisions. Rather, the proposed

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[71] Statement of evidence of Claire Drewery on behalf of Auckland Transport for the Drury East Transport Hearing dated 2 December 2021.
[72] PC 48 Decision at page 4, paragraph 96. See paragraphs 121 – 126 for analysis against RPS. See paragraphs 107 – 120 for analysis against relevant objectives and policies of the NPS-UD; PC 49 Decision at page 4. See paragraphs 99 – 122 for analysis against relevant objectives and policies of the NPS-UD; See paragraphs 123 – 129 for analysis against the RPS; PC50 Decision at page 4, paragraph 98. See paragraphs 100 – 120 for analysis against relevant objectives and policies of the NPS-UD. See paragraphs 121 – 126 for analysis against RPS.
[73] Being a strategy prepared under another Act (Local Government Act) in terms of s 74(2)(b)(i) RMA.
[74] PC 48 Decision at paragraph 156. PC 49 Decision at paragraph 158. PC50 Decision at paragraph 156.

amendments reinforce and further ensure PC 48 – 50's consistency with those documents.

Urban Growth and Form

[36] PC 48 will give effect to the AUP RPS Urban Growth and Form objectives and policies, including:

(a) Policies B2.2.2(4)-(6): which seek to enable higher residential intensification close to public transport, social facilities and employment opportunities while supporting a hierarchy of centres within the region; and

(b) Policy B2.2.2(7) which relates to a quality compact urban form that enables rezoning within the Rural Urban Boundary.

[37] PC 49 and 50 will give effect to the AUP RPS Urban Growth and Form objectives and policies, including:

(a) Objective B2.2.1(5): The development of land within the Rural Urban Boundary, towns, and rural and coastal towns and villages is integrated with the provision of appropriate infrastructure; and

(b) Objective B2.4.1(3): Land within and adjacent to centres and corridors or in close proximity to public transport and social facilities (including open space) or employment opportunities is the primary focus for residential intensification.

Infrastructure, Transport and Energy

[38] As amended, PC 48 is also considered to align with the AUP RPS objectives and policies regarding infrastructure, transport and energy, including:

(a) Objective – B3.2.1(5) which requires infrastructure planning and land use planning to be integrated to service growth efficiently;

(b) Policy – B3.2.2.(1) which enables the efficient development, operation, maintenance and upgrading of infrastructure; and

(c) Policy B3.2.2(5) which seeks to ensure that subdivision, use and development do not occur in a location or form that constrains the development, operation, maintenance and upgrading of existing and planned infrastructure.

[39] PC 49 and 50 will give effect to the AUP RPS Part B3 – Infrastructure, Transport and Energy, including:

(a) Objective B3.2.1(5);

(b) Policy B3.2.2(4): Avoid where practicable, or otherwise remedy or mitigate, adverse effects on subdivision, use and development on infrastructure;

(c) Policy B3.2.2(5);

(d) B3.3.2(1): Enable the effective, efficient and safe development, operation, maintenance and upgrading of all modes of an integrated transport system; and

(e) B3.3.2(5): Improve the integration of land use and transport.

Section 32AA Analysis

[40] Section 32AA of the RMA requires a further evaluation for any changes to the proposal since the initial section 32 evaluation report.

[41] The consent memorandum in relation to PC 48 was supported by an affidavit of Mr Nicholas Roberts affirmed 6 October 2022. The consent memorandum in relation to PC 49 was supported by an affidavit of Mr Roberts affirmed 12 October 2022. The consent memorandum in relation to PC 50 was supported by an affidavit of Mr Roberts affirmed 17 October 2022. The affidavits provide a s 32AA analysis of the proposed amendments to the plan changes.

[42] In summary, the agreed changes expand on, refine and provide greater certainty in relation to the provisions approved in the Decisions, with a particular focus on strengthening requirements around the integration and coordination of

subdivision and development with infrastructure, but without substantively changing the development form and outcomes enabled by PC 48, PC 49 and PC 50.

[43] The PC 48 – 50 provisions have been refined:

(a) To ensure internal coherence and consistency;

(b) To provide additional clarity and to address concerns expressed by appellants regarding the potential for uncertainty or ambiguity; and

(c) To ensure that issues will be assessed and addressed appropriately and comprehensively through a resource consenting process as subdivision and development occurs over time. As noted, there is a particular emphasis on the integration and coordination of subdivision / development and infrastructure in many of the proposed amendments to the precinct provisions. However, there has also been an emphasis on other transport-related objectives such as promoting a mode shift to public transport and active modes.

[44] The key changes include:

(a) The changes to the activity status for activities that infringe the Staging of Subdivision and Development with Transport Upgrades Standard[75] from restricted discretionary to non-complying for the short term upgrades and discretionary for the longer term upgrades and the direct connection to the Drury Centre from SH1;

(b) Various amendments to the policy framework, including (among others) to introduce a focus on "mitigation" of adverse effects of traffic generation on the surrounding transport network rather than "management", and to add express policies around transport network safety and the provision of safe pedestrian and cycling connections to schools;

[75] PC 48: IX.6.2. PC 49: IX.6.1. PC 50: IX.6.1.

(c) The insertion of a new Standard[76] Road Design and Upgrade of Existing Rural Roads requiring that:

(i) Subdivision and development be undertaken in accordance with a newly substituted table at Appendix 1 (Road Function and Required Design Elements Table), with restricted discretionary activity status for any infringement; and

(ii) Fitzgerald and Brookfield Roads for PC 48 and and existing rural roads within an adjoining the Drury East Precinct for PC 49, be progressively upgraded to an urban standard as subdivision and development occurs, with discretionary activity status for any infringement;

(d) The changes to Standard[77] relating to Activities Sensitive to Noise Within 60m of the Rail Corridor, to enable consideration of the potential for such activities to unduly constrain the ongoing operation of the rail corridor, and changes to related provisions including the matters of discretion and assessment criteria (PC 48 and 50);

(e) The changes to Standard IX.6.7 relating to Activities Sensitive to Noise Within 40m of an Existing or Future Arterial Road to enable consideration of the potential for such activities to unduly constrain the operation of Waihoehoe Road and to provide additional guidance for compliance with this standard, and changes to related provisions including the matters of discretion and assessment criteria (PC 49);

(f) The changes to Standard IX.6.8 relating to Activities Sensitive to Noise Within 75m of an Existing or Future Arterial Road in Precinct Plan 1 to ensure appropriate mitigation of predicted traffic noise effects for activities sensitive to noise within 75m of Waihoehoe Road and the future Opāheke North-South FTN Arterial and to provide additional guidance for compliance with this standard, and changes to related

[76] PC 48: IX.6.2D. PC 49: IX.6.2A. PC 50: IX.6.2A.
[77] PC 48: IX.6.5. PC 50: IX6.7.

provisions including the matters of discretion and assessment criteria (PC 50);

(g) The changes to provisions to enable ownership and maintenance arrangements to be considered as part of the development of large publicly accessible open space and to clarify that areas zoned open space outside the esplanade reserve are to be retained in private ownership; and

(h) Insertion of further special information requirements with respect to integrated transport assessments and new special information requirements with respect to monitoring of Rule IX.6.1, Transport Design Reports, Flood Assessment Reports and activities sensitive to noise proposed within 60m of the rail corridor which infringe Standard IX6.7 and/or buildings proposed within 5m of the NIMT which infringe Standard IX6.9 (PC 50).

[45] Mr Roberts' s 32AA analyses conclude that:

(a) PC 48, PC 49, PC 50 as amended form a package of interrelated provisions that collectively enable development of a metropolitan centre and residential community at Drury in a way that takes account of potential adverse effects and that is integrated with the implementation of key transport infrastructure;

(b) Collectively, those provisions, as amended, are the most appropriate way of giving effect to the objectives of the plan change, the objectives and policies in Part B – RPS of the Unitary Plan, and the Drury – Opāheke Structure Plan;

(c) There is a sound rationale for all of the changes proposed and that the package of provisions incorporated into PC 48, PC 49, PC 50:

(i) Is the most appropriate way to achieve the purpose of the RMA with respect to the provision of a metropolitan centre and

residential development to accompany urban expansion of Auckland at Drury; and

(ii) Is the most appropriate way to achieve the relevant objectives.

Involvement of Mana Whenua

[46] Prior to lodgement of the plan changes, the applicants undertook consultation with Mana Whenua and others which was documented in a Consultation Report attached to the plan change requests. The Consultation Report documented the meetings, hui, correspondence and site visits carried out with Mana Whenua. Cultural Values Assessment were prepared by some Mana Whenua groups.

[47] The Applicant's section 32 reports and the Council Decision record that the areas of interest to the Iwi groups were in summary:

(a) Ongoing degradation of waterways through further development, loss of habitat and increased stormwater runoff;

(b) Loss of mature vegetation and natural habitats for native species;

(c) Extent of earthworks and potential to disturb kōiwi, Maori artefacts or archaeological features;

(d) Protection of streams including provision for stream management plans and special policy requirements (greenspace, infrastructure, wider riparian margins);

(e) Treatment of stormwater prior to discharge;

(f) Unforeseen adverse impacts to the environment;

(g) Sustainability;

(h) Ongoing engagement;

(i) The application of Te Aranga Māori Design Principles; and

(j) Meaningful cultural interpretation occurring through incorporation of place names (e.g. streets and parks) and, as appropriate, cultural art and design elements to offset the impacts to the cultural and natural landscape.

[48] The Applicants committed to work constructively with tangata whenua on an ongoing basis. For each of the plan changes a policy was developed through the hearings process to address Mana Whenua values.[78]

[49] The Independent Hearings Commissioners recorded in their Decisions that, as Mana Whenua representatives did not attend the hearings, they were unable to question them or to seek clarification on the measures proposed to address them. Notwithstanding this, given the Applicant's commitment, the Commissioners were satisfied, based on the information and evidence before them, that the plan change would give effect to the RPS and Part in relation to Mana Whenua interests and values.

[50] The Applicants have confirmed their intention to engage with Mana Whenua on an ongoing basis.

[51] Auckland Council has also actively engaged with Mana Whenua on the future development of the plan change land and wider Drury area. This engagement is outlined in detail in the Council's Drury-Opāheke Structure Plan (adopted in 2019) and will continue through future processes (for example through the processing of resource consent applications and through the design and provision of infrastructure as and when funding becomes available).

[52] Auckland Transport's engagement with Mana Whenua has primarily been through Te Tupu Ngātahi Supporting Growth. Te Tupu Ngātahi has been established by Auckland Transport and Waka Kotahi NZ Transport Agency to investigate and route protect the strategic transport network for Auckland's future urban areas. Mana whenua are a project partner and have worked with the Te Tupu Ngātahi team to identify the transport network required to support growth in the Drury area. This included contributions towards option development, alternatives assessment and design refinement processes for each transport corridor. This allowed Mana Whenua

[78] PC 48: Policy IX.3(29). PC 49: Policy IX.3(17). PC 50: IX.3(17).

to highlight any key concerns and opportunities particularly in regard to water quality, stormwater management and treatment, ecology and cultural heritage.

Variation 1 to PC 49 and Variation 2 to PC 50

[53] PC 49 and 50 propose new residential zones to apply to part of the subject land. The proposed residential zones are "relevant residential zones" for the purpose of section 77G of the RMA (as amended by the Resource Management (Enabling Housing Supply & Other Matters) Act 2021 (**Housing Supply Amendments**) which require that every relevant residential zone of a specified territorial authority (including Auckland Council) must have the Medium Density Residential Standards (**MDRS**) incorporated into that zone.

[54] Section 77G(3) of the RMA provides that when changing its district plan for the first time to incorporate the MDRS, a specified territorial authority (including the Council) must use an Intensification Planning Instrument (**IPI**) and the Intensification Streamlined Planning Process (ISPP). Auckland Council notified its IPI, Plan Change 78 (**PC 78**) to the AUP on 18 August 2022.

[55] PC 49 and PC 50 do not yet incorporate the MDRS into the relevant residential zones proposed. The MDRS cannot be incorporated into the new residential zones proposed for the PC 49 and 50 areas via the IPI because the Drury East Precinct and Waihoehoe Precinct provisions are not yet operative. PC 49 and 50 are also caught by the transitional provisions of the Housing Supply Amendments[79] because at the time the Housing Supply Amendments entered into force it was a "partly completed plan change" which:

(a) Does not incorporate the MDRS;

(b) Was notified prior to the commencement of the MDRS amendments; and

(c) At the time of commencement, decisions on submissions on PC 49 and 50 had not been notified in accordance with clause 10 of Schedule 1.

[79] Clause 34(2) of Schedule 12.

[56] Clauses 34(2) and (4) of Schedule 12 state that in respect of "partly completed proposed plan changes" meeting the criteria set out above:

> (2) The specified territorial authority must notify a variation to the plan change at the same time that it notifies the IPI to incorporate the MDRS as required by section 77G(3). …
>
> (4) The variation must incorporate the MDRS into all areas within the scope of the plan change that are a relevant residential zone or a new residential zone.

[57] For this reason, at the same time that it publicly notified its IPI, PC 78 to the AUP, the Council notified:

(a) Variation 1 to PC 49 which amends PC 49 to incorporate the MDRS into the relevant residential zones within the PC 49 area; and

(b) Variation 2 to PC 50 which amends PC 50 to incorporate the MDRS into the relevant residential zone within the PC 50 area.

[58] Specifically, Variation 1 to PC 49:

(a) Amends the IX.1 Drury East Precinct Description to refer to "qualifying matters" which apply within the Precinct;

(b) Rezones land in the east of the Drury East Precinct from Residential – Mixed Housing Suburban Zone to Residential – Mixed Housing Urban Zone; and

(c) Amends the subdivision activity rules to meet the MDRS requirements and the notification standards so that they are consistent with the notification standards in the underlying zones.

[59] Specifically, Variation 2 to PC 50 amends the subdivision activity rules to meet the MDRS requirements and the notification standards so that they are consistent with the notification standards in the underlying zone.

[60] The existence of Variation 1 and Variation 2 poses an issue for the resolution of the appeals because:

(a) The Court cannot confirm the resolution of the appeals by consent while PC 49 and 50 are subject to a variation; and

(b) PC 49 and 50 cannot be made operative until the variation process is completed.

[61] The parties are in agreement that it is not necessary or desirable for the requirements of the Housing Supply Amendments to delay the resolution of the appeals on PC 49 and 50, and the operative date for the Drury East precinct and Waihoehoe precinct.

[62] The Council has identified, and the parties have agreed to, the following process to enable the resolution of the appeals while ensuring compliance with the requirements of the Housing Supply Amendments.

Withdrawal of Variation 1 and Variation 2

[63] Clause 34(6) of Schedule 12 of the RMA states that in relation to a variation that is notified by a specified territorial authority the incorporate the MDRS into new residential zones that:

> (6) The variation may be declined or withdrawn only if it is no longer required for the plan change to meet the requirements of section 77G(1).

[64] Variation 1 and 2 would no longer be required if PC 49 and 50 were able to be made operative (following resolution of the appeals) and a variation to the Council's IPI was initiated, which incorporates the MDRS into the area subject to the PC 49 Precinct and PC 50 Precinct.

[65] The parties suggest that, subject to the Court's approval of the draft consent documentation, once PC 49 and 50 are made operative by the Council, a variation can be notified to PC 78 to incorporate the MDRS into relevant residential zones within the Precincts, as required by section 77G of the RMA.

[66] The Council intended that the process for withdrawal of the variations would proceed in tandem with the filing of draft consent documentation. Specifically:

(a) The Council approved the withdrawal of the variations on 6 October 2022;

(b) The Council publicly notified the withdrawal of Variation 1 and 2 on 13 October 2022;

(c) Once the Court issues a consent order for PC 49 and 50, the Council will make them operative under clause 20 of Schedule 1 to the RMA as soon as possible, following a resolution of the relevant Committee at the first available Committee meeting which is likely to be in December 2022;

(d) The Council will seek Committee approval to prepare a variation to PC 78 to:

(i) rezone the area in the Drury East Precinct zoned Residential – Mixed Housing Suburban to Residential – Mixed Housing Urban and to incorporate the MDRS and qualifying matters into the Drury East Precinct; and

(ii) incorporate minor amendments with respect to the subdivision activity rules and the notification standards to bring it in line with the MDRS and qualifying matters into the Waihoehoe Precinct.

[67] The parties agree that this process will enable the efficient resolution of the appeals and will comply with the requirements of the Housing Supply Amendments.

Discussion

[68] A similar situation has arisen recently in relation to another matter before the Court.[80] In that matter, once the variation was withdrawn by the Council, the Court proceeded to consider the consent documents.

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[80] *Kristin School Charitable Trust v Auckland Council* [2022] NZEnvC 212.

[69] Having confirmed Variation 1 to PC 49 and Variation 2 to PC 50 have been publicly notified as withdrawn, I am satisfied that the Court can proceed with considering these consent documents.

Consideration

[70] In making this order, the Court has read and considered the appeals and the joint memoranda of the parties dated 7 October 2022 (PC 48), 13 October 2022 (PC 49), 18 October 2022 (PC 50) and the accompanying affidavits of Mr Roberts.

[71] This determination does not represent the outcome of a full hearing by the Court, but rather an agreement reached between parties represented by experienced counsel.

[72] The parties have provided an analysis under s 32AA regarding why the change in position is justified. I am satisfied that there is sound rationale for the changes. The agreements reached are an appropriate way to enable urban expansion while providing for integrated infrastructure and mitigation of adverse effects such as noise and traffic generation. I am of the view that applicants and consent planners have clearer guidance as to what is being considered and expected outcomes.

[73] The agreed provisions improve clarity and certainty. For example, provisions which address the management of stormwater and flood effects have been amended. Another example is the provisions regarding open space which clarify ownership thus setting proper expectations. The detailed road function and design elements table reflect discussions between experts and provide greater clarity and certainty for all parties. I consider the minor amendments and grammatical corrections provide greater direction.

[74] There is a significant change to activity status for any activity, development and/or subdivision that does not comply with the standard/s relating to infrastructure upgrades. The provisions make a distinction between transport upgrades associated with earlier versus later stages of development. I agree with the parties that departure from the transport upgrade requirements requires careful scrutiny and rigorous assessment. I also agree that the link between subdivision and development and

transport infrastructure upgrades is important, as failure to carry out upgrades may result in adverse transport effects. I am of the view, as are the parties, that discretionary status for non-compliance with the later transport infrastructure triggers is appropriate given the uncertainty around the form and timing of the upgrades and the receiving environment, and the desirability of remaining flexible in responding to the environment at the time. The staging requirements for transport upgrades, in conjunction with amendments to other transport provisions, address key issues raised by some parties and are, in my opinion, appropriate and workable.

[75] I consider the shift from "management" to "mitigation" of adverse effects of traffic generation to be appropriate and better in keeping with the RMA framework.

[76] The promotion of public and active modes of transport are supported by policies around transport network safety. The upgrade of roads ensures that the developing urban environment meet urban standards.

[77] The setbacks for activities sensitive to noise sensibly ensure that consideration is given both to the receiving activities and also ensures the noise generating activities (such as the rail corridor and Waihoehoe Road) are not unduly constrained. The additional guidance for compliance with the standards, the matters of discretion and assessment criteria work together to ensure there is additional clarity and address concerns raised by some appellants.

[78] The new precinct plan identifying a rail vibration notation is appropriate as a signal to landowners that they may experience vibration in proximity to the rail corridor, without placing obligations on the landowners to remedy this potential effect. I agree the amended 5m setback from the railway corridor creates a natural buffer and is appropriate in this case because the land is zoned for a new, highly intensive, use.

[79] Regarding noise attenuation provisions, I am generally satisfied as to the consistency with the agreement reached on PC 51 and 61. The focus remains on health and amenity effects. The scope of the PC 49 and 50 appeals and the particular schemes of the plan changes are drivers of the differences between noise attenuation provisions across the different plan changes. I agree that the differences are minor and do not

necessitate changes to agreed provisions. The noise attenuation matters of discretion generally mirror PC 51 and 61. The future predicted noise level being that modelled by Auckland Transport and Waka Kotahi is consistent with PC 51 and 61. The inclusion of modelling by a suitably qualified expert appointed by the applicant for PC 49 and 50 is not inconsistent, it simply provides another modelling option and was raised in these appeals. The detail of future predicted noise level modelling provides certainty, and the parameters are consistent. PC 49 and 50 set a 40 dB LAeq (24 hour) limit for all activities. I accept no table is needed, as used in PC 51 and 61, as the only activities likely to locate within the setback areas are residential activities.

[80] I acknowledge that the 40m setback for PC 49 is consistent with the expert evidence, the Council decision and is outside the scope of the appeals to amend. The 75m for PC 50 is consistent with PC 51 and 61.

[81] I am satisfied with the assurances that the amendments will appropriately align with higher order policy documents. The agreed provisions will realise the development signalled in the Drury-Opāheke Structure Plan. I am of the view, consistent with the Council level decisions, that the provisions will give effect to the AUP RPS, notably Auckland Unitary Plan Parts B2 – Urban Growth and Form and B3 – Infrastructure, Transport and Energy. Those parts of the AUP focus on integration of development, infrastructure and transport. The agreed changes have strengthened the plan change provisions to ensure development is integrated with infrastructure and there is a push to promote public and active transport modes.

[82] The expanded matters of discretion and assessment criteria include matters such as topography and building location to make it clear what is to be considered by a decision maker in the consent process. This ensures an efficient land use response.

[83] Overall, I am of the view that the agreed amendments will provide certainty for developers and future landowners.

[84] I am satisfied that the agreements reached for PC 48, 49 and 50 are consistent and take a wholistic approach to common issues. I am satisfied that the agreements reached have been appropriately considered alongside the already agreed PC 51 and 61 provisions.

[85] The Court is making this order under section 279(1) of the Act, such order being by consent, rather than representing a decision or determination on the merits pursuant to section 297. The Court understands for present purposes that:

(a) all parties to the proceedings have executed the memorandum requesting this order;

(b) all parties agree that the agreed amendments to PC 48, PC 49 resolve the Appeals in full; and

(c) all parties are satisfied that all matters proposed for the Court's endorsement fall within the Court's jurisdiction, and conform to the relevant requirements and objectives of the Act including, in particular, Part 2.

[86] I conclude the parties have taken a robust and workable approach, and the agreed amendments are the most appropriate way to achieve the purpose of the Act and the objectives in the Plan. Overall, I consider the sustainable management purpose and the other relevant requirements of the Act are broadly met.

Order

[87] Therefore, the Court orders, by consent, that:

(a) The appeals by Auckland Council (as submitter), Auckland Transport, Kāinga Ora and KiwiRail, be resolved through the amendment of the Unitary Plan to include the provisions of PC 48 set out in **Appendix 2**;

(b) The appeals by Kāinga Ora, Auckland Council (as submitter) and Auckland Transport be resolved through the amendment of the Unitary Plan to include the provisions of PC 49 set out in **Appendix 3**;

(c) The appeals by Auckland Council (as submitter), Auckland Transport, Kāinga Ora – Homes and Communities, KiwiRail Holdings Limited, and Francisca Josephine Kleinsman be resolved through the amendment of

the Unitary Plan to include the provisions of PC 50 set out in **Appendix 4**; and

(d) There is no order as to costs.

J A Smith
Environment Judge



APPENDIX 1 – List of Section 274 Parties

Appeal	Section 274 Parties	Plan Change
Kāinga Ora-Homes and Communities v Auckland Council ENV-2022-AKL-125	Auckland Transport Fulton Hogan Land Development Ltd KiwiRail Holdings Ltd Oyster Capital	PC 48
Auckland Council v Auckland Council ENV-2022-AKL-126	Auckland Transport Beachlands South Limited Partnership Cabra Developments Limited Drury South Limited Fulton Hogan Land Development Limited Kainga Ora - Homes and Communities Kiwi Property Holdings No. 2 Limited KiwiRail Holdings Limited Kleinsman, Josephine Neil Construction Limited Waka Kotahi New Zealand Transport Agency	PC 50
Kāinga Ora-Homes and Communities v Auckland Council ENV-2022-AKL-127	Auckland Transport Kiwi Property Holdings No. 2 Ltd Oyster Capital Waka Kotahi / New Zealand Transport Agency	PC 49
Auckland Council v Auckland Council ENV-2022-AKL-128	Auckland Transport Beachlands South Limited Partnership Cabra Developments Ltd Drury South Ltd Kāinga Ora-Homes and Communities Kiwi Property Holdings No. 2 Ltd Neil Construction Ltd Oyster Capital Waka Kotahi New Zealand Transport Agency	PC 49
Kāinga Ora-Homes and Communities v Auckland Council ENV-2022-AKL-129	Auckland Transport Fulton Hogan Land Development Limited Kiwi Property Holdings No. 2 Limited KiwiRail Holdings Limited Kleinsman, Josephine Waka Kotahi New Zealand Transport Agency	PC 50
Auckland Council v Auckland Council	Auckland Transport Beachlands South Limited Partnership	PC 48

ENV-2022-AKL-130	Cabra Developments Ltd Drury South Ltd Fulton Hogan Land Development Ltd Kāinga Ora-Homes and Communities KiwiRail Holdings Ltd Neil Construction Ltd Oyster Capital Waka Kotahi New Zealand Transport Agency	
Francisca Jospehine Kleinsman ENV-2022-AKL-131	Auckland Council Auckland Transport Fulton Hogan Land Development Limited Kainga Ora - Homes and Communities Waka Kotahi New Zealand Transport Agency Watercare Services Limited	PC 50
Auckland Transport v Auckland Council ENV-2022-AKL-132	Auckland Council (as appellant) Beachlands South Limited Partnership Drury South Ltd Fulton Hogan Land Development Ltd Kāinga Ora-Homes and Communities KiwiRail Holdings Ltd Oyster Capital Waka Kotahi New Zealand Transport Agency	PC 48
KiwiRail Holdings Limited v Auckland Council ENV-2022-AKL-133	Auckland Transport Kāinga Ora-Homes and Communities Oyster Capital	PC 48
Auckland Transport v Auckland Council ENV-2022-AKL-134	Auckland Council (as appellant) Beachlands South Limited Partnership Drury South Ltd Kiwi Property Holdings No.2 Limited Kāinga Ora-Homes and Communities Oyster Capital Waka Kotahi New Zealand Transport Agency	PC 49
KiwiRail Holdings Limited v Auckland Council ENV-2022-AKL-136	Auckland Transport Kainga Ora - Homes and Communities Kiwi Property Holdings No. 2 Limited Kleinsman, Josephine	PC 50
Auckland Transport v Auckland Council ENV-2022-AKL-137	Auckland Council Beachlands South Limited Partnership Drury South Limited	PC 50

	Fulton Hogan Land Development Limited Kainga Ora - Homes and Communities Kiwi Property Holdings No. 2 Limited KiwiRail Holdings Limited Kleinsman, Josephine Waka Kotahi New Zealand Transport Agency	

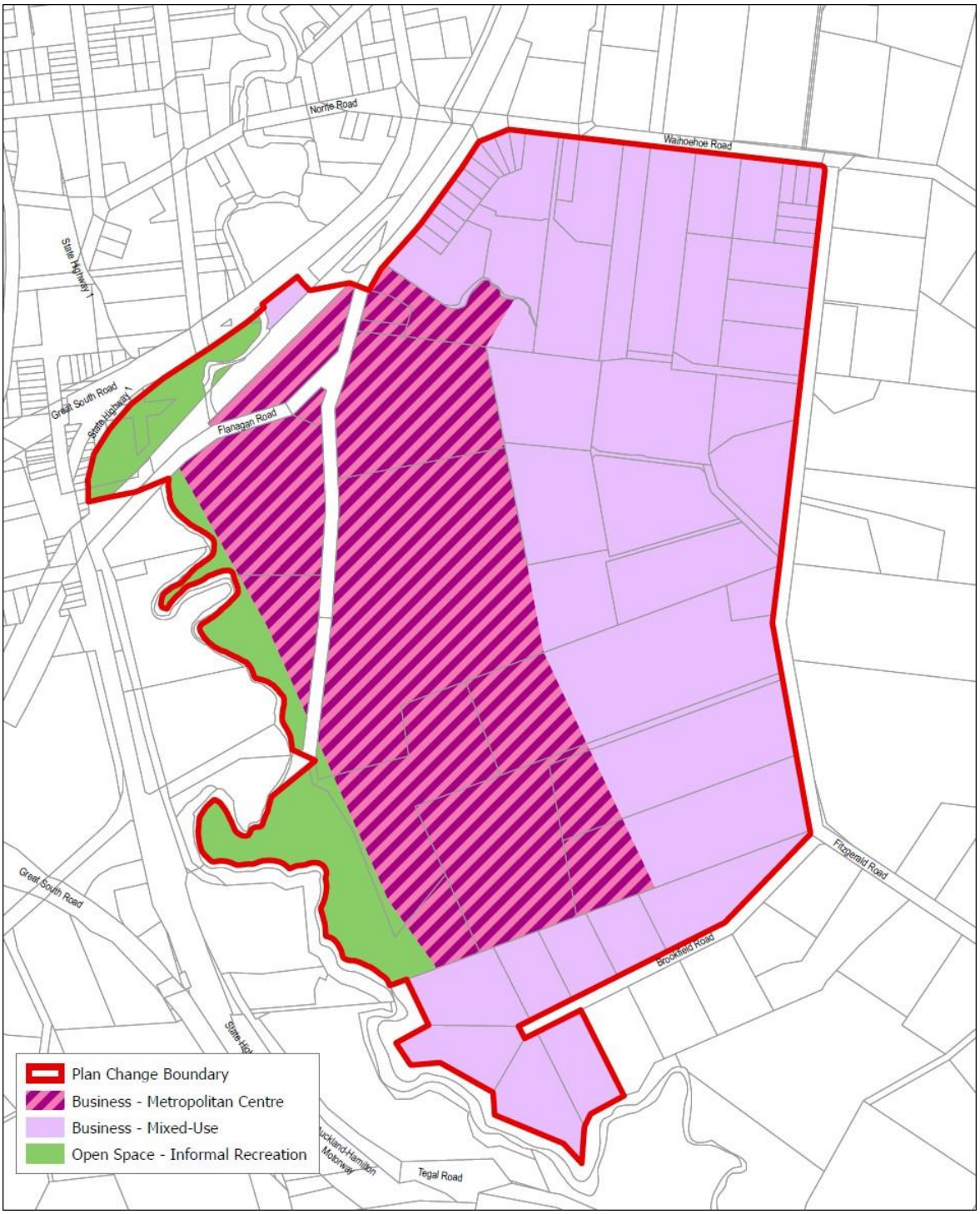
Appendix 2 (Plan Change 48)

Notes:

Amendments agreed are shown ~~strikethrough~~ and underline.

IX. Drury Centre Precinct

Drury Centre – Zoning Plan

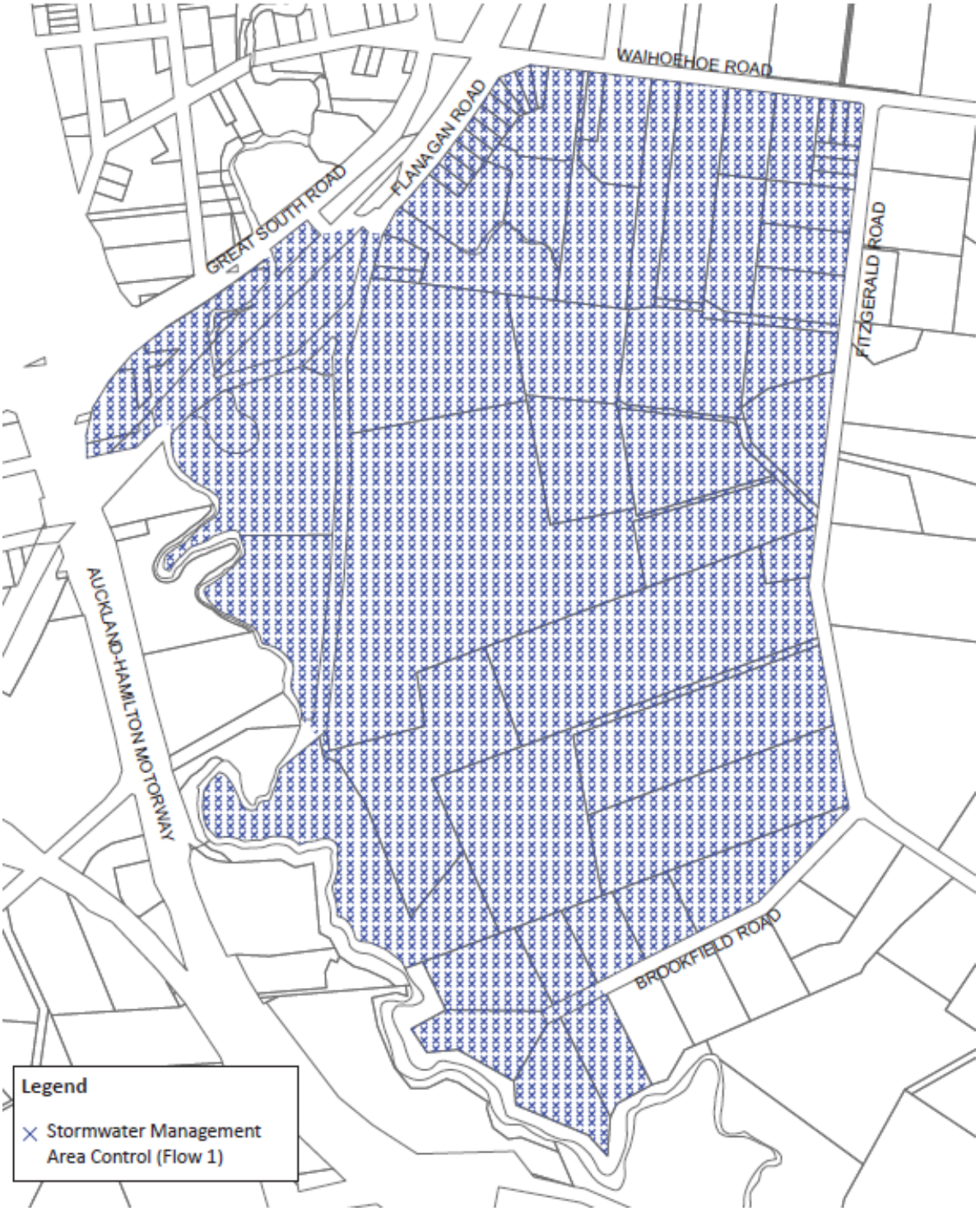


Drury Centre - Precinct Plan



Drury Centre – Stormwater Management

Drury Centre - Stormwater Management Area Control (Flow 1)



IX.1 Precinct Description

The purpose of the Drury Centre Precinct is to provide for the development of a new, comprehensively planned, high density, transit-orientated centre at Drury that supports a quality compact urban form. The precinct achieves this by prioritising access to and within the centre by public and active modes and integrating rail, bus, pedestrian and cycle networks to connect key destinations. The precinct also provides for the highest employment-generating activities and retail and residential densities around the future Drury Central train station. At the same time, the precinct emphasises the need for development to create a unique sense of place for Drury by integrating existing natural and built site features with development and respecting the landform.

The precinct provides for a wide range of activities that will support the establishment of a new metropolitan centre in Drury. The precinct comprises: the core centre, anchored by a future train station in the north; a retail main street; and quality open spaces. The main street will provide a vibrant pedestrian experience, typically with fine grain retail frontages and a high amenity street environment. The precinct provides for safe and convenient active transport access to and from the Drury Central train station.

The core centre will be surrounded by supporting activities, including high density residential to the north and east, and large format retail and associated activities to the south. The streets through the high density residential areas to the north and south of the centre will offer a high quality pedestrian environment, while allowing some residential to locate at ground floor.

There is a network of streams throughout the Drury Centre Precinct, including the Hingaia stream and Fitzgerald stream. The precinct seeks to maintain and enhance these waterways and integrate them with the open space network as a key feature.

There are five Sub-precincts in the Drury Centre Precinct:

- Sub-precinct A is zoned Business - Metropolitan Centre Zone and contains the primary retail area, Key Retail Street and civic and green open spaces. The sub-precinct is the focal point for intensive retail, commercial and civic development and pedestrian activity;
- Sub-precinct B is zoned Business – Metropolitan Centre Zone and is intended to be the primary location for large format retail, while also providing for other commercial and residential activities allowed in the zone. Development in this sub-precinct should ensure that a quality street environment is achieved;
- Sub-precinct C is zoned Business - Mixed Use Zone and provides for high density residential and a range of commercial activities that will complement the core centre and maximise the efficient use of land close to the rapid transport network. Eight storey buildings are enabled in this sub-precinct to provide a transition to surrounding residential zones.
- Sub-Precinct D is zoned Business – Mixed Use Zone and applies to the south-eastern part of the Drury Centre Precinct. Additional assessment criteria apply to the staging of pedestrian and cycle connections to the Drury Central train station and additional residential standards apply.
- Sub-precinct E is zoned Business – Mixed Use Zone and provides for high density residential and a range of commercial activities that will complement the core centre and

maximise the efficient use of land close to the rapid transport network. The Centre Fringe Office Control applies to the area within 200m of the Drury Central train station. Twelve storey buildings are enabled, and flexible ground floor designs are encouraged in the sub-precinct.

The transport network in the wider Drury East area as defined on Precinct Plan 3 will need to be progressively upgraded over time to support development in the wider area. The precinct includes provisions to ensure that the subdivision and development of land for business and housing is coordinated with the construction of safe, efficient and effective access to the Drury Central train station and other upgrades necessary to manage adverse effects on the local and wider transport network. At the time of the Drury Centre Precinct provisions being made operative, there is insufficient council family or central government funding available for transport and other infrastructure to support the full build-out of Drury East, which may affect the speed at which land within Drury East can be developed.

The precinct manages and mitigates the adverse effects of traffic generation on the transport network and achieves the integration of land use and transport by:

(a) Requiring particular transport infrastructure upgrades to be operational by the time a certain level of subdivision and development is reached within the wider Drury East area (see IX.6.2), recognising that the area functions as an integrated transport network;

(b) Requiring a comprehensive assessment and an Integrated Transport Assessment to be prepared for development and subdivision that does not comply with IX.6.2;

(c) Requiring safe, legible and direct connection/s to the Drury Central train station to be in place as development and subdivision occurs;

(d) Requiring Fitzgerald Road and Brookfield Road to be progressively upgraded in accordance with Appendix 1, as development and subdivision occurs, to connect with the Waihoehoe/Fitzgerald Road intersection and any new schools within the Precinct Plan 3 area. Those parts of Flanagan Road within the precinct which are not to be closed or relocated, will also require frontage upgrade as development progresses;

(e) Requiring new collector roads within the precinct generally in the locations shown on Precinct Plan 2, and new local roads to form a high quality and integrated network;

(f) Requiring all proposed roads to be designed in accordance with Appendix 1, consistent with the functions and elements outlined in the table.

Precinct provisions also require assessment of a range of matters relating to the existing road network, including for example whether a temporary active modes connection has been provided to the Drury South Precinct.

Open spaces in the Drury Centre precinct other than esplanade reserve may be privately owned, owned by the Crown, or (subject to Council approval) vested in the Council.

An area within the Precinct which may experience vibration levels higher than would normally be expected because of proximity to the rail corridor is identified on Precinct Plan

5.

The zoning of the land within the Drury Metropolitan Centre Precinct is Business – Metropolitan Centre, Business - Mixed Use, and Open Space – Informal Recreation.

All relevant overlay, Auckland-wide and zone provisions apply in this precinct unless otherwise specified below.

IX.2 Objectives

(1) Drury Centre is a vibrant and intensive transit-orientated development, that supports employment-generating and retail activities and high density residential within walking distance of rapid transit, and which prioritises public and active modes of transport to and within the centre.

(2) Drury Centre provides for the social and economic needs of the wider Drury-Opaheke community, and is the primary location for retail, civic, recreation and intensive employment activities, creating a focal point for the area.

(3) Development of the Drury Centre creates a distinctive sense of place, which responds to natural and built site features, landform and Mana Whenua values.

(4) Drury Centre is a walkable centre, with a street-based environment that positively contributes to pedestrian amenity, safety and convenience, with a particular emphasis on the Key Retail Street and key collector roads.

(5) Subdivision and development does not occur in advance of the availability of operational transport infrastructure, including regional and local transport infrastructure.

(6) Access to and from the precinct occurs in an effective, efficient and safe manner that ~~manages~~ mitigates adverse effects of traffic generation on the surrounding road network.

(7) Drury Centre develops and functions in a way that:

   (a) Results in a mode shift to public and active modes of transport; and

   (b) Provides safe and effective movement between~~,~~ retail areas, community facilities, housing, jobs, open spaces and the Drury Central train station by active modes.

(8) Development is coordinated with the supply of sufficient water, energy and communications infrastructure.

(9) Freshwater, sediment quality, and biodiversity are improved.

(10) Activities sensitive to noise adjacent to the railway corridor are designed to protect people's health and residential amenity while they are indoors, and in a way which does not unduly constrain the operation of the railway corridor.

IX.3 Policies

Land Use

(1) Provide for the greatest density of retail and commercial activities with supporting community and residential activities within Sub-Precinct A and discourage activities

which do not support an active and lively retail street frontage with a fine grained, pedestrian orientated outcome.

(2) Recognise that Sub-Precinct B will be the primary location for large format retail activities.

(3) Provide for high density residential and supporting intensive employment activities compatible with residential amenity values in Sub-Precinct C, D and E ~~and F~~ that supports the function, role and amenity of Sub-Precinct A as the core centre.

(4) Provide for a greater range of intensive employment activities in Sub-Precinct E responding to its close proximity to rapid transport, while supporting the function, role and amenity of Sub-Precinct A as the core centre.

Street Network and Built Form

(5) Require attractively designed, safe and direct access to the Drury Central train station, with a particular focus on pedestrians and cyclists.

(6) Require collector roads to be provided generally in the locations shown in IX.10.2(1) Drury Centre: Precinct Plan 2, while allowing for variation, where it would achieve a better connected street layout that integrates with the surrounding and proposed transport network.

(7) Ensure that development provides a local road network that achieves a highly connected street layout and integrates with the collector road network within the precinct, and the surrounding transport network, and supports the safety and amenity of the open space and stream network.

(8) Require the transport network ~~streets~~ to be attractively designed to appropriately provide for all modes of transport in accordance with Appendix 1, including by:

(a) Providing a high standard of amenity for pedestrians in areas where high volumes of pedestrians are expected; ~~and~~

(b) Providing for safe separated access for cyclists on arterial and collector roads that link key destinations; ~~and~~

(c) Providing a level of landscaping that is appropriate for the function of the street; and

(d) Providing for the safe and efficient movement of vehicles.

(9) Manage building height and form to:

(a) Maximise heights and densities close to the Drury Central train station and the frequent transport network;

(b) Contribute positively to Drury's sense of place, including by:

(i) Reinforcing the function of Sub-precinct A as the core of Drury Centre;

(ii) Responding to landform; and

(iii) Transitioning the scale of built form to visually integrate with adjoining areas.

(c) ~~Minimising~~ Minimise shading effects on large publicly accessible open spaces.

(10) Ensure that Sub-Precinct A is designed to be the compact, pedestrian orientated retail core of the precinct with a fine-grained network of streets that are open to the sky.

(11) Ensure that development positively addresses and engage with the street by:

(a) Maximising street activation, building continuity along the frontage, pedestrian amenity and safety and visual quality on the Key Retail Street.

(b) Achieving a reasonable level of street activation, building continuity along the frontage, pedestrian amenity and safety and visual quality on other local roads in Sub-Precinct A, and the General Commercial frontages shown on Precinct Plan 2A.

(12) Recognise that appropriately designed residential at ground floor may locate on some local roads in Sub-Precinct A away from the Key Retail Street, including where residential adjoins public open space.

(13) Require large format retail activities in Sub-Precinct B to provide for the visual quality and interest of streets and other public places, having regard to the functional requirements of that activity.

(14) Enable residential activities at high densities in Sub-Precinct C, D and E ~~and F~~ that provide quality on-site amenity for residents, including privacy and outlook, outdoor living space and access to daylight.

(15) In addition to matters (a)-(c) of Policy E38.3.18, ensure that the location and design of publicly accessible open spaces contribute~~s~~ to a sense of place for the Drury Centre and a quality network of open spaces in Drury-Opāheke, including by:

(a) Incorporating distinctive site features, including the existing Homestead;

(b) Reinforcing legibility within the centre; and

(c) Integrating with the stream network to create a green corridor following the Hingaia and Fitzgerald streams.

Transport, Infrastructure and Staging

(16) Promote a mode shift to public transport and active modes by:

(a) Requiring active mode connections to the Drury Central train station for all stages of development;

(b) Requiring streets to be designed to provide safe separated access for cyclists on collector and arterial roads;

(c) Limiting the supply of on-site parking for office activities to minimise the growth of private vehicle trips by commuters travelling during peak periods;

(d) Requiring end-of-trip facilities for all commercial and community activities.

(17) Encourag~~e~~ing office and retail activities to implement additional travel demand management measures that would promote the use of public transport.

(18) ~~Manage~~ Ensure that the adverse effects of traffic generation on the surrounding transport network are mitigated, including by ensuring:

(a) Public transport can operate efficiently at all times;

(b) The surrounding road network can operate with reasonable efficiency during inter-peak periods;

(c) Safe and efficient movement of freight vehicles within and through the Drury South precinct;

(d) Any upgrades to the transport network are safe for pedestrians, cyclists and motorists; and ~~.~~

(e) The transport network operates safely at all times.

(19) Provide for the progressive upgrade of existing roads and key intersections within and adjoining the Drury Centre precinct, including the upgrade of road frontages to an urban standard at the time of development or subdivision of adjoining land, ~~adjoining the Drury Centre precinct,~~ to provide for all modes and connect with the existing transport network to the Drury Central train station.

(20) ~~Ensure~~ Require that subdivision and development does not occur in advance of the availability of operational transport infrastructure, including regional and local transport infrastructure.

(21) Ensure that development in Drury Centre Precinct is coordinated with sufficient stormwater, wastewater, water, energy, and communications infrastructure.

(22) Require subdivision and development, as it proceeds, to provide access to safe, direct and legible pedestrian and cycling connections to the Drury Central train station and schools within the Precinct Plan 3 area.

Ecology

(23) In addition to the matters in Policy E1.3(8), manage erosion and associated effects on stream health and values arising from development in the precinct, including parts of the Fitzgerald and Hingaia streams, and enable in-stream works to mitigate any effects.

(24) In addition to the matters in Policy E.3.3(13), provide for stream works, including reclamation, where they are required to construct Drury Boulevard.

(25) Contribute to improvements to water quality, habitat and biodiversity, including by providing planting on the riparian margins of permanent and intermittent streams.

Stormwater Management

(26) Require subdivision and development to be consistent with the treatment train approach outlined in a supporting stormwater management plan, including:

(a) Application of water sensitive design to achieve water quality and hydrology mitigation;

(b) Requiring the use of inert building materials to eliminate or minimise the generation and discharge of contaminants;

(c) Requiring treatment of runoff from public road carriageways and publicly accessible carparks at or near source by a water quality device designed in accordance with GD01;

(d) Requiring runoff from other trafficked impervious surfaces to apply a treatment train approach to treat contaminant generating surfaces, including cumulative effects of lower contaminant generating surfaces;

(e) Providing planting on the riparian margins of permanent or intermittent streams;

(f) Ensuring development is coordinated with sufficient stormwater infrastructure.

Natural Hazards

(27) Ensure development manages flooding effects upstream ~~or~~ and downstream of the site and in the Drury Centre precinct so that the risks to people and property (including infrastructure) are not increased for all flood events, up to a 1% AEP ~~100-year ARI~~ flood event. This may include appropriately designed and sited interim storage/attenuation areas prior to culvert upgrades.

~~*Noise sensitive activities*~~ *Activities sensitive to noise adjacent to the rail corridor*

(28) Ensure that "Activities sensitive to noise" adjacent to the railway corridor are designed with acoustic attenuation measures to protect people's health and residential amenity while they are indoors and that such activities do not unduly constrain the operation of the railway corridor.

Mana Whenua values

(29) Development responds to Mana Whenua values by:

(a) Delivering a green corridor following the Hingaia and Fitzgerald streams;

(b) Taking an integrated approach to stormwater management;

(c) Ensuring the design of streets and publicly accessible open spaces incorporate Te Aranga design principles;

(d) Encouraging engagement with Mana Whenua to inform the design of development in Drury Centre.

All relevant overlay, Auckland-wide and zone objectives and policies apply in this precinct in addition to those specified above.

IX.4 Activity table

All relevant overlay, Auckland-wide and zone activity tables apply unless the activity is listed in Activity Table IX.4.1 below.

Activity Table IX.4.1 specifies the activity status for land use and development activities pursuant to section 9(3) of the Resource Management Act 1991 and the activity status for subdivision pursuant to section 11 of the Resource Management Act 1991.

Table IX.4.1 Activity table

All Sub-Precincts

Activity		Activity Status
Use		
Subdivision and Development		
(A1)	Subdivision, or new buildings prior to subdivision, including private roads	RD
(A2)	Development of publicly accessible open spaces greater than 1000m^2	RD
(A3)	New buildings	RD
(A4)	Additions and alterations to buildings not otherwise provided for	RD
(A5)	Subdivision and/or ~~D~~development that does not comply with Standard IX.6.2 Staging of Subdivision and Development with Transport Upgrades with respect to the following elements of Table IX.6.2.1: i. Upgrades in rows (a) and (b) ii. The upgrade in row (c) relating to Drury Central train station	~~RD~~ NC
(A6)	Subdivision and/or development that does not comply with Standard IX.6.2 Staging of Subdivision and Development with Transport Upgrades with respect to the following elements of Table IX.6.2.1: i. The upgrade in row (c) relating to the Direct connection from State Highway 1 to the Drury Centre ii. Upgrades in rows (d) to (f)	D
(A7)	Subdivision and/or development that does not comply with Standard IX6.2D(1) Road Design and Upgrade of Existing Rural Roads	RD
(A8)	Subdivision and/or development that does not comply with Standard IX6.2D(2) Road Design and Upgrade of Existing Rural Roads	D
(A9)	Any application to amend an existing resource consent that gives rise to non-compliance with Standard IX.6.2 Staging of Subdivision and Development with Transport Upgrades	NC in relation to transport infrastructure upgrades subject to (A5) above D in relation to transport

	and Table IX.6.2.1	infrastructure upgrades subject to (A6) above
~~Subdivision~~		
~~(A8)~~	~~Subdivision that does not comply with Standard IX6.2 Staging of Development with Transport Upgrades~~	~~RD~~
Streams		
(A~~9~~10)	New reclamation or drainage within Stream A shown on IX.10.2(1) ~~IX.10.4~~ Precinct Plan 2 required to construct the Drury Boulevard	D

Sub-Precinct C and E – Mixed Use

Activity		Activity Status
Use		
Commerce		
(A11~~0~~)	Department stores	NC
(A12~~1~~)	Drive through restaurants	NC
(A13~~2~~)	Motor vehicle sales	NC
(A14~~3~~)	Service stations with frontage to an arterial road	RD
(A15~~4~~)	Service stations with no frontage to an arterial road	NC
(A16~~5~~)	Trade suppliers	NC
Industry		
(A17~~6~~)	Industrial laboratories	D
(A18~~7~~)	Light manufacturing and servicing	D
(A19~~8~~)	Repair and maintenance services	NC
(A20~~19~~)	Storage and lockup	NC
(A21~~0~~)	Warehousing and storage	NC

Sub-Precinct A – Metropolitan Centre

Activity		Activity Status
Use		
Commerce		
(A22~~1~~)	Drive through restaurants	NC

(A232)	Motor vehicle sales	NC
(A243)	Trade suppliers	NC
(A254)	Garden centres	NC
(A265)	Warehousing and storage	NC

IX.5 Notification

(1) Any application for resource consent for an activity listed in Table IX.4.1 Activity table will be subject to the normal tests for notification under the relevant sections of the Resource Management Act 1991.

(2) When deciding who is an affected person in relation to any activity for the purpose of section 95E of the Resource Management Act 1991 the Council will give specific consideration to those persons listed in Rule C1.13(4).

~~(3) When deciding who is an affected person in relation to any activity for the purpose of section 95E of the Resource Management Act 1991 the Council will give specific consideration to those persons listed in Rule C1.13(4).~~

IX.6 Standards

(1) Unless specified in Standard IX.6(2), IX.6(3) and IX.6(4) below, all relevant overlay, Auckland-wide and zone standards apply to the activities listed in Activity Table IX.4.1 above.

(2) The following Auckland-wide and zone standards do not apply to activities listed in Activity Table IX.4.1 above within all sub-precincts:

(a) H9.6.1 Building Height

(b) E27.6.1 Trip Generation.

(3) In addition to IX.6 (1) activities listed in Activity Table IX.4.1 must comply with the following standards IX.6.1 to IX.6.6 and IX.6.11.~~:~~

~~(a) IX.6.1 Building Height~~

~~(b) IX.6.2 Staging of Development with Transport Upgrades~~

~~(c) IX.6.4 Riparian Planting~~

~~(d) IX.6.5 Building Setback along Waihoehoe Road~~

~~(e) IX6.6 Stormwater Quality.~~

Sub-Precinct C, D and E ~~and F~~

(4) In addition to IX.6(1) and IX.6(3), activities in Sub -Precincts C, D and E ~~and F Activities~~ listed in Activity Table IX.4.1 must also comply with the following standards:

(a) IX.6.7 Daylight

(b) IX.6.8 Outdoor Living Space

(c) For that part of Sub-Precinct E subject to the Centre Fringe Office Control, IX.6.9~~X~~ Residential at Ground Floor~~.~~

(d) IX.6.10 Outlook Space.

All Sub-Precincts

IX.6.1 Building Height

Purpose:

- Enable building height to be maximised close to the Drury Central train station and the frequent transport network;
- Contribute positively to Drury's sense of place;
- Manage the effects of building height, including visual dominance.

(1) Buildings must not exceed the height shown in metres on IX.10.1 Drury Centre: Precinct Plan 1.

IX.6.2 Staging of Subdivision and Development with Transport Upgrades

Purpose:

- ~~Manage~~ Mitigate the adverse effects of traffic generation on the surrounding local and wider road network, consistent with Policy IX.3(18).
- Achieve the integration of land use and transport consistent with Policies IX.3(16), (19), ~~and~~ (20) and (22).

(1) Development and subdivision within the area shown on IX.10.3 Precinct Plan 3 must not exceed the thresholds in Table IX.6.2.1 until such time that the identified infrastructure upgrades are constructed and are operational. Applications for resource consent in respect of activities, development or subdivision identified in Column 1 of the Table will be deemed to comply with this standard IX.6.2(1) if the corresponding infrastructure identified in Column 2 of the Table is:

(a) Constructed and operational prior to lodgement of the resource consent application; or

(b) Under construction with relevant consents and/or designations being given effect to prior to the lodgement of the resource consent application and the application is expressly made on the basis that the relevant infrastructure upgrade(s) will be completed and operational prior to:

(i) the issue of a section 224(c) RMA certificate in the case of a subdivision consent application; and/or

(ii) the occupation of any dwellings, commercial, and/or community activities in the case of a land use consent application; or

(c) Proposed to be constructed by the applicant as part of the resource consent application and the application is expressly made on the basis that the relevant infrastructure upgrade(s) will be completed and operational:

(i) Prior to or in conjunction with the issue of a section 224(c) RMA certificate in the case of a subdivision consent application; and/or

(ii) Prior to the occupation of any dwellings, commercial, and/or community activities in the case of a land use consent application.

(2) Any application lodged in terms of IX.6.2(1) b) or c) above must confirm the applicant's express agreement in terms of section 108AA(1)(a) of the RMA and on an *Augier* basis to the imposition of consent conditions requiring (as relevant) that:

(a) no dwellings, retail, commercial and/or community floorspace shall be occupied until the relevant infrastructure upgrades are constructed and operational; and/or

(b) no section 224(c) certificate shall be issued and no subdivision survey plan shall be deposited until the relevant infrastructure upgrades are constructed and operational.

Any resource consent(s) granted on one or both of the above bases must be made subject to consent conditions as described in IX.6.2 (2)(a) and/or IX.6.2 (2)(b) above. Those conditions will continue to apply until appropriate evidence is supplied to council confirming that the relevant infrastructure upgrades are operational.

(3) For the purpose of this standard:

(a) 'dwelling' and 'retail/commercial/community floorspace' means buildings for those activities that have a land use consent, or subdivision that has a section 224(c) certificate that creates additional vacant lots;

(b) 'Occupation' and 'occupied' mean occupation and use for the purposes permitted by the resource consent but not including occupation by personnel engaged in construction, fitting out or decoration; and

(c) 'Operational' means the relevant upgrade is available for use and open to all traffic (be it road traffic in the case of road upgrades, or rail traffic in the case of the Drury Central train station).

(4) Any proposal for land use or subdivision for dwellings, retail, commercial and/or community activities must demonstrate compliance with this rule in accordance with the Special Information Requirements in IX.9(5).

Table IX.6.2.1 Threshold for Subdivision and Development as shown on IX.10.3 Drury Centre: Precinct Plan 3

Column 1 Activities, development or subdivision, enabled by Transport Infrastructure in column 2		Column 2 Transport infrastructure required to enable activities, development or subdivision in column 1
(a)	Up to a maximum of 710 dwellings	Interim upgrade to Great South Road/Waihoehoe Road roundabout to signals in accordance with Appendix 1 and 1a, including pedestrian connections to adjacent existing footpaths; and. Interim upgrade of Waihoehoe Road in accordance with Appendix 1 and 1a, including walking and cycling provisions on the Waihoehoe Road bridge.
(b)	Up to a maximum of: (i) 1,300 dwellings; and/or (ii) 24,000m^2 retail GFA; and/or (iii) 6,000m^2 other commercial GFA; and/or (iv) 800m^2 community GFA.	Upgrades in (a) above and State Highway 1 widening – Stage 1, being six lanes between the Papakura interchange and Drury interchange.
(c)	Up to a maximum of: (i) 1,800 dwellings; and/or (ii) 32,000m^2 retail GFA; and/or (iii) 8,700m^2 other commercial GFA; and/or (iv) 1,000m^2 community GFA.	Upgrades in (a) and (b) above and: Drury Central train station, including a pedestrian connection to Waihoehoe Road*; and. Direct connection from State Highway 1 to the Drury Centre via a single lane slip lane from SH1 interchange to Creek Road. Creek Road is within the Drury Centre Precinct and is shown on Precinct Plan 2**. Notes: * Refer to IX.4.1(A5) – non-compliance is a non-complying activity ** Refer to IX.4.1(A6) – non-compliance is a discretionary activity
(d)	Up to a maximum of: (i) 3,300 dwellings; and/or (ii) 56,000m^2 retail GFA; and/or (iii) 17,900m^2 other commercial GFA; and/or 2,000m^2 community GFA.	Upgrades in (a)-(c) above and: Ultimate Waihoehoe Road upgrade between Fitzgerald Road and Great South Road in accordance with Appendix 1, including: i. Two general traffic lanes and two bus lanes, footpaths and cycleways on both sides, and a new six-lane bridge over the railway corridor; and ii. Signalisation and increased capacity at the Great South Road/Waihoehoe Road intersection, including fully separated active mode facilities and 3-4 approach lanes in each direction.

(e)	Up to a maximum of: (i) 3,800 dwellings; and/or (ii) 64,000m^2 retail GFA; and/or (iii) 21,000m^2 other commercial GFA; and/or 2,400m^2 community GFA.	Upgrades in (a)-(d) above and: Mill Road southern connection between Fitzgerald Road and State Highway 1, providing four traffic lanes and separated active mode facilities, including a new SH1 Interchange at Drury South - the "Drury South interchange"
(f)	Up to a maximum of: (i) 5,800 dwellings; and/or (ii) 97,000m^2 retail GFA; and/or (iii) 47,000m^2 other commercial GFA; and/or 10,000m^2 community GFA.	Upgrades in (a)-(e) above and: Mill Road northern connection between Fitzgerald Road and Papakura, providing four traffic lanes and separated active modes, including ultimate upgrade of Waihoehoe Road East from Fitzgerald Road to Mill Road and Ultimate Opaaheke Northern connection, providing four lanes including bus lanes and active mode facilities between Waihoehoe Road and Opaaheke Road in Papakura

~~IX.6.2~~ IX.6.2A Maximum parking rate

Purpose:

- Promote a mode shift to public transport and active modes by limiting the supply of commuter parking progressively over time.

(1) Any proposal for office activities must provide information in accordance with the Special Information Requirements in IX.9(5).

(2) The maximum number of parking spaces for office activity are as follows:

(a) Up to 19,000m^2 – 1 space per 35m^2 GFA;

(b) Between 19,001 – 47,000m^2 – 1 space per 50m^2 GFA;

(c) Greater than 47,000m^2 – 1 space per 60m^2 GFA.

IX.6.2B Minimum Bicycle Parking

(1) In addition to the bicycle parking requirements in standard E27.6.2(6), at least one secure (long stay) bicycle park must be provided for every dwelling.

(2) For multi-unit development, at least one visitor (short stay) bicycle space must be provided for every 20 dwellings.

IX.6.2C End-of-Trip Facilities

Purpose:

- Promote a mode shift to public transport and active modes by requiring end-of-trip facilities for all commercial and community activities.

(1) End-of-trip facilities:

(a) the activities specified in Table IX.6.2C~~B~~.1 must provide end-of-trip facilities as listed below; and

(b) the following end-of-trip facilities requirements apply to new buildings and developments.

Table IX.6.2C.1 Required end-of-trip facilities (intended for staff use)

Land Use	GFA	No. of showers and changing facilities required
Commercial and community activities	Up to 500m^2	No requirement
	Greater than 500m^2 up to 2,500m^2	One shower and changing area with space for storage of clothing
	Greater than 2,500m^2 up to 7,500m^2	Two showers and changing area with space for storage of clothing
	Every additional 7,500m^2	Two additional showers and changing area with space for storage of clothing

IX.6.2D Road Design and Upgrade of Existing Rural Roads

Purpose:

- To ensure that any activity, development and/or subdivision complies with Appendix 1: Road Function and Design Elements Table, and that existing rural roads are progressively upgraded to an urban standard.

(1) Any activity, development and /or subdivision that includes the construction of new roads, or the upgrade of existing roads, must comply with Appendix 1: Road Function and Design Elements Table.

(2) Fitzgerald Road and/or Brookfield Road must be upgraded to an urban standard where vehicle access is proposed for any new activity, development and/or subdivision to or from either of these roads, and where the upgrade has not already occurred. The portion of road to be upgraded must extend from the proposed vehicle access to the intersection of Waihoehoe / Fitzgerald Roads.

IX.6.3 Riparian Margins

Purpose: Contribute to improvements to water quality, habitat and biodiversity.

(1) Riparian margins of permanent or intermittent streams must be planted either side to a minimum width of 10m measured from the top of bank of the stream, provided that:
   - (a) This rule shall not apply to road crossings over streams;
   - (b) Walkways and cycleways must not locate within the riparian planting area;
   - (c) Any archaeological site identified in a site specific archaeological survey must not be planted;
   - (d) The riparian planting area is vested in Council or protected and maintained in perpetuity by an appropriate legal mechanism.

(2) A building, or parts of a building, must be setback at least 20m from the bank of a river or stream measuring 3m or more in width, consistent with the requirements of

E38.7.3.2.

IX.6.4 Stormwater Quality

Purpose: Contribute to improvements to water quality and stream health.

(1) Stormwater runoff from new, or redevelopment of existing, high contaminant generating carparks, all publicly accessible carparks exposed to rainfall, and all roads must be treated with a stormwater management device(s) meeting the following standards:

(a) the device or system must be sized and designed in accordance with 'Guidance Document 2017/001 Stormwater Management Devices in the Auckland Region (GD01); or

(b) where alternative devices are proposed, the device must demonstrate it is designed to achieve an equivalent level of contaminant or sediment removal performance to that of 'Guidance Document 2017/001 Stormwater Management Devices in the Auckland Region (GD01)'.

(c) For all other trafficked impervious surfaces, water quality treatment in accordance with the approved stormwater management plan must be installed.

(2) New buildings, and additions to buildings must be constructed using inert cladding, roofing and spouting building materials, that avoid the use of high contaminant yielding building products which have:

(a) exposed surface(s) or surface coating of metallic zinc of any alloy containing greater than 10% zinc; or

(b) exposed surface(s) or surface coating of metallic copper or any alloy containing greater than 10% copper; or

(c) exposed treated timber surface(s) or any roof material with a copper-containing or zinc-containing algaecide.

IX.6.5 ~~Noise sensitive activities~~ Activities sensitive to noise within 60m of the rail corridor

Purpose: Ensure Activities sensitive to noise adjacent to the railway corridor are designed to protect people's health and residential amenity while they are indoors and that such activities do not unduly constrain the operation of the railway corridor.

(1) Any new building or alteration to an existing building that contains an activity sensitive to noise within 60 metres of the rail corridor must be designed, constructed and maintained to not exceed 35 dB LAeq (1 hour) for sleeping areas and 40 dB LAeq (1 hour) for all other habitable spaces.

Note - Railway noise is assumed to be 70 dB LAeq(1 hour) at a distance of 12 metres from the track and must be deemed to reduce at a rate of 3 dB per doubling of distance up to 40 metres and 6 dB per doubling of distance beyond 40 metres.

(2) If windows must be closed to achieve the design noise levels in Standard IX.6.5(1), the building must be designed, constructed and maintained with a mechanical ventilation system that meets the requirements of E25.6.10(3)(b) and (d) to (f).

(3) A report must be submitted by a suitably qualified and experienced person to the council demonstrating compliance with Rule IX.6.5 (1) and (2) prior to the construction or alteration of any building containing an activity sensitive to noise located within the areas specified in IX.6.5 (1).

IX.6.6 Fences adjoining publicly accessible open space

Purpose: Ensure development positively contributes to the visual quality and interest of open spaces.

(1) Fences, or walls, or a combination of these structures, within a side or rear yard adjoining a publicly accessible open space (excluding roads) must not exceed the heights specified below, measured from the ground level at the boundary:

~~(i)~~ (a) 1.2m in height~~;~~ or~~;~~

~~(ii)~~ (b) 1.8m in height if the fence is at least 50 per cent visually open.

IX.6.7 Daylight

Purpose:

- Ensure adequate daylight for living areas and bedrooms in dwellings, supported residential care and boarding houses; and
- In combination with the outlook control, manage visual dominance effects within a site by ensuring that habitable rooms have an outlook and sense of space, particularly at upper building levels.

(1) Buildings which include dwellings, units in an integrated residential development, visitor accommodation and boarding houses within Sub-Precincts C, D and E ~~and F~~ must comply with H6.6.14 Daylight.

IX.6.7 Outdoor Living Space

Purpose: to provide dwellings, supported residential care and boarding houses with outdoor living space that is of a functional size and dimension, has access to sunlight, and is directly accessible from the principal living room, dining room or kitchen and is separated from vehicle access and manoeuvring areas.

(1) Buildings which include dwellings, supported residential care and boarding houses within Sub-Precincts C, D and E must have an outdoor living space in the form of a balcony, patio or roof terrace that:

(a) is at least $5m^2$ for studio and one-bedroom dwellings and has a minimum dimension of 1.8m; or

(b) is at least $8m^2$ for two or more bedroom dwellings and has a minimum dimension of 1.8m; and

(c) is directly accessible from the dwelling, supported residential care unit or boarding house; and

(d) except that, a balcony or roof terrace is not required where the net internal floor area of a dwelling is at least $35m^2$ for a studio and $50m^2$ for a dwelling with one or more bedrooms.

IX.6.9 Residential at ground floor

Purpose:

- Protect the ground floor of buildings within the Centre Fringe Office Control for commercial use;
- Preclude activities that require privacy from locating on the ground floor of buildings fronting streets or public open spaces.

(1) Within that part of Sub-Precinct E subject to the Centre Fringe Office Control (refer to IX.10.4 Precinct Plan 4), dwellings including units within an integrated residential development must not locate on the ground floor of a building where the dwelling or unit has frontage to public open spaces including streets.

IX.6.10 Outlook space

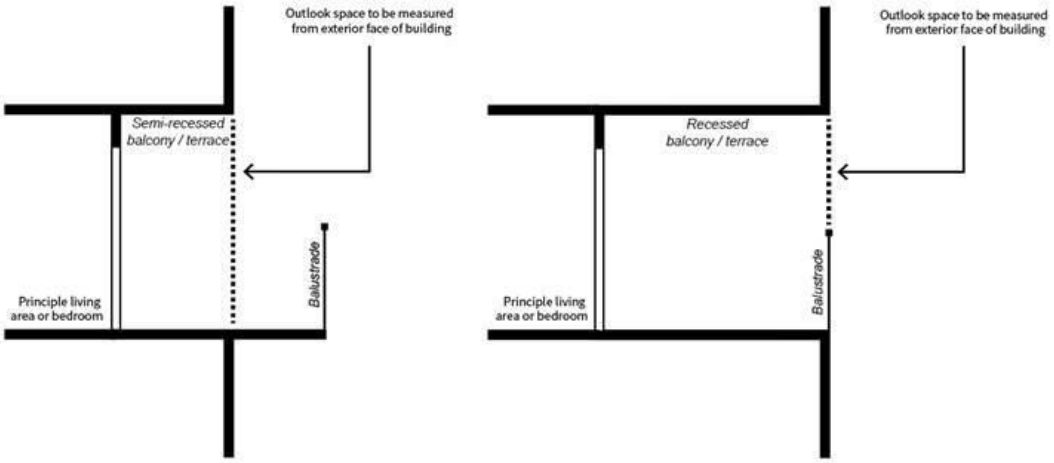
Purpose:

• To ensure a reasonable standard of visual privacy between habitable rooms of different buildings, on the same or adjacent sites; and

• manage visual dominance effects within a site by ensuring that habitable rooms have an outlook and sense of space.

(1) Buildings which include dwellings, units in an integrated residential development, visitor accommodation and boarding houses within Sub-Precincts C, D and E must comply with H13.6.9 Outlook. In addition to matters H13.6.9 (1) – (10), where the unit contains a recessed balcony or terrace, the outlook space must extend from the exterior face of the building as illustrated in Figure 1 below.

Figure 1: Measurement of outlook space for recessed balconies or terraces



IX.6.11 Safe operation of the NIMT

Purpose: To ensure the safe operation of the North Island Main Trunk Line by providing for buildings on adjoining sites to be maintained within their site boundaries.

(1) Buildings must be setback at least ~~2.5~~5 metres from any boundary which adjoins the North Island Main Trunk Line.

IX.7 Assessment – controlled activities

There are no controlled activities in this precinct.

IX.8 Assessment – restricted discretionary activities

IX.8.1 Matters of discretion

The Council will reserve its discretion to all of the following matters when assessing a restricted discretionary activity resource consent application, in addition to the matters specified for the relevant restricted discretionary activities in the overlays, Auckland-wide or zones provisions:

(1) Subdivision, or new buildings prior to subdivision, including private roads:

(a) Location and design of the collector streets, local streets and connections with neighbouring sites to achieve an integrated street network, and appropriately provide for all modes;

(b) Provision of cycling and pedestrian networks;

(c) Location, design and sequencing of connections to the Drury Central train station;

(d) Design and sequencing of upgrades to the existing road network;

(e) Stormwater & flooding;

(f) Servicing;

(g) In Sub-precinct A, discourage activities which do not support an active and lively retail street frontage with fine grained, pedestrian orientated outcomes~~.~~;

(h) ~~.~~ Matters of discretion IX.8.1 (1)(a) – (e) apply in addition to the matters of discretion in H9.8.1(2), (3) and (4) and E38.12.1~~.~~; and

(i) The imposition of consent conditions of the kind referred to in rule IX.6.2(1) and (2).

(2) Development of publicly accessible open space greater than 1000m^2

(a) Location and design of the indicative publicly accessible open spaces shown in IX.10.2 (1) Precinct Plan 2;

(b) Location and design of any other publicly accessible open spaces greater than 1000m^2; ~~and~~

(c) Matters of discretion IX8.1 (2) (a) - (b) apply in addition to the matters of discretion in E38.12.1~~.~~; and

(d) Ownership and maintenance arrangements.

(3) New buildings, and alterations and additions to buildings not otherwise provided for Sub-Precincts A and B:

(a) The design and appearance of buildings and development as it relates to all the matters set out in H9.8.1(2)(a)-(i), (3) and (4) and the future amenity values of Drury.

(b) Servicing; ~~and~~

(c) Travel demand management measures;

(d) Matters of discretion IX.8.1 (3)(a)-(c) apply in addition to the matters of discretion in H9.8.1 (2),(3) and (4); and

(e) ~~f~~For Sub-precinct A, discourage activities which do not support an active and lively retail street frontage with fine grained, pedestrian orientated outcomes.

(4) New buildings, alterations and additions to buildings not otherwise provided for in the underlying zone within Sub-Precincts C, D and E:

(a) The design and layout of buildings and development insofar as it affects the existing and future residential amenity values and the amenity values of public streets and open spaces;

(b) Servicing;

(c) Matters of discretion IX8.1 (4) (a) - (b) apply in addition to the matters of discretion in H13.8.1 (3).

~~(5) Development or subdivision that does not comply with Standard IX.6.2 Staging of Development with Transport Upgrades:~~

~~(a) Effects of traffic generation on the safety and efficiency of the surrounding road network consistent with Policies IX.3(7), IX.3(8), IX.3(16), (17), (18), (19) and IX.3(21);~~

~~(b) An Integrated Transport Assessment;~~

~~(c) The rate of public transport uptake and travel management measures;~~

~~(d) The coordination of retail, commercial and residential development in Drury East; and~~

~~(e) The outcome of engagement with the road controlling authority.~~

~~**Note –** See IX.9 Special information requirements below.~~

(6) Infringement to standard IX.6.1 Building height:

(a) Matters of discretion H13.8.1(7) apply.

(7) Infringement of standard IX.6.2A Maximum parking rate

(a) Matters of discretion E27.8.1(5) apply.

(8) Infringement of standard IX.6.2B Minimum cycle parking, IX.6.2C End of Trip Facilities

(a) Matters of discretion E27.8.1(7) apply.

(9) Infringement to standard IX6.3 Riparian Margins:

(a) Effects on water quality, biodiversity and stream erosion.

(10) Infringements to standard IX6.4 Stormwater Quality

(a) Matters of discretion E9.8.1(1) apply.

(11) Infringement of standard IX.6.5 – Development within 60m of the rail corridor

(a) Effects on human health and residential amenity while people are indoors and effects on the operation of the railway corridor.

(12) Infringement of standard IX.6.6 Fences adjoining publicly accessible open space

(a) Effects on the amenity and safety of the open space.

(13) Infringement to standard IX.6.7 Daylight:

(a) Matters of discretion H13.8.1(7) apply.

(14) Infringement to standard IX.6.8 Outdoor Living Space:

(a) Matters of discretion H13.8.1(7) apply.

(15) Infringement of Standard IX.6.9. Residential at ground floor in Sub-Precinct E

(a) Matters of discretion in H13.8.1(7) apply.

(16) Infringement of standard IX.6.10 – Outlook Space

(a) Matters of discretion H13.8.1(7) apply.

(17) Infringement of standard IX.6.11 Safe operation of the NIMT

(a) Whether the proposal ensures that buildings can be maintained within their site boundaries while providing for the safe operation of the North Island Main Trunk Line.

(18) Infringement to standard IX.6.2D(1) Road Design and Upgrade of Existing Rural Roads

(a) The design of the road, and associated road reserve and whether it achieves policies IX.3(8), (16), (18) and (19).

(b) Design constraints.

(c) Interface design treatment at property boundaries, particularly for pedestrians and cyclists.

IX.8.2 Assessment criteria

The Council will consider the relevant assessment criteria below for restricted discretionary activities, in addition to the assessment criteria specified for the relevant restricted discretionary activities in the overlays, Auckland-wide or zones provisions:

(1) Subdivision, or new buildings prior to subdivision, including development of private roads:

Location of roads

(a) The extent to which the collector road network, the Key Retail Street and the potential connection to Drury Centre are provided generally in the locations shown on IX.10.2(1)~~X~~ Drury Centre: Precinct Plan 2 to achieve a highly connected street layout that integrates with the surrounding transport network and responds to landform.

(b) Whether an alternative alignment provides an equal or better degree of connectivity and amenity within and beyond the precinct may be appropriate, having regard to the following functional matters:

(i) Landowner patterns and the presence of natural features, natural hazards, contours or other constraints and how these impact on the placement of roads;

(ii) The need to achieve an efficient block structure and layout within the precinct suitable to the proposed activities; and

(iii) The constructability of roads and the ability for them to be connected beyond any property boundary.

(c) Within Sub-precinct D, whether development precludes the construction of any connection between Brookfield Road and Quarry Road over Hingaia Stream.

(d) Whether a high quality and integrated network of local roads is provided within the precinct that provides a good degree of accessibility and supports a walkable street network. Whether roads and pedestrian and cycle paths are aligned to provide visual and physical connections to open spaces, including along the stream network, where the site conditions allow.

(e) Whether subdivision and development provides for collector roads and local roads to the site boundaries to coordinate with neighbouring sites and support the integrated completion of the network within the precinct over time;

Design of roads

(f) Whether the design of new collector and local roads accords with the road design details provided in IX.11 Drury Centre: Appendix 1;

(g) Whether the layout of the street network provides a good degree of accessibility and supports a walkable street network. As a general principle, the length of a block should be no greater than 180m, and the perimeter of the block should be no greater than 500m;

(h) Whether Station Road is designed as a low-speed environment that provides pedestrian accessibility between the Drury Central train station and the Key Retail Street.

Connections to the Drury Central train station

(i) Whether the street network provides direct, safe and legible pedestrian and cycle connections to the operational Drury Central train station as development occurs over time. In particular, whether the following is provided, or an alternative is provided that achieves an equal or better degree of connectivity:

(i) Development in Sub-Precinct B and D has a connection to the Drury Central train station via Drury Boulevard or the Key Retail Street shown on Precinct Plan 2;

(ii) Development in Sub-Precinct A has a connection to the Drury Central train station via the Key Retail Street and/or any connecting local or collector roads and/or open spaces;

(iii) Development in Sub-Precincts C and E has a connection to the Drury Central train station via Drury Boulevard and any connecting local or collector roads

and/or open spaces.

Sequencing of upgrades to the existing road network

(j) ~~Whether Fitzgerald Road and Brookfield Road are progressively upgraded to ensure that safe connections are provided from the site to the Waihoehoe Road/Fitzgerald Road intersection. The section of upgraded road should extend from the site being developed to the Waihoehoe Road/Fitzgerald Road intersection.~~

(k) ~~Whether the design of the upgraded road accords with the interim road design details included in Appendix 1a. Where an Applicant controls land on one or both sides of the road, a wider footpath and back berm should be provided on the development side, to integrate with the final design width of 23m.~~

(l) Whether a further upgrade to the intersection of State Highway 22 / Great South intersection beyond what is required by the Drury South Precinct (I410.8.2(1)(f)) is necessary, to ensure it can operate safely and efficiently. This will be assessed for development exceeding the level set out in IX.6.2.1(a), but prior to the full upgrade of Waihoehoe Road required by IX.6.2.1(d). If required, the further upgrade will provide an additional right turn lane from Great South Road.

(m) ~~Where an interim upgrade of Fitzgerald Road is proposed, whether there are safe transport routes available for people to travel south of the precinct.~~

(n) Whether a temporary unsealed active modes connection, within the existing road reserve, has been provided to Drury South Precinct along Fitzgerald Road to Quarry Road (except for sections where impracticable due to constraints).

(o) Prior to the upgrade of Fitzgerald Road, south of Brookfield Road, to an urban standard, whether any works are required within the existing road reserve, to ensure Fitzgerald Road is of a suitable condition to maintain safe traffic movement including any shoulder widening, localised widening, safety works and/or interim intersection upgrades, having regard to the additional traffic on that road generated by the Drury Centre Precinct.

Stormwater and flooding

(p) Whether development is in accordance with an approved Stormwater Management Plan and policies E1.3(1) – (14);

(q) Whether the design and efficacy of infrastructure and devices is appropriate with consideration given to the likely effectiveness, ease of access, operation and integration with the surrounding environment.

(r) Whether the proposal ensures that development manages flooding effects upstream or and downstream of the site and in the Drury Centre precinct so that the risks to people and property (including infrastructure) are not increased for all flood events, up to a 1% AEP ~~100-year ARI~~ flood event.

(s) Whether the location, size, design and management of any interim flood attenuation

areas that may be necessary is appropriate to ensure that development does not increase flooding risks prior to upgrades of culverts.

Servicing

(t) Whether there is sufficient capacity in the existing or proposed utilities network, and public reticulated water supply, wastewater and stormwater network, to service the proposed development, having particular regard to the capacity of the Fitzgerald culvert and culverts under Great South Road;

(u) Where adequate network capacity is not available, whether adequate mitigation or staging is proposed.

(2) Development of publicly accessible open space greater than 1000m^2:

Location and design of publicly accessible open spaces greater than 1000m^2 in Sub-Precinct A

(a) Whether open spaces are provided in locations generally consistent with their indicative locations shown on IX.10.2 Drury Centre Precinct Plan 2 and have adequate street frontage to ensure the open spaces are visually prominent and safe;

(b) Whether the existing Homestead building is to be retained, repurposed and incorporated into a high amenity urban park for informal recreation, which forms a focal point of the Drury Centre; and if not the reasons why not;

(c) Whether existing mature trees are retained within Homestead Park where possible;

(d) Whether a civic open space is integrated with the Key Retail Street that functions as an urban plaza and is a focus of civic and public activity.

Location and design of any other open spaces greater than 1000m² including any riparian planting

(e) Whether the subdivision or development provides for the recreation and amenity needs of residents by providing suitably sized open spaces that are prominent and accessible to pedestrians within a neighbourhood;

(f) Whether the location and design of open spaces ~~to~~ integrates with surrounding natural features including the network of permanent and intermittent streams;

(g) If private ownership of publicly accessible open space is proposed, whether appropriate arrangements are proposed to provide for on-going private maintenance.

(3) New buildings, and alterations and additions to buildings not otherwise provided for, within Sub-Precincts A~~,~~ and B:

(a) The design and appearance of buildings and development as it relates to all the matters set out in H9.8.1(2)(a)-(i) and the future amenity values of Drury;

(b) The relevant assessment criteria in H9.8.2(2) of the Business – Metropolitan Centre

Zone for buildings or alterations and additions to buildings apply in addition to the criteria below;

(c) Whether the height and form of buildings provides for four hours of sunlight access to over 75% of the net site area of publicly accessible open spaces greater than 3,000m^2, between the hours of 10am-4pm during the Equinox (22 September. Demonstrating this may require the height of buildings to be reduced below that allowed by Rule IX.6.1 Building Height;

(d) Whether buildings along the Key Retail Street shown on IX.10.2(1) Drury Centre: Precinct Plan 2 maximise pedestrian amenity, safety and visual quality through:

  (i) achieving an appropriate level of definition and sense of enclosure to the street by providing a frontage height of at least 8m;

  (ii) providing activities that engage and activate the street and open space at ground and first floor levels;

  (iii) ensuring buildings are generally aligned with the street and have continuous verandah cover except where open space is provided;

  (iv) locating clearly identifiable and accessible pedestrian entrances to the street;

  (v) requiring internal space at all levels within buildings to maximise outlook onto the street and open space; and

  (vi) minimising or integrating servicing elements on building facades;

(e) Whether other local streets in Sub-Precinct A achieve a reasonable level of street activation, building continuity along the frontage, pedestrian amenity and safety and visual quality;

(f) Whether buildings fronting Homestead Park, the Town Square and Station Plaza provide activities that engage and activate the open space at ground floor level;

(g) Whether activities within Sub-precinct B provide for the visual quality and interest of streets and other public places, having regard to the functional requirements of these activities, including typically larger building footprints, and areas of carparking;

(h) Whether development incorporates Te Aranga Maori Design Principles;

(i) Whether the height of retaining walls to streets and public open spaces are minimised where practicable. Where retaining walls are required, they should be stepped and landscaped;

(j) Whether, in Sub-precinct A, activities support an active and lively retail street frontage with fine grained, pedestrian orientated outcomes.

Servicing:

(k) Whether there is sufficient capacity in the existing or proposed utilities network, and public reticulated water supply, wastewater and stormwater network, to service the proposed development, having particular regard to the capacity of the Fitzgerald culvert and culverts under Great South Road;

(l) Where adequate network capacity is not available, whether adequate mitigation or staging is proposed;

(m) Whether development has considered the presence of the 110kv Counties Power electricity lines and the need to achieve safe distances under existing Codes of Practice, or whether the existing lines can be relocated.

Travel demand management measures:

(n) For commercial activities ~~offices~~ greater than 500m^2 or integrated retail development, whether it can be demonstrated by the measures outlined in a travel plan that the activities will be managed on an on-going basis, to minimise private vehicle travel to and from precinct and promote the use of public transport.

(4) New buildings, and alterations and additions to buildings not otherwise provided for, within Sub-Precincts C, D and E:

(a) The relevant assessment criteria in H13.8.2(3) of the Business – Mixed Use Zone for buildings or alterations and additions to buildings apply in addition to the criteria below.

(b) Whether residential development contributes to achieving attractive and safe streets and open spaces. Methods to achieve this include:

(i) Providing windows and entrances to the street to encourage passive surveillance;

(ii) Use of soft landscaping and planted elements to the street;

(iii) Minimising the visual dominance of garage doors and car parking areas to the street;

(iv) Minimising the frequency of vehicle crossings to the street and encouraging rear access, taking into account the context of the site, including orientation and topography.

(c) Whether residential development:

(i) orientates and locates windows to optimise privacy and encourage natural cross ventilation within the dwelling;

(ii) optimises sunlight access based on orientation, function, window design and location, and depth of the dwelling floor space;

(iii) provides secure and conveniently accessible storage for the number and type of occupants the dwelling is designed to accommodate;

(iv) provide the necessary waste collection and recycling facilities in locations conveniently accessible and screens from streets and public open spaces.

(d) Whether the height of retaining walls to streets and public open spaces are minimised where practicable. Where retaining walls are required, they should be stepped and landscaped.

(e) Whether the height and form of buildings provides for four hours of sunlight access to

over 75% of the net site area of publicly accessible open spaces greater than 3,000m^2, between the hours of 10am-4pm during the Equinox (22 September. Demonstrating this may require the height of buildings to be reduced below that allowed by Rule IX.6.1 Building Height.

Servicing:

(f) Whether there is sufficient capacity in the existing or proposed utilities network, and public reticulated water supply, wastewater and stormwater network to service the proposed development having particular regard to the capacity of the Fitzgerald culvert and culverts under Great South Road;

(g) Where adequate network capacity is not available, whether adequate mitigation or staging is proposed;

(h) Whether development has considered the presence of the 110kv Counties Power electricity lines and the need to achieve safe distances under existing Codes of Practice, or whether the existing lines can be relocated.

~~**(5) Development or subdivision that does not comply with IX.6.2 Staging of Development with Transport Upgrades:**~~

~~A proposal that does not comply with IX.6.2 Staging of Development with Transport Upgrades will be assessed in terms of the matters below, as informed by an Integrated Transport Assessment.~~

~~(a) Whether the proposal is in accordance with Policies IX.3(7), IX.3(8), IX.3(16), (17), (18), (19) and IX.3(21) in addition to any relevant AUP policy that is within the scope of the matters of discretion in IX.8.1(5);~~

~~(b) Whether public transport routes that connect to the Drury Central train station and the Drury Centre can operate effectively and efficiently at all times;~~

~~(c) Whether the Waihoehoe/Great South Road intersection can operate safely and with reasonable efficiency during the inter-peak period, being generally no worse than a Level of Service D for the overall intersection;~~

~~(d) Whether increased use of public transport within the Drury Centre precinct or the wider area, has provided additional capacity within the transport network including by implementing travel demand management measures set out in a travel plan, which has been prepared in accordance with IX.9(4);~~

~~(e) Whether the proposal would have a similar or lesser trip generation and similar effects on the surrounding road network to the development mix provided for in the Table IX.6.2.1 Threshold for Development;~~

~~(f) Whether residential development is coordinated with retail and commercial development within the wider Drury East area identified on Precinct Plan 3 to minimise trips outside of the precinct providing additional capacity within the transport network;~~

~~(g) Whether the actual rate of development in the wider area is slower than anticipated~~

~~and provides additional capacity in the transport network;~~

(h) ~~The effect of the timing and development of any other transport upgrades or transport innovations not anticipated by the Drury Centre precinct;~~

(i) ~~Whether the integrated transport assessment supporting the application documents the outcome of engagement with the road controlling authority;~~

(j) ~~Whether the proposal demonstrates methods that promote the increased use of public transport, including details of how those methods would be implemented, monitored and reviewed so as to contribute to a reduction in vehicle trips;~~

(k) ~~Whether the intersection of Great South Road/Quarry Road and the Drury South Precinct roads can operate safely and efficiently prior to the full upgrade of Waihoehoe Road between Fitzgerald Road and Great South Road.~~

(6) Infringement of standard IX.6.2A - Maximum parking rate

(a) Assessment criteria in E27.8.2(4) apply.

(7) Infringement of standard IX.6.2B - Minimum cycle parking and IX.6.2C - End of Trip Facilities

(a) Assessment criteria in E27.8.2(6) apply.

(8) Infringement to standard IX.6.3 - Riparian Planting

(a) Whether the infringement is consistent with Policy IX.3(20).

(9) Infringement to IX.6.4 - Stormwater Quality

(a) Assessment criteria E9.8.2(1) apply;

(b) Whether the proposal is in accordance with the approved Stormwater Management Plan and Policies E1.3(1) – (10) and (12) – (14);

(c) Whether a treatment train approach is implemented to treat runoff so that all contaminant generating surfaces are treated, including cumulative effects of lower contaminant generating surfaces.

(10) Infringement of standard IX.6.5 - ~~Development~~ Activities sensitive to noise within 60m of the rail corridor

(a) Whether Activities sensitive to noise adjacent to the railway corridor are designed to protect people from adverse health and residential amenity effects while they are indoors, and whether such activities unduly constrain the operation of the railway corridor. This includes:

(i) the extent to which building(s) containing activities sensitive to noise have been located and designed with particular regard to proximity to the rail corridor;

(ii) the extent of non-compliance with the noise standard and the effects of any non-compliance;

(iii) the extent to which topographical features or location of other buildings or structures will mitigate noise effects; and

(iv) Any noise management implications arising from technical advice from an acoustic rail noise expert and KiwiRail

(11) Infringement of standard IX.6.6 - Fences adjoining publicly accessible open space

(a) Whether the proposal positively contributes to the visual quality and interest of the adjoining open space, while providing an adequate degree of privacy and security for the development.

(12) Infringement to standard IX.6.7 - Daylight:

(a) Whether the proposal is designed to meet the day to day needs of residents by providing adequate access to daylight to principal living rooms and bedrooms and providing a sense of space between buildings on the same site.

(13) Infringement to standard IX.6.8 - Outdoor Living Space:

(a) Whether the proposal provides outdoor living space that is useable and accessible having regard to the functional requirements of the type of residential activity proposed.

(14) Infringements to standard IX.6.9 and H9.6.5 - Residential at Ground Floor

(a) Whether the ground floor is designed with flexibility to accommodate commercial uses in the future;

(b) Whether there are particular site characteristics that would make residential at ground floor suitable, for example where the site has frontage to a local road or minor public open space. In those instances, whether the dwellings are designed to enable passive surveillance of the street/public open space and provide privacy for residents.

(15) Infringement of standard X.6.10 - Outlook Space

(a) Assessment criteria in H13.8.2(7) apply.

(16) Infringement of standard IX.6.11 - Safe operation of the NIMT

(a) Whether the proposal ensures that buildings can be maintained within their site boundaries while providing for the safe operation of the North Island Main Trunk Line, including:

(i) the size, nature and location of the buildings on the site;

(ii) the extent to which the safety and efficiency of railway operations will be adversely affected;

(iii) any characteristics of the proposal that avoid or mitigate any effects on the safe operation of the North Island Main Trunk Line; and

(iv) Any implications arising from advice from KiwiRail

(17) Infringement to standard IX.6.2D(1) Road Design and Upgrade of Existing Rural Roads

(a) Whether there are constraints or other factors present which make it impractical to comply with the required standards.

(b) Whether the design of the road and associated road reserve achieves policies IX.3(8), (16), (18) and (19).

(c) Whether the proposed design and road reserve:

(i) incorporates measures to achieve the required design speeds;

(ii) can safely accommodate required vehicle movements;

(iii) can appropriately accommodate all proposed infrastructure and roading elements including utilities and/or any stormwater treatment;

(iv) assesses the feasibility of upgrading any interim design or road reserve to the ultimate required standard.

(d) Whether there is an appropriate interface design treatment at property boundaries, particularly for pedestrians and cyclists

IX.9 Special information requirements

(1) Riparian planting plan

An application for land modification, development and subdivision which adjoins a permanent or intermittent stream must be accompanied by a riparian planting plan identifying the location, species, planter bag size and density of the plants. Plant species should be native. The riparian planting plan must be prepared in accordance with Appendix 16 - Guideline for native revegetation plantings.

(2) Archaeological assessment

An application for land modification must be accompanied by an archaeological assessment, including a survey. The purpose of this assessment is to evaluate the effects on archaeological values prior to any land disturbance, planting or demolition of a pre-1900 building, and to confirm whether the development will require an Authority to Modify under the Heritage New Zealand Pouhere Taonga Act 2014.

(3) Travel Plan

A travel plan is required for offices greater than 500m^2 and integrated retail development, or where development infringes standard IX.6.2. A travel plan must be prepared by suitably qualified and experienced person and include:

(a) operational measures to be established on-site to encourage reduced vehicle trips, including car sharing schemes, public transport use incentives, flexitime, staggered working hours;

(b) operational measures to be established to restrict the use of any employee parking area(s) during peak periods, including the allocation of on-site parking between staff, company cars and visitors;

(c) details of the management structure within the building or site in which the activity is to be located which has overall responsibility to oversee the implementation and monitoring of travel management measures;

(d) the methods by which the effectiveness of the proposed measures outlined in the travel plan can be independently measured/monitored and reviewed by a suitably qualified and experienced traffic engineer, including a commitment to undertake travel surveys at the time of building occupation or as otherwise required to provide on-going information regarding travel behaviour;

(e) the design of transport infrastructure proposed as part of the development that encourages a mode shift;

(f) an objective or target for mode share or travel associated with offices, retail or commercial activities.

(4) Integrated transport assessment

An application to infringe standard IX.6.2 Staging of Subdivision and Development with Transport Upgrades must be accompanied by an integrated transport assessment prepared by suitably qualified transport planner or traffic engineer prepared in accordance with the Auckland Transport Integrated Transport Assessment Guidelines in force at the time of the application.

The integrated transport assessment must include a register of development and subdivision that has been previously approved under standard IX.6.2 Staging of Subdivision and Development with Transport Upgrades.

Without limiting the scope of the integrated transport assessment, the integrated transport assessment must assess and provide details of the following:

(a) Whether the proposal is in accordance with Policies IX.3(7), IX.3(8), IX.3(16), (17), (18), (19) and IX.3(21) in addition to any other relevant AUP policy;

(b) Whether public transport routes that connect to the Drury Central train station and the Drury Centre can operate effectively and efficiently at all times;

(c) Whether the Waihoehoe/Great South Road intersection can operate safely and with reasonable efficiency during the inter-peak period, being generally no worse than a Level of Service D for the overall intersection;

(d) Whether increased use of public transport within the Drury Centre precinct or the wider area, has provided additional capacity within the transport network including by implementing travel demand management measures set out in a travel plan, which has been prepared in accordance with IX.9(4);

(e) Whether the proposal would have a similar or lesser trip generation and similar effects on the surrounding road network to the development mix provided for in the Table IX.6.2.1 Threshold for Subdivision and Development;

(f) Whether residential development is coordinated with retail and commercial development within the wider Drury East area identified on Precinct Plan 3 to minimise trips outside of the precinct providing additional capacity within the transport network;

(g) Whether the actual rate of development in the wider area is slower than anticipated and provides additional capacity in the transport network;

(h) The effect of the timing and development of any other transport upgrades or transport innovations not anticipated by the Drury Centre precinct;

(i) Whether the integrated transport assessment supporting the application documents the outcome of engagement with the road controlling authority;

(j) Whether the proposal demonstrates methods that promote the increased use of public transport, including details of how those methods would be implemented, monitored and reviewed so as to contribute to a reduction in vehicle trips;

(k) Whether the intersection of Great South Road/Quarry Road and the Drury South Precinct roads can operate safely and efficiently prior to the full upgrade of Waihoehoe Road between Fitzgerald Road and Great South Road;

(l) Whether the surrounding transport network can operate safely and efficiently when considering traffic generated by construction activities within the Precinct Plan 3 area.

(5) Monitoring of Rule IX.6.2 Staging of Subdivision and Development with Transport Upgrades and Rule IX.6.2A Maximum Parking Rate

(a) Any proposal for land use or subdivision for dwellings, retail, commercial and/or community activities must demonstrate compliance with rule IX.6.2 Staging of Subdivision and Development with Transport Upgrades. Any application must contain details of the maximum number of dwellings or amount of retail, commercial or community GFA proposed to be enabled (as well as anticipated dwellings/GFA for any subdivision proposal involving superlots).

(b) Any proposal for office activities must demonstrate compliance with rule IX.6.2A Maximum Parking Rate. Any application must contain details of the amount of office GFA proposed to be enabled where relevant.

(6) Transport Design Report

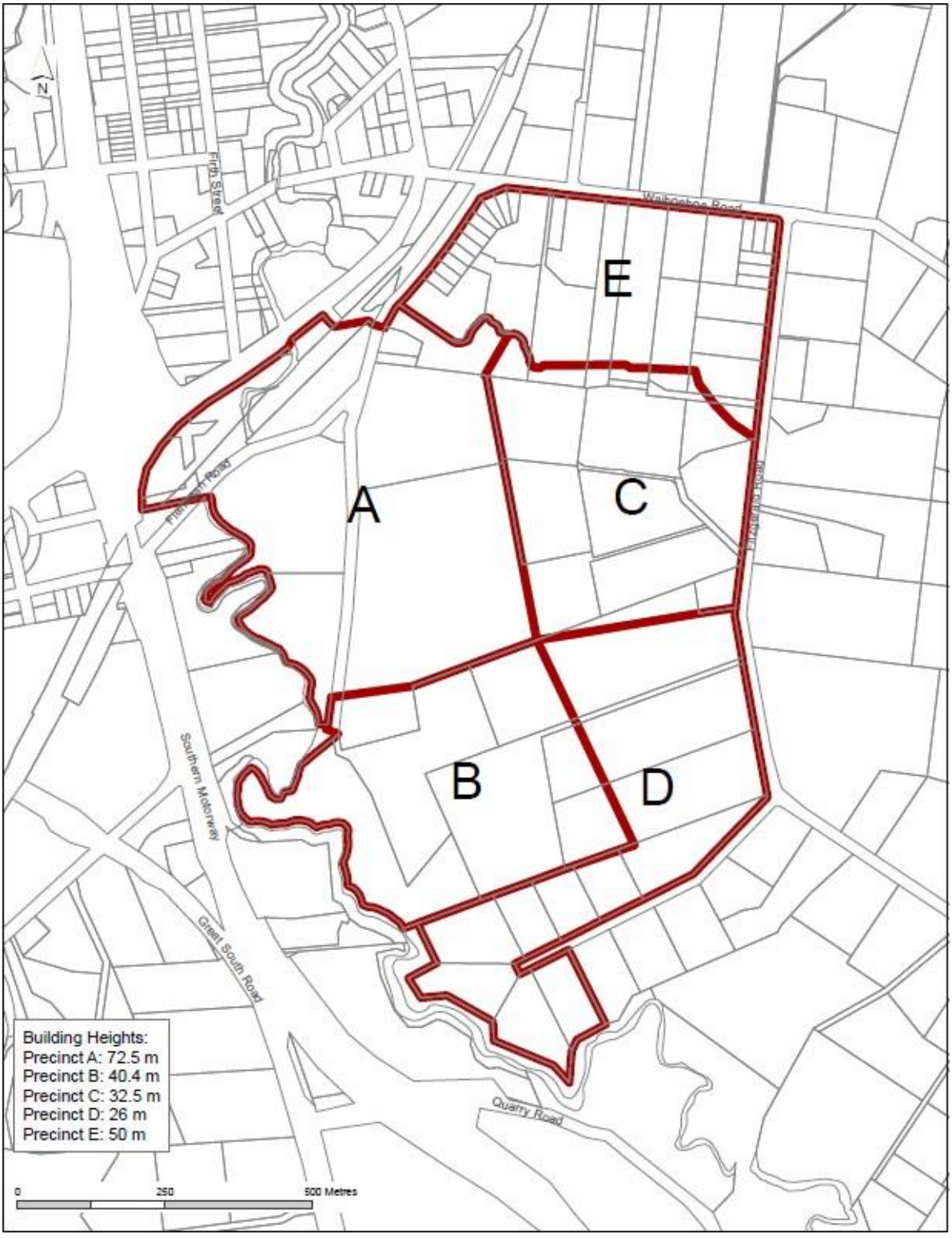
Any proposed new road intersection or upgrading of existing road intersections must be supported by a Transport Design Report and Concept Plans (including forecast transport modelling and land use assumptions), prepared by a suitably qualified transport engineer confirming the location and design of any road and its intersection(s) supports the safe and efficient function of the existing and future (ultimate) transport network and can be accommodated within the proposed or available road reserves. This may be included within a transport assessment supporting land use consent.

In addition, where an interim upgrade is proposed, information must be provided, detailing how the design allows for the ultimate upgrade to be efficiently delivered.

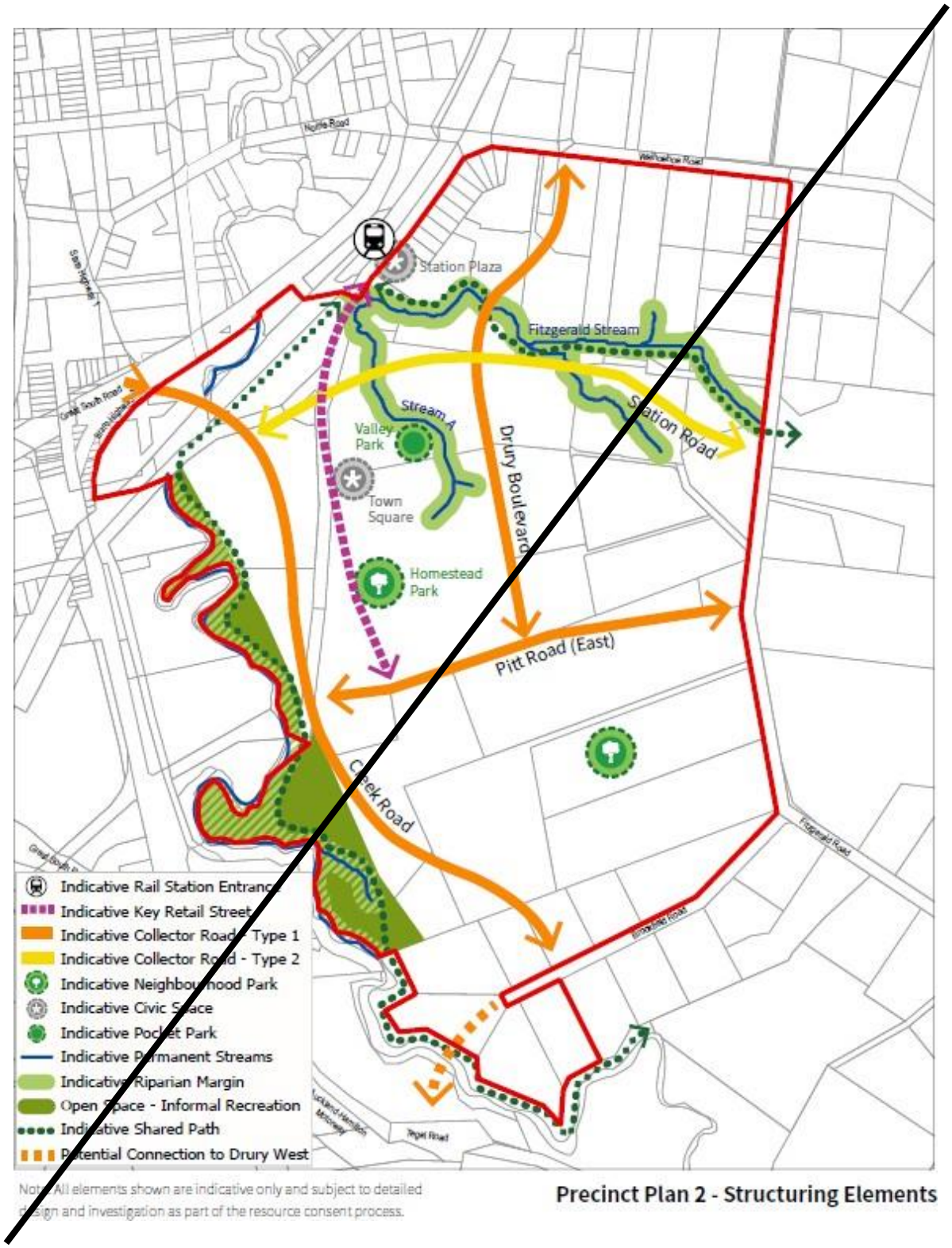
(7) Activities sensitive to noise proposed within 60m of the rail corridor which infringe Standard IX.6.5 and/or buildings proposed within 5 metres from any boundary which adjoins the North Island Main Trunk Line which infringe Standard IX.6.11:

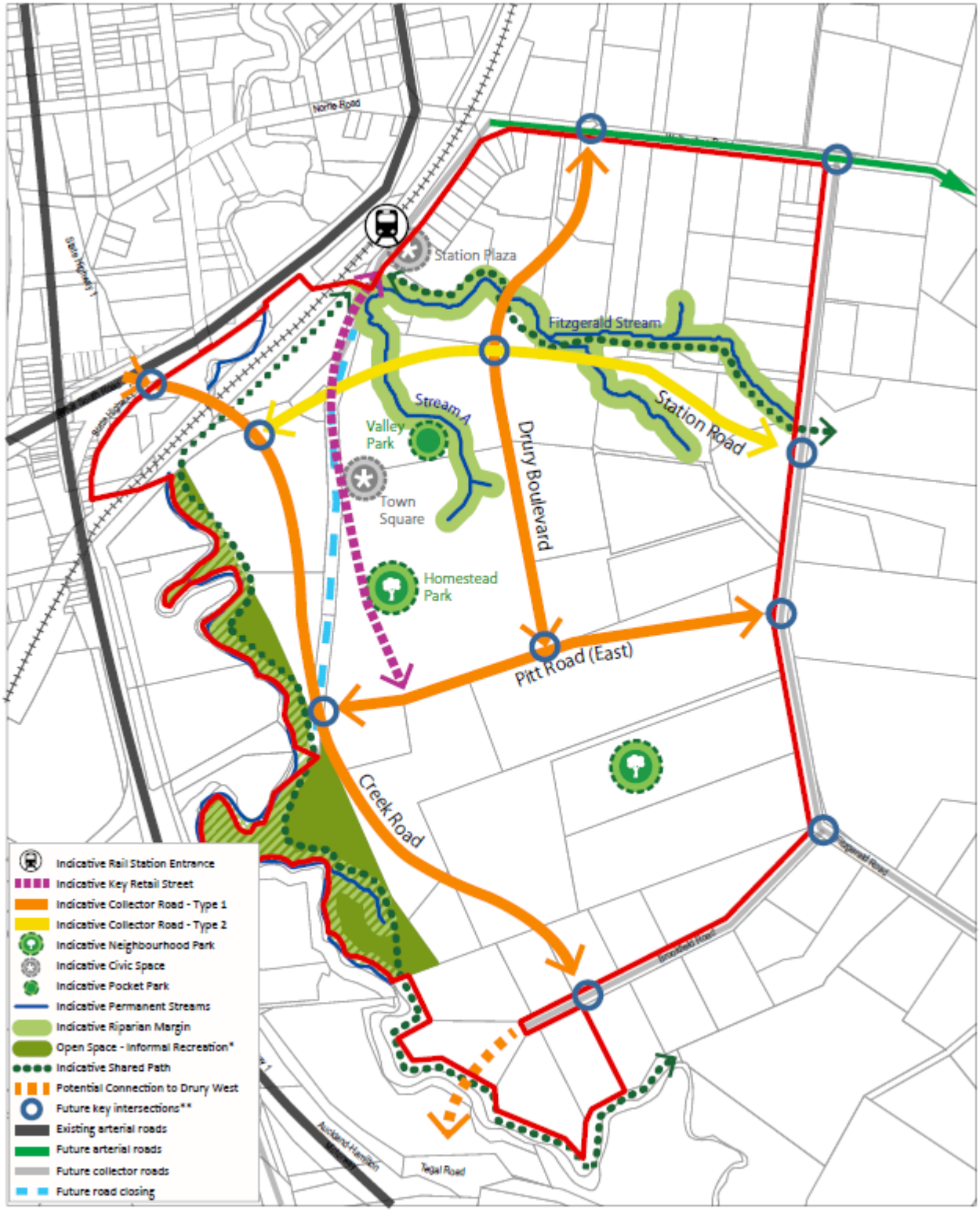
(a) Evidence of consultation with KiwiRail and its responses to that consultation.

IX.10.1 Drury Centre: Precinct plan 1 – Building Height



IX.10.2(1) Drury Centre: Precinct plan 2 – Structuring Elements





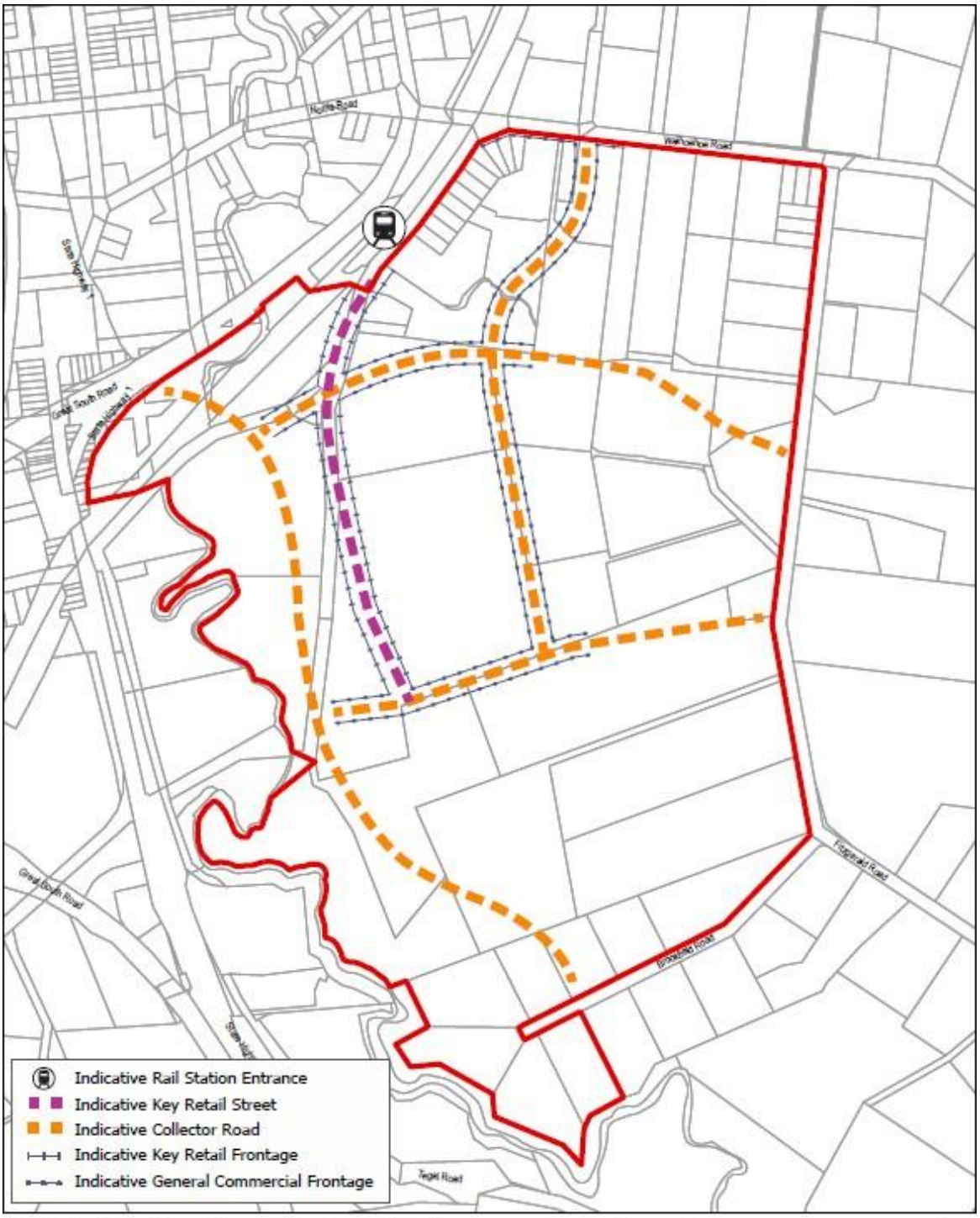
Note: All elements shown are indicative only and subject to detailed design and investigation as part of the resource consent process.

Precinct Plan 2 - Structuring Elements

* Areas zoned Open Space outside of the Esplanade Reserve to be retained in private ownership.

**All future key intersections subject to detailed design and special information requirements.

IX.10.2(2) Drury Centre: Precinct plan 2A – Road Network and Key Retail and General Commercial Frontage controls



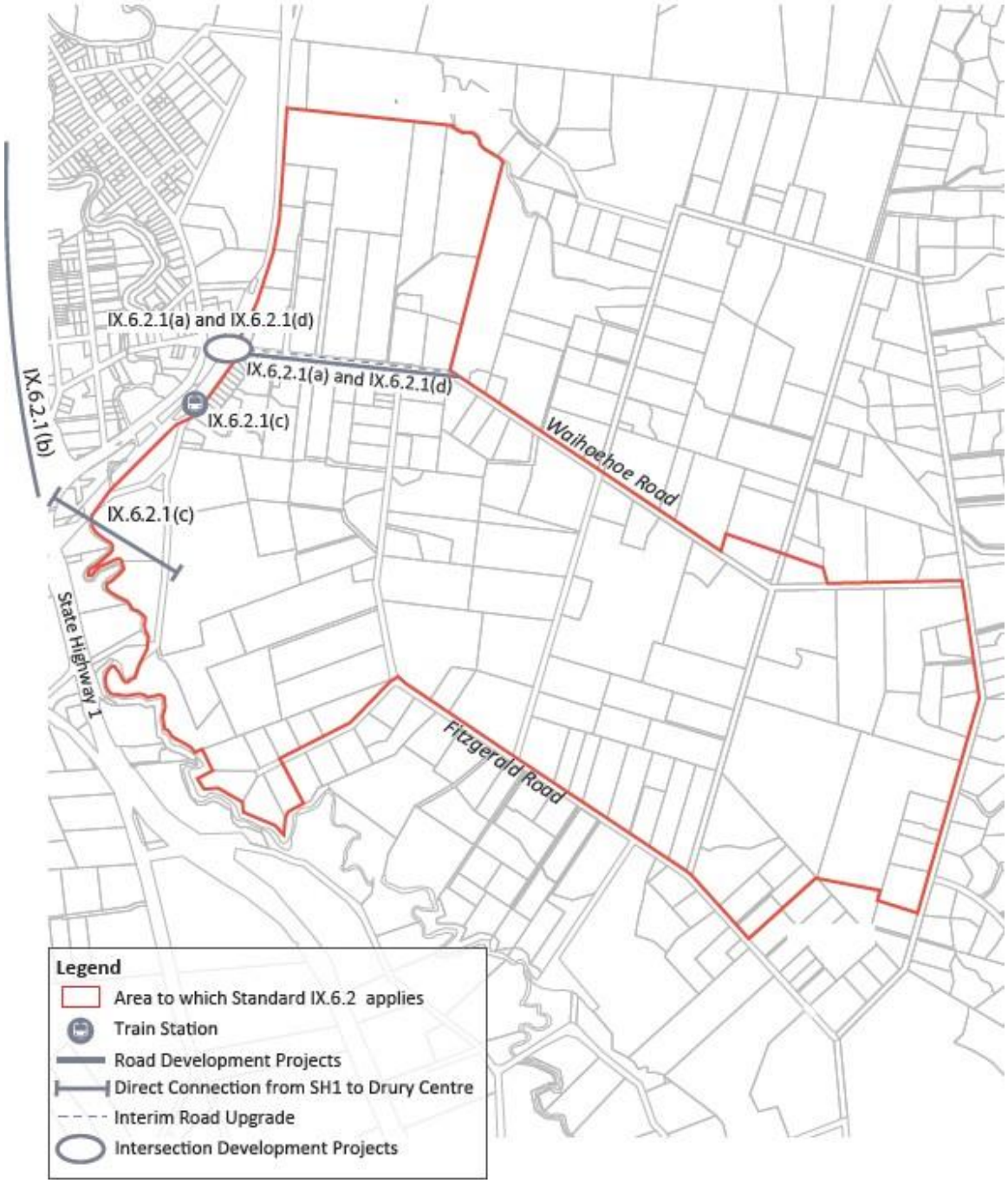
Note: The Key Retail and General Commercial frontage controls apply to sites adjoining the final location of Collector Roads and the Key Retail Street as determined through a resource consent process.

Precinct Plan 2A - Frontage Controls

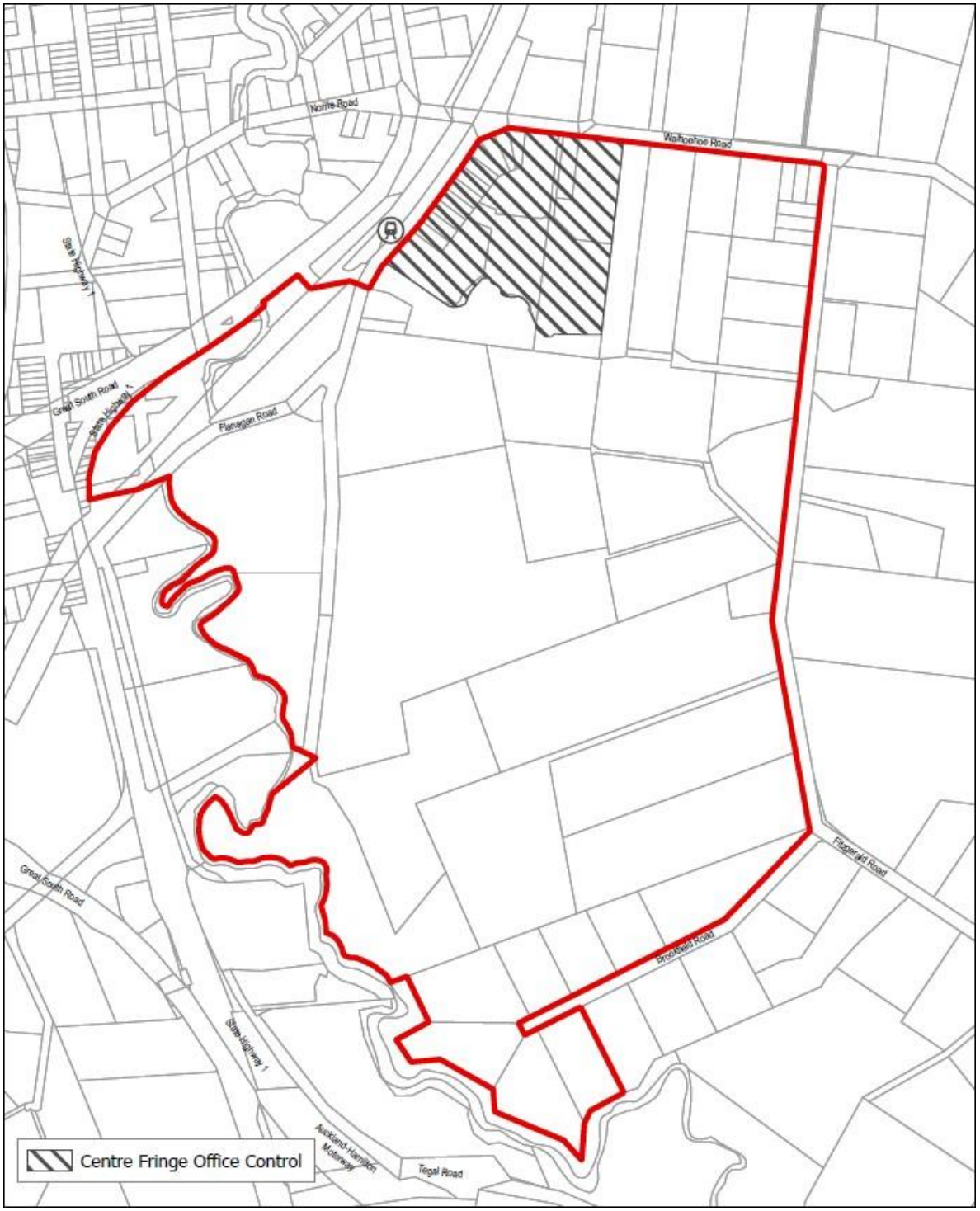
IX.10.3 Drury Centre: Precinct plan 3 – Transport Staging Boundary

Drury Centre Precinct

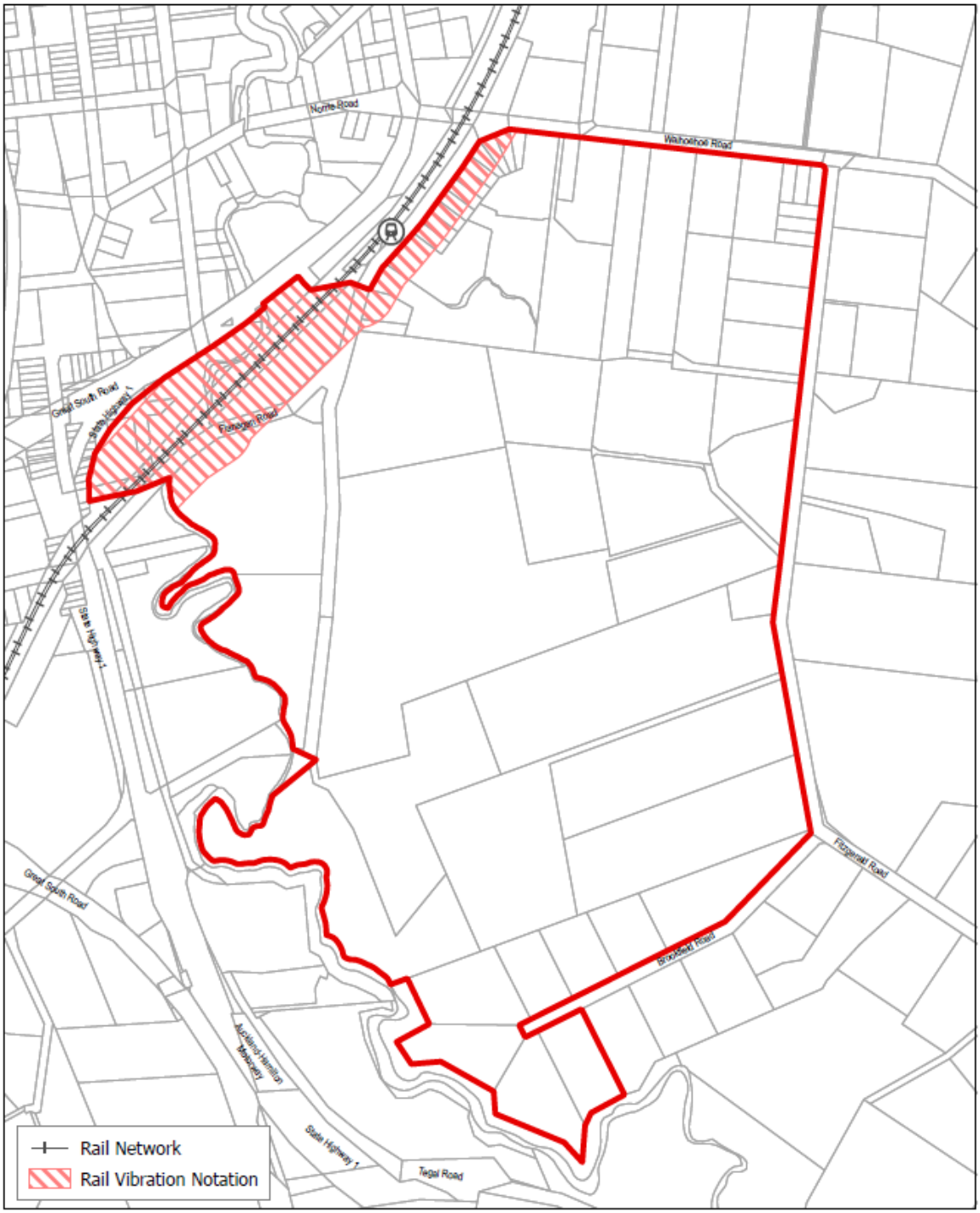
Drury Centre Precinct Plan 3 - Transport Staging Boundary



IX.10.~~45~~ Drury Centre: Precinct plan 4 – Centre Fringe Office Control



IX.10.5 Drury Centre: Precinct plan 5 – Rail Vibration



The "Rail Vibration Notation" identifies an area that may experience vibration levels higher than would normally be expected, because of proximity to the rail corridor.

Appendix 1: Design Details

Road description	Role and function of road	Minimum road reserve	Total number of lanes	Design speed	Median	Cycle provision	Pedestrian provision	Street trees/rain garden/ parking	Vehicle access restriction
Creek Road, Drury Boulevard, Pitt Road (east)	Collector Road (Type 1)	23m	2	40 km/h	No	Yes Separated both sides	Both sides	Trees /rain garden each side On-street parking (interspersed between trees)	No
Station Road	Collector Road (Type 2)	23m	2	30 km/h	No	Yes Separated both sides	Both sides	Trees /rain garden each side On-street parking (interspersed between trees)	No
N/A	Local Road	16m	2	30 km/h	No	No	Yes	Trees /rain garden each side On-street parking (interspersed between trees)	No
N/A	Local Road – Park Edge	13.5m	2	30 km/h	No	Yes (3m shared path park side)	Yes (Lot side)	Trees /rain garden each side On-street parking (interspersed between trees)	No
Key Retail Street	Local Road	20m	2	30 km/h	No	No	Yes (3m both sides)	Trees /rain garden each side On-street parking (interspersed between trees)	Yes

Road Function and Required Design Elements Table										
Road Function and Required Design Elements Road Name (refer to Precinct Plan 2)	**Proposed Role and Function of Road in Precinct Area**	**Min. Road Reserve (subject to note 1)**	**Total number of lanes (subject to note 3)**	**Speed Limit (Design)**	**Access Restrictions**	**Median**	**Bus Provision (subject to note 2)**	**On Street Parking**	**Cycle Provision**	**Pedestrian Provision**
Waihoehoe Road West Ultimate Upgrade (Great South Road to Fitzgerald Road) with separated active transport provisions	Arterial	30m	4	50	Yes	Yes	Yes	No	Yes separated on both sides	Yes both sides
Waihoehoe Road West Interim Upgrade (Great South Road to Fitzgerald Road)	Arterial	20m	2[1]	50	Yes	No	Yes	No	Yes Shared path on one side with safe crossing points.	Yes Shared path on one side with safe crossing points.

[1] *Note: an additional bus lane will be provided between the Waihoehoe bridge and the turning lanes at Fitzgerald Road intersection, as shown at Appendix 1a.

Road Function and Required Design Elements Table										
Road Function and Required Design Elements Road Name (refer to Precinct Plan 2)	**Proposed Role and Function of Road in Precinct Area**	**Min. Road Reserve (subject to note 1)**	**Total number of lanes (subject to note 3)**	**Speed Limit (Design)**	**Access Restrictions**	**Median**	**Bus Provision (subject to note 2)**	**On Street Parking**	**Cycle Provision**	**Pedestrian Provision**
Ultimate Waihoehoe Road (Fitzgerald Road to Mill Road northern connection) with separated active transport provisions	Arterial	24m	2	50	yes	Yes	yes	No	Yes separated on both sides	Yes both sides
Waihoehoe Road East Interim Constrained Upgrade (future width 24m) (subject to note 4)	Arterial	20m	2	50	Yes	No	Yes	No	Yes separated on both sides	Yes - Pedestrian provision only required on one side.
North-South Opaheke Road (Ultimate)	Arterial	27m	4	40	Yes	No	Yes	Optional	Yes separated on both sides	Yes both sides
North-South Opahake Road (Interim)	Collector	27m	2	40	Yes	No	Yes	Optional	Yes separated on both sides	Yes both sides

Road Function and Required Design Elements Table										
Road Function and Required Design Elements Road Name (refer to Precinct Plan 2)	**Proposed Role and Function of Road in Precinct Area**	**Min. Road Reserve (subject to note 1)**	**Total number of lanes (subject to note 3)**	**Speed Limit (Design)**	**Access Restrictions**	**Median**	**Bus Provision (subject to note 2)**	**On Street Parking**	**Cycle Provision**	**Pedestrian Provision**
Collector Roads with separated active transport provisions including Fielding Road, Cossey Road, Fitzgerald Road and Brookfield Road	Collector	23m	2	40	No	No	Yes	Optional	Yes separated on both sides	Yes both sides
Collector Roads Interim Hybrid Upgrade (future width 23 m) including Fielding Road, Cossey Road, Fitzgerald Road and Brookfield Road (subject to note 4)	Collector	21.5m	2	40	No	No	Yes	Optional	Yes separated on both sides	Yes both sides[2]

[2] * Note: Pedestrian provision is not required along the frontage of any Future Urban zoned site

Road Function and Required Design Elements Table										
Road Function and Required Design Elements Road Name (refer to Precinct Plan 2)	**Proposed Role and Function of Road in Precinct Area**	**Min. Road Reserve (subject to note 1)**	**Total number of lanes (subject to note 3)**	**Speed Limit (Design)**	**Access Restrictions**	**Median**	**Bus Provision (subject to note 2)**	**On Street Parking**	**Cycle Provision**	**Pedestrian Provision**
Collector Road Interim Constrained Upgrade (future width 23 m) including Fielding Road, Cossey Road, Fitzgerald Road and Brookfield Road (subject to note 4)	Collector	20m	2	40	No	No	Yes	Optional	Yes separated both sides	Yes both sides[3]
Local Roads (Residential)	Local	16m	2	30	No	No	No	Optional	No	Yes both sides
Local Roads (Residential Park Edge)	Local	13.5m	2	30	No	No	No	Optional	No	One side NB: provided that a shared path is provided within park outside the road reserve

[3] * Note: Pedestrian provision is not required along the frontage of any Future Urban zoned site

Road Function and Required Design Elements Table										
Road Function and Required Design Elements Road Name (refer to Precinct Plan 2)	**Proposed Role and Function of Road in Precinct Area**	**Min. Road Reserve (subject to note 1)**	**Total number of lanes (subject to note 3)**	**Speed Limit (Design)**	**Access Restrictions**	**Median**	**Bus Provision (subject to note 2)**	**On Street Parking**	**Cycle Provision**	**Pedestrian Provision**
Key Retail Street	Local	20m	2	30	Yes	No	No	Optional	No	Yes both sides

Note 1: Typical minimum width which may need to be varied in specific locations where required to accommodate network utilities, batters, structures, stormwater treatment, intersection design, significant constraints or other localised design requirements.

Note 2: Carriageway and intersection geometry capable of accommodating buses.

Note 3: Any interim, hybrid, constrained or ultimate upgrades must be designed and constructed to include a new road pavement and be sealed to their appropriate standard in accordance with the Proposed Role and Function of the Road.

Note 4: Any interim hybrid or constrained upgrades shall only apply where the applicant does not have access to the land on one or both sides of the existing road reserve. Where an application is only undertaken on one side of the road, a wider footpath and back berm shall be provided on that side, to integrate with the final design width of the road once fully upgraded.

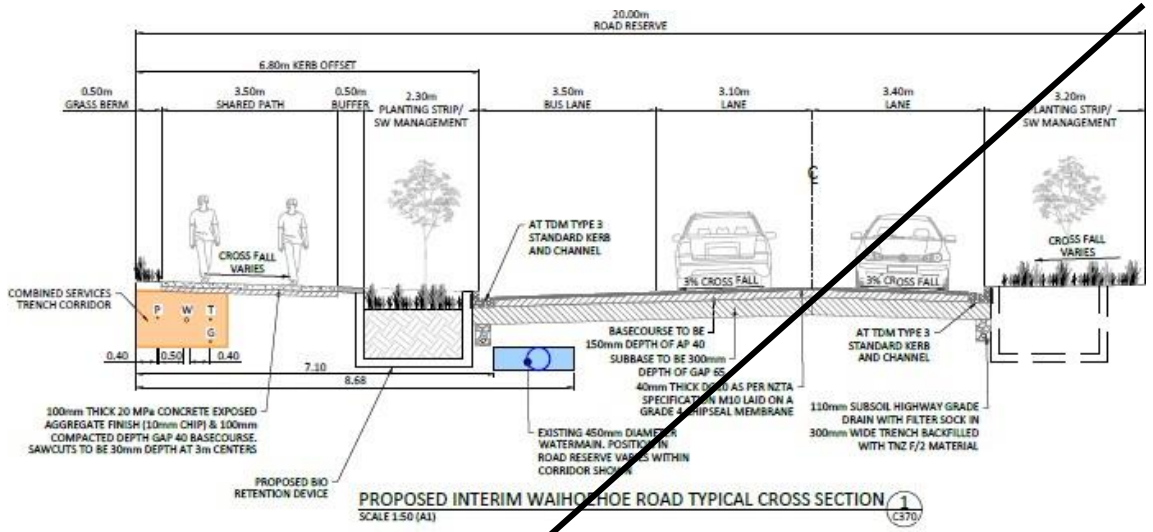
Appendix 1a: Interim Design Details for Existing Roads

Note: all drawings in this appendix are indicative designs to be refined through the EPA process.

(1) Waihoehoe Road (west of Fitzgerald Road)

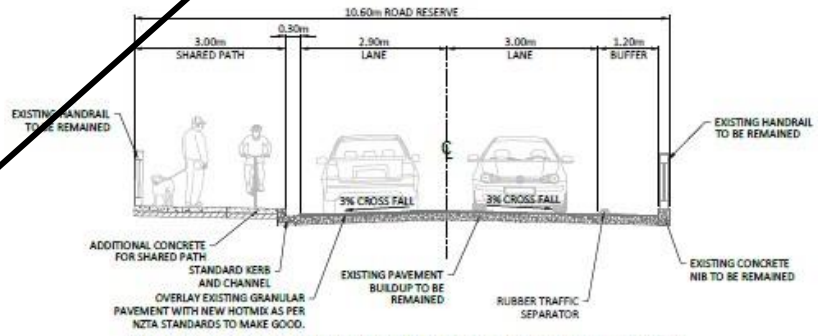
*any upgrade works will need to be integrated with the design of the Ultimate Waihoehoe bridge and station access works.





PROPOSED INTERIM WAIHOEHOE ROAD TYPICAL CROSS SECTION 1 C370

SCALE 1:50 (A1)



WAIHOEHOE ROAD BRIDGE CROSSING TYPICAL CROSS SECTION 2 C370

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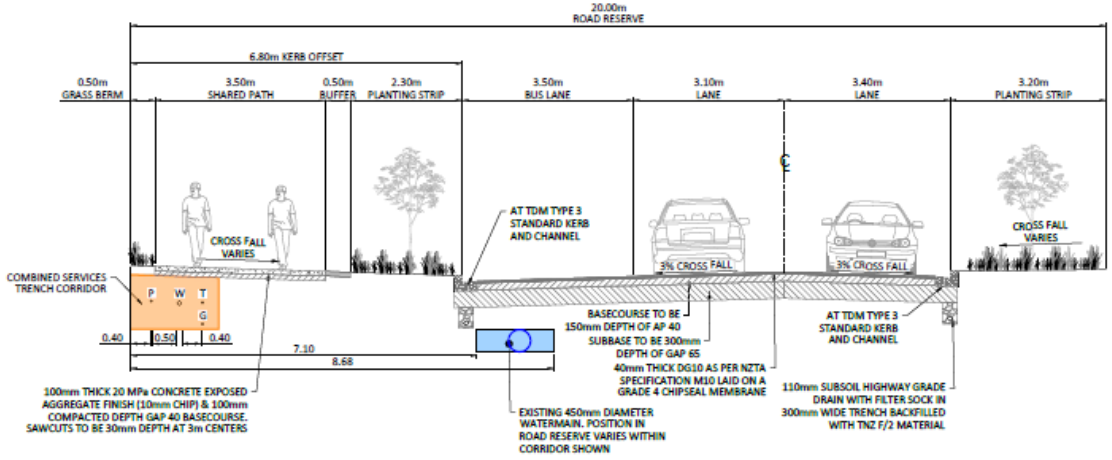
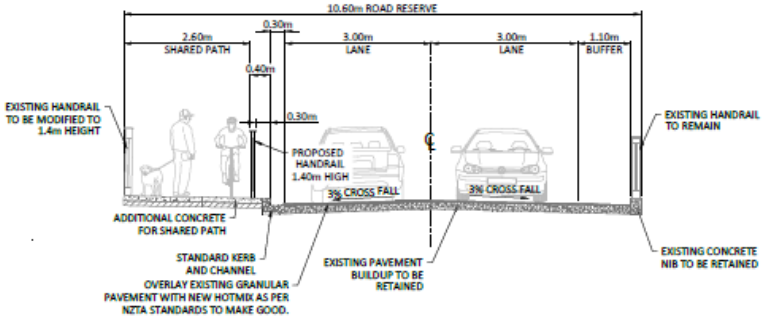


PROPOSED INTERIM WAIHOEHOE ROAD TYPICAL CROSS SECTION 1 C370

SCALE 1:50 (A1)



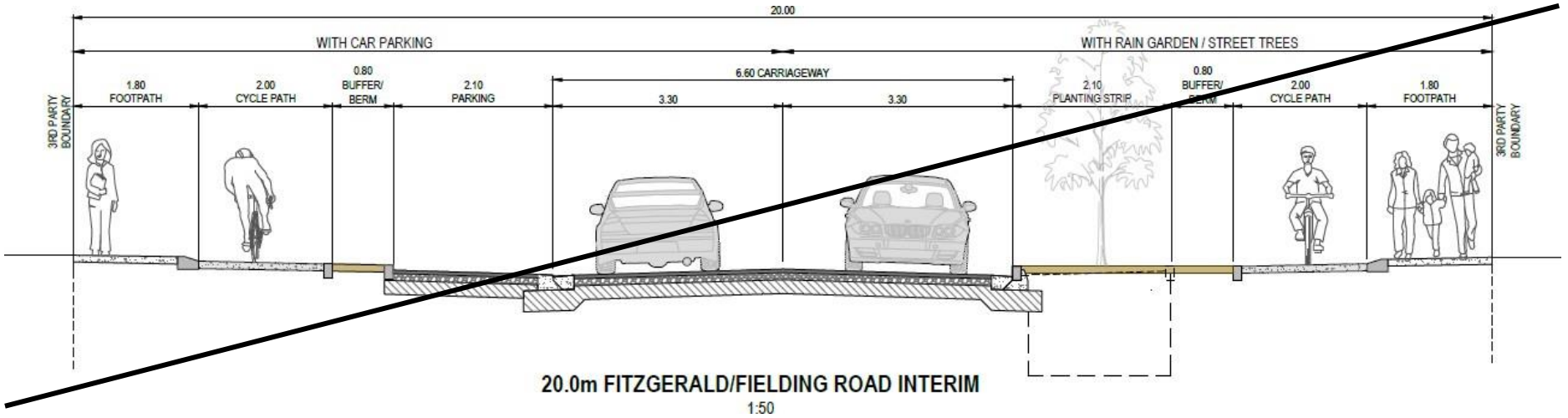
WAIHOEHOE ROAD BRIDGE CROSSING TYPICAL CROSS SECTION 2 C370

SCALE 1:50 (A1)

*any upgrade works will need to be integrated with the final design of the Ultimate Waihoehoe bridge and station access works
**The Waihoehoe Road (West) Bridge Crossing design is indicative and will be refined through EPA process

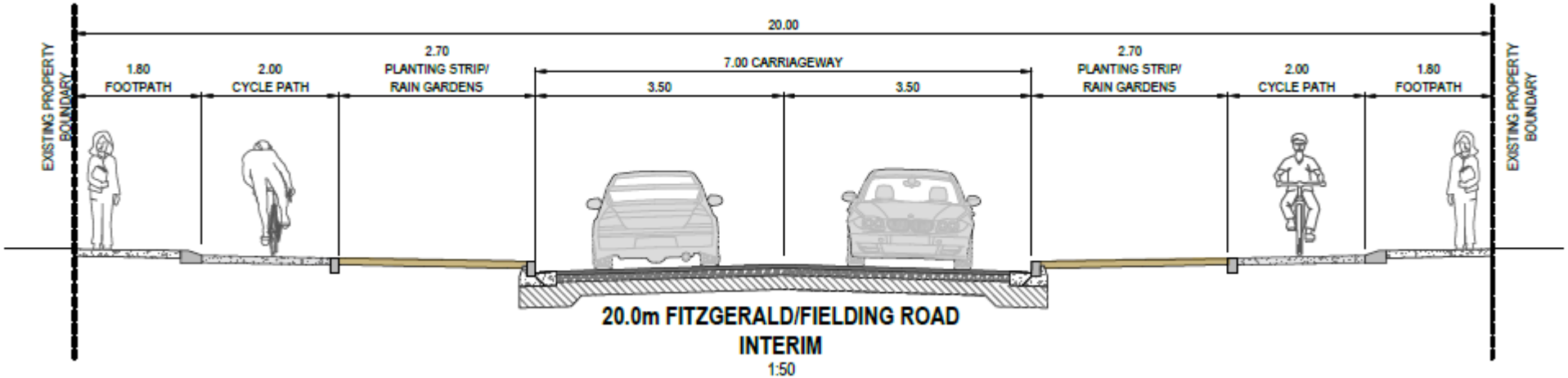
(2) Fitzgerald Road

Indicative design to be refined through EPA process



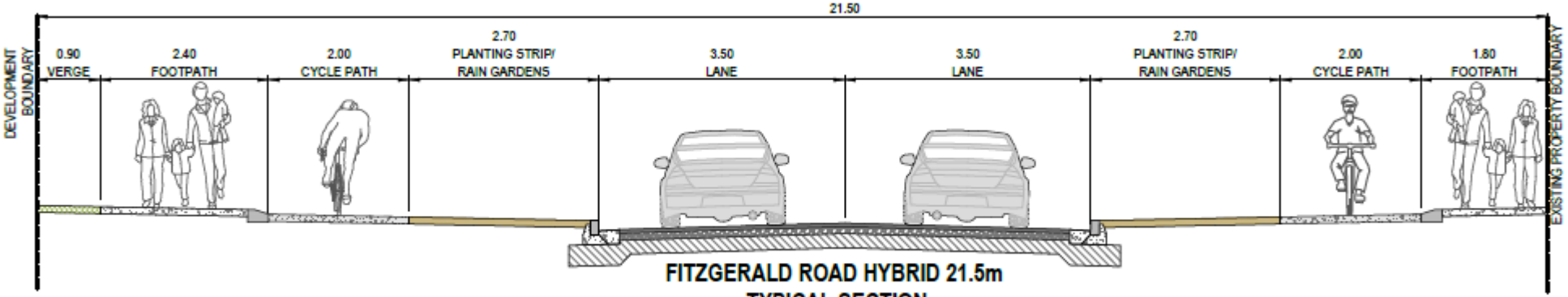
20.0m FITZGERALD/FIELDING ROAD INTERIM

1:50



20.0m FITZGERALD/FIELDING ROAD INTERIM

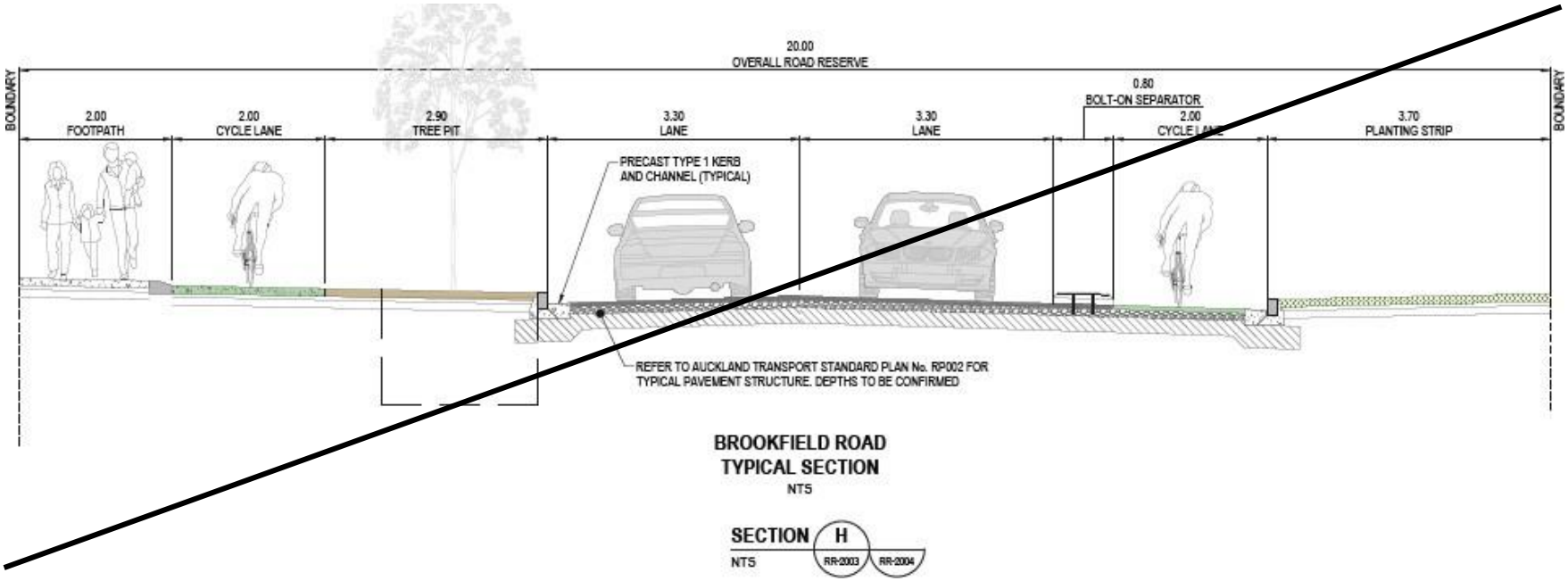
1:50

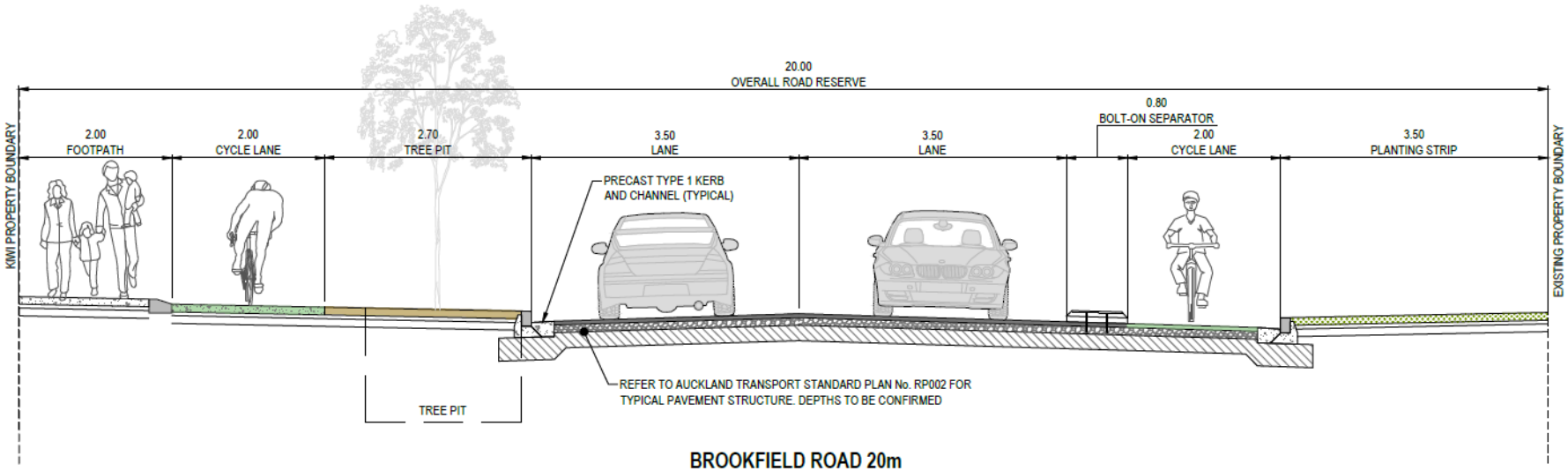


FITZGERALD ROAD HYBRID 21.5m
TYPICAL SECTION
1:50

(3) Brookfield Road

Indicative design to be refined through EPA process





BROOKFIELD ROAD 20m
TYPICAL CONSTRAINED SECTION
NTS

Appendix 3 (Plan Change 49)

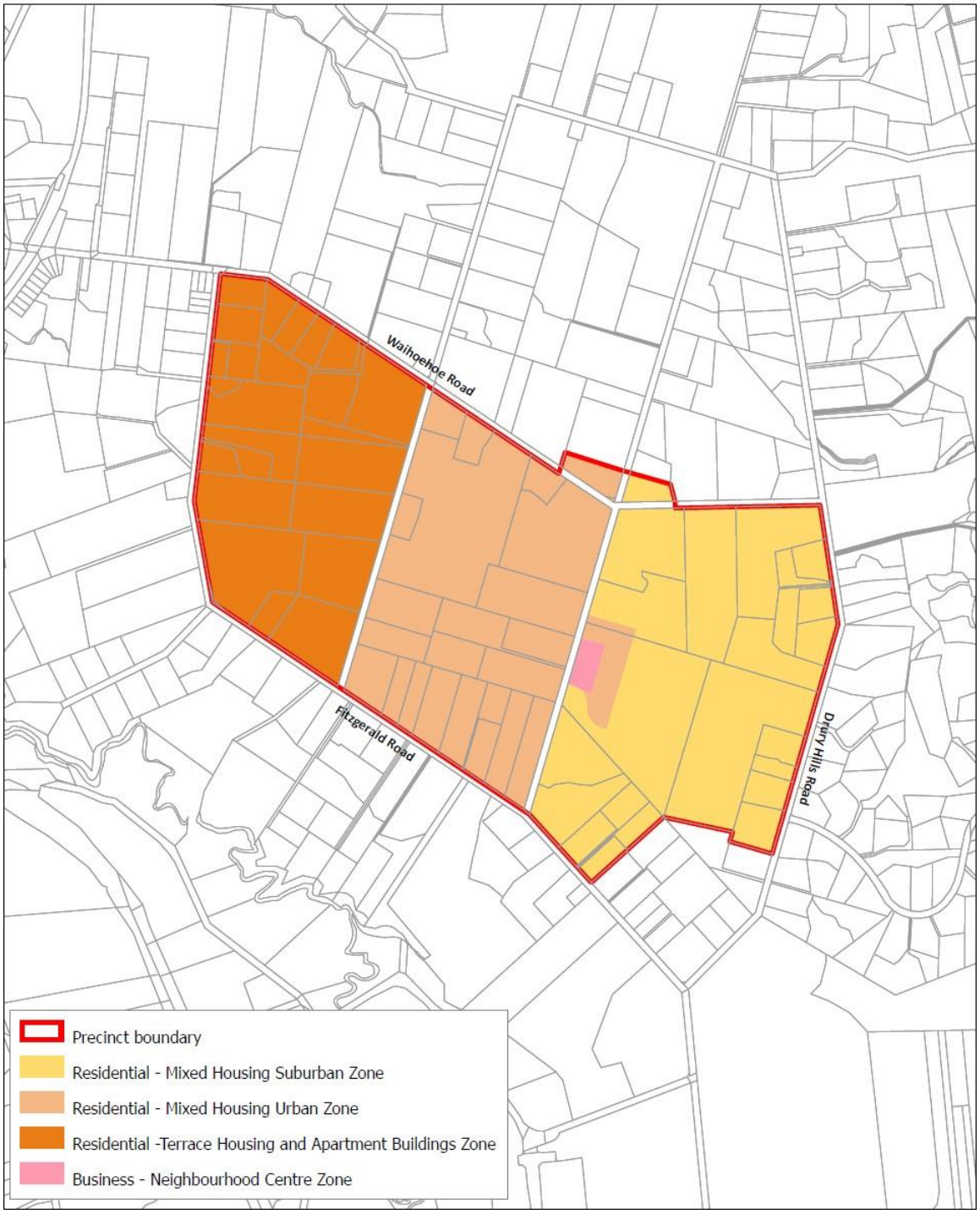
Notes:

Amendments agreed between the parties to the Appeals are shown ~~strikethrough~~ and underline.

IX. Drury East Precinct

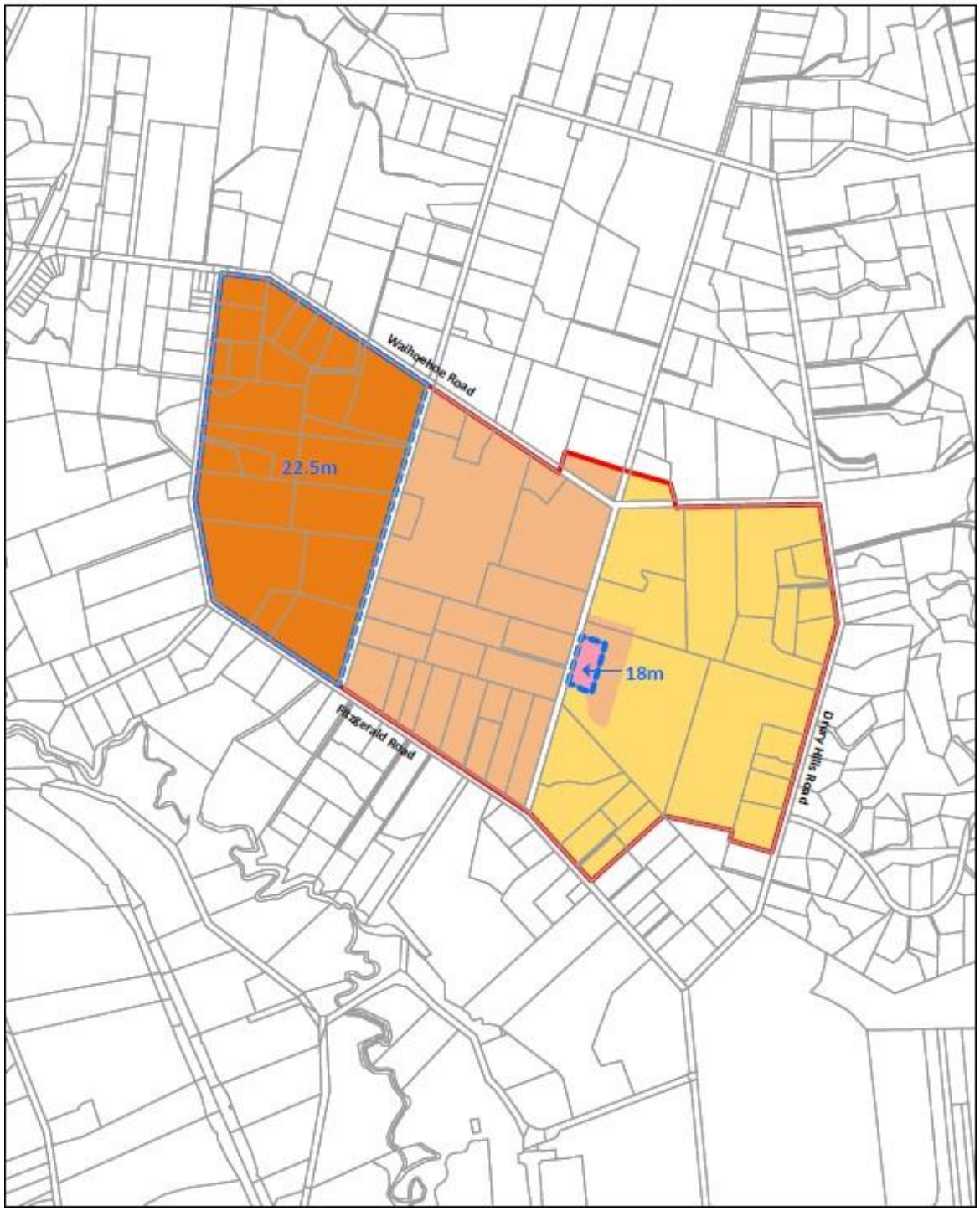
Drury East Precinct

Drury East - Zoning Plan

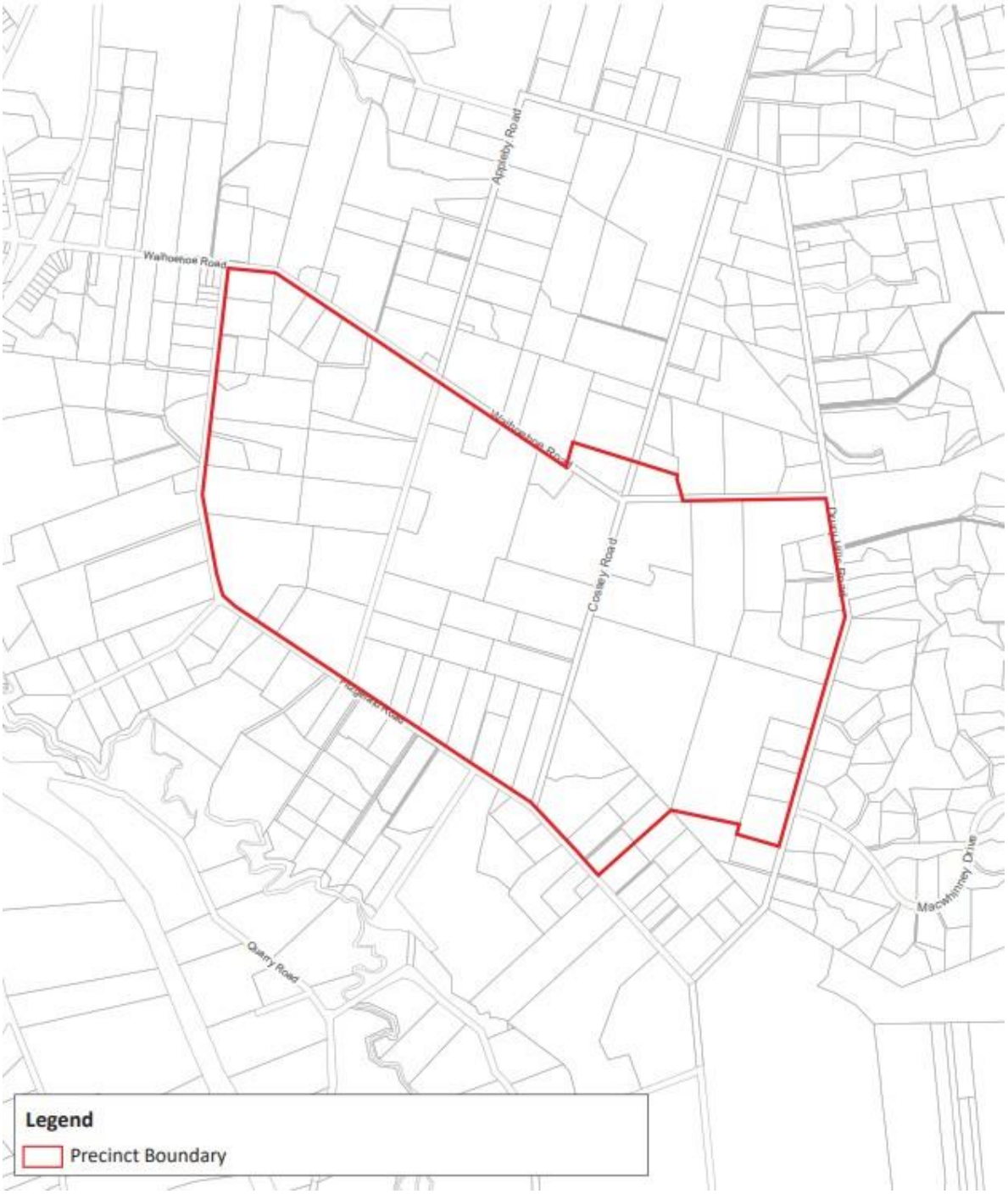


Drury East Height Variation Control

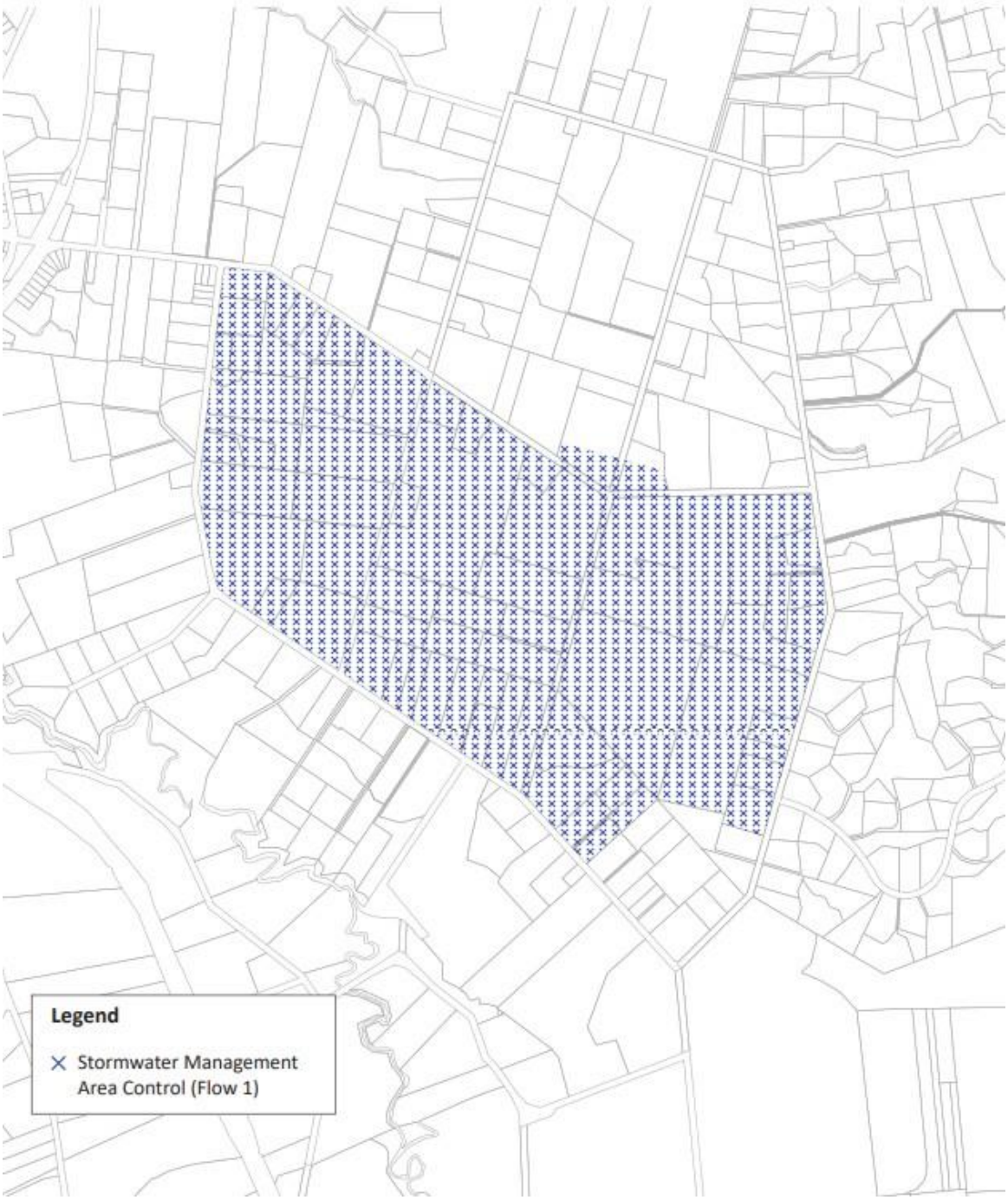
Drury East - Height Variation Control



Drury East - Precinct Plan



Drury East - Stormwater Mangement Area Control (Flow 1)



IX.1 Precinct Description

The Drury East Precinct applies to approximately 184 hectares of land generally bounded by Waihoehoe Road to the north, Drury Hills Road to the east and Fitzgerald Road to the south and west.

The purpose of the Drury East Precinct is to provide for the development of a new, comprehensively planned residential community in Drury East that supports a quality compact urban form. The precinct provides for a range of residential densities, including higher residential densities close to the Drury Centre and the future rapid and frequent public transport. Moderate residential densities are enabled in the eastern part of the precinct to provide a transition between the higher density housing in the west, and the Rural Countryside Living land to the east in the Drury foothills.

A small neighbourhood centre is provided for at the junction of Cossey Road and the proposed east-west Collector Road to provide for the local day-to-day needs of residents in a central location. The neighbourhood centre has been located to be visually prominent and accessible in Drury east, integrate with the stream and open space network, and have a northerly and westerly orientation.

The precinct emphasises the need for development to create a unique sense of place for Drury, by integrating existing natural features, responding the landform and respecting Mana Whenua values. In particular there is a network of streams throughout Drury East precinct, including the Fitzgerald stream. The precinct seeks to maintain and enhance these waterways and integrate them where possible within the open space network.

The transport network in the wider Drury East area as defined on Precinct Plan 2 will need to be progressively upgraded over time to support development in the wider area. The precinct includes provisions to ensure that the subdivision and development of land for housing and related activities is coordinated with the construction of safe, efficient and effective access to the Drury Central train station and other upgrades necessary to manage adverse effects on the local and wider transport network. At the time of the Drury East Precinct provisions being made operative, there is insufficient council family or central government funding available for transport and other infrastructure to support the full build-out of Drury East, which may affect the speed at which land within Drury East can be developed.

The precinct manages and mitigates the adverse effects of traffic generation on the transport network and achieves the integration of land use and transport by:

(a) Requiring particular transport infrastructure upgrades to be operational by the time a certain level of subdivision and development is reached within the wider Drury East area (see IX.6.1), recognising that the area functions as an integrated transport network;

(b) Requiring a comprehensive assessment and an Integrated Transport Assessment to be prepared for development and subdivision that does not comply with IX.6.1;

(c) Requiring safe, legible and direct connection/s to the Drury Central train station to be in place as development and subdivision occurs;

(d) Requiring existing rural roads to be progressively upgraded in accordance with IX.11:

Appendix 1, as development and subdivision occurs, to connect with the Waihoehoe/Fitzgerald Road intersection and any new schools within the Precinct Plan 2 area;

(e) Requiring new collector roads within the precinct to be located generally in accordance with Precinct Plan 2, and new local roads to form a high quality and integrated network;

(f) Requiring all proposed roads to be designed in accordance with IX.11: Appendix 1, consistent with the functions outlined in the table.

Precinct provisions also require assessment of a range of matters relating to the existing road network, including for example whether a temporary active modes connection has been provided to the Drury South Precinct.

Open spaces in the Drury East precinct other than esplanade reserve may be privately owned, owned by the Crown, or (subject to Council approval) vested in the Council.

Acoustic attenuation provisions are proposed within the Precinct to protect activities sensitive to noise from adverse effects arising from the road traffic noise associated with the operation of Waihoehoe Road (shown as a future arterial road on Precinct Plan 1).

The zoning of the land within the Drury East Precinct is Residential – Terrace Housing and Apartment Buildings, Residential - Mixed Housing Urban, Residential – Mixed Housing Suburban and Business – Neighbourhood Centre.

All relevant overlay, Auckland-wide and zone provisions apply in this precinct unless otherwise specified below.

IX.2 Objectives

(1) Drury East is a comprehensively developed residential environment that integrates with the Drury Centre Precinct and the natural environment, supports public and active transport use, and respects Mana Whenua values.

(2) Subdivision and development does not occur in advance of the availability of operational transport infrastructure, including regional and local transport infrastructure.

(3) Access to and from the precinct occurs in an effective, efficient and safe manner that ~~manages~~ mitigates adverse effects of traffic generation on the surrounding road network.

(4) The Drury East precinct develops and functions in a way that:

(a) Results in a mode shift to public and active modes of transport; and

(b) Provides safe and effective movement between housing, open spaces and the neighbourhood centre within the precinct, and to the Drury Central train station, by active modes of transport.

(5) Development is coordinated with the supply of sufficient water, energy and communications infrastructure.

(6) Freshwater, sediment quality, and biodiversity is improved.

(7) Development is supported by social facilities, including schools.

(8) Activities sensitive to noise adjacent to ~~an~~ arterial roads are designed to protect people's health and residential amenity while they are indoors.

IX.3 Policies

(1) Require the east to west collector road to be provided generally in the location shown in IX.10.1 Drury East: Precinct Plan 1 while allowing for variation, where it would achieve a highly connected street layout that integrates with the surrounding and proposed transport network.

(2) Ensure that development provides a local road network that achieves a highly connected street layout and integrates with the collector road network within the precinct, and the surrounding transport network, and supports the safety and amenity of the open space and stream network.

(3) Require the transport network ~~streets~~ to be attractively designed and appropriately provide for all transport modes in accordance with IX.11: Appendix 1.

(4) In addition to matters (a)-(c) of Policy E38.3.18, ensure that the location and design of publicly accessible open spaces contribute to a sense of place and a quality network of open spaces for Drury East and Drury-Opāheke, including by:

a) incorporating distinctive site features;

b) integrating with the stream network to create a green corridor following the Fitzgerald stream and tributaries of the Hingaia stream.

(5) Promote a mode shift to public and active modes of transport by:

a) Requiring active mode connections to the Drury Central train station and Drury Centre for all stages of development;

b) Requiring streets to be designed to provide safe separated access for cyclists on collector roads and arterial roads;

c) Requiring safe and secure cycle parking for all residential activities.

(6) ~~Manage~~ Ensure that the adverse effects of traffic generation on the surrounding transport network are mitigated, including by ensuring:

a) Public transport can operate efficiently at all times;

b) The surrounding road network can operate with reasonable efficiency during inter-peak periods;

c) Safe and efficient movement of freight vehicles within and through the Drury South precinct;

d) Any upgrades to the transport network are safe for pedestrians, cyclists and motorists~~.~~; and

e) The transport network operates safely at all times.

(7) Provide for the progressive upgrade of existing roads and key intersections, within and adjoining the Drury East precinct, including the upgrade of road frontages to an urban standard at the time of development or subdivision of adjoining land ~~adjoining the Drury East precinct~~, to provide for all modes and connect with the existing transport network to the Drury Central train station.

(8) ~~Ensure~~ Require that subdivision and development does not occur in advance of the availability of operational transport infrastructure, including regional and local transport infrastructure.

(9) Ensure that development in Drury East Precinct is coordinated with sufficient stormwater, wastewater, water, energy and communications infrastructure, having particular regard to the capacity of the Fitzgerald culvert and culverts under Great South Road.

(10) Require subdivision and development, as it proceeds, to provide access to safe, direct and legible pedestrian and cycling connections to the Drury Central train station and schools within the Precinct Plan 2 area.

(11) In addition to the matters in Policy E1.3(8), manage erosion and associated effects on stream health and values arising from development in the precinct, including parts of the Fitzgerald stream, and enable in-stream works to mitigate any effects.

(12) Contribute to improvements to water quality, habitat and biodiversity, including by providing planting on the riparian margins of permanent and intermittent streams.

(13) Provide for new social facilities, including schools, that meet the needs of the community.

Stormwater Management

(14) Require subdivision and development to be consistent with the treatment train approach outlined in the supporting stormwater management plan, including:

a) Application of water sensitive design to achieve water quality and hydrology mitigation;

b) Requiring the use of inert building materials to eliminate or minimise the generation and discharge of contaminants;

c) Requiring treatment of runoff from public road carriageways and publicly accessible carparks at or near source by a water quality device designed in accordance with GD01;

d) Requiring runoff from other trafficked impervious surfaces to apply a treatment train approach to treat contaminant generating surfaces, including cumulative effects of lower contaminant generating surfaces;

e) Providing planting on the riparian margins of permanent or intermittent streams;

f) Ensuring development is coordinated with sufficient stormwater infrastructure.

Activities sensitive to noise ~~Noise sensitive activities~~ adjacent to ~~the current~~ existing and future arterial road corridors

(15) Ensure that activities sensitive to noise adjacent to ~~current~~ existing and future arterial roads are designed with acoustic attenuation measures to protect people's health and residential amenity while they are indoors.

Natural Hazards

(16) Ensure development manages flooding effects upstream ~~or~~ and downstream of the site and in the Drury East precinct so that the risks to people and property (including infrastructure) are not increased for all flood events, up to a 1% AEP ~~100-year ARI~~ flood event. This may include appropriately designed and sited interim storage/attenuation areas prior to culvert upgrades.

Mana Whenua values

(17) Development responds to Mana Whenua values by:

(a) Delivering a green corridor following the Fitzgerald stream and tributaries of the Hingaia stream;

(b) Taking an integrated approach to stormwater management;

(c) Ensuring the design of streets and publicly accessible open spaces incorporate Te Aranga design principles.

All relevant overlay, Auckland-wide and zone policies apply in this precinct in addition to those specified above.

IX.4 Activity table

All relevant overlay, Auckland-wide and zone activity tables apply unless the activity is listed in Activity Table IX.4.1 below.

Activity Table IX.4.1 specifies the activity status of district land use activities and development in the Drury East Precinct pursuant to section(s) 9(3) of the Resource Management Act 1991 and the activity status for subdivision pursuant to section 11 of the Resource Management Act 1991.

Table IX.4.1 Activity table

Activity		Activity Status
Subdivision and Development		
(A1)	Subdivision, or new buildings prior to subdivision, including private roads (excluding alterations and additions that are a permitted activity in the underlying zone)	RD
(A2)	Subdivision and/or development that does not comply with Standard IX.6.1 Staging of Subdivision and Development with Transport Upgrades with respect to the following elements of Table IX.6.1.1: i. Upgrades in rows (a) and (b) ii. The upgrade in row (c) relating to Drury Central train station	~~RD~~ NC
(A3)	Subdivision and/or development that does not comply with Standard IX.6.1 Staging of Subdivision and Development with Transport Upgrades with respect to the following elements of Table IX.6.1.1: i. The upgrade in row (c) relating to the Direct connection from State Highway 1 to the Drury Centre ii. Upgrades in rows (d) to (f)	D
(A4)	Subdivision and/or development that does not comply with Standard IX.6.2A(1) Road Design and Upgrade of Existing Rural Roads	RD
(A5)	Subdivision and/or development that does not comply with Standard IX.6.2A(2) Road Design and Upgrade of Existing Rural Roads	D
(A6)	Any application to amend an existing resource consent that gives rise to non-compliance with Standard IX.6.1 Staging of Subdivision and Development with Transport Upgrades and Table IX.6.1.1	NC in relation to transport infrastructure upgrades subject to (A2) above D in relation to transport infrastructure upgrades subject to (A3) above
~~**Subdivision**~~		

~~(A5)~~	~~Subdivision that does not comply with Standard IX.6.1 Staging of Development with Transport Upgrades~~	~~RD~~

IX.5 Notification

(1) Any application for resource consent for an activity listed in Table IX.4.1 Activity table will be subject to the normal tests for notification under the relevant sections of the Resource Management Act 1991.

(2) When deciding who is an affected person in relation to any activity for the purposes of section 95E of the Resource Management Act 1991 the Council will give specific consideration to those persons listed in Rule C1.13(4).

IX.6 Standards

(1) Unless specified in Standard IX.6(2), ~~or~~ IX.6(3) or IX.6(4) below, all relevant overlay, Auckland-wide and zone standards apply to the activities listed in Activity Table IX.4.1 above.

(2) The following Auckland-wide standards do not apply to activities listed in Activity Table IX.4.1 above:

(a) E27.6.1 Trip generation

(3) The following zone standard does not apply within Area A:

(a) H6.6.10 Maximum impervious area

(4) In addition to IX.6 (1) activities listed in Activity Table IX.4.1 must comply with the following standards IX.6.0 to IX.6.7.

IX.6.0 Building Height

Purpose:

- Enable building height to be maximised close to the Drury Central train station and the frequent transport network;
- Contribute positively to Drury's sense of place;
- Manage the effects of building height, including visual dominance.

(1) Buildings in the Residential - Terrace Housing and Apartment Buildings zone and the Business – Neighbourhood Centre zone must not exceed the height in metres shown in the Height Variation Control on the planning maps.

(2) Within the Business Neighbourhood Centre zone the maximum height is 18m, but with a maximum occupiable building height of 16m (with the additional 2m in height allowed but can only be used for roof form, roof terraces, plant and other mechanical and electrical equipment).

IX.6.1 Staging of Subdivision and Development with Transport Upgrades

Purpose:

- ~~Manage~~ Mitigate the adverse effects of traffic generation on the surrounding regional and local road network, consistent with Policy IX.3(6).
- Achieve the integration of land use and transport consistent with Policies IX.3(5), (7), (8) and (10).

(1) Development and subdivision within the area shown on IX.10.2 Drury East: Precinct Plan 2 must not exceed the thresholds in Table IX.6.1.1 until such time that the identified infrastructure upgrades are constructed and are operational. Applications for resource consent in respect of activities, development or subdivision identified in Column 1 of the Table will be deemed to comply with this standard IX.6.1(1) if the corresponding infrastructure identified in Column 2 of the Table is:

(a) Constructed and operational prior to lodgement of the resource consent application; or

(b) Under construction with relevant consents and/or designations being given effect to prior to the lodgement of the resource consent application and the application is expressly made on the basis that the relevant infrastructure upgrade(s) will be completed and operational prior to:

i. the issue of a section 224(c) RMA certificate in the case of a subdivision consent application; and/or

ii. the occupation of any dwellings, commercial, and/or community activities in the case of a land use consent application; or

(c) Proposed to be constructed by the applicant as part of the resource consent application and the application is expressly made on the basis that the relevant infrastructure upgrade(s) will be completed and operational:

i. Prior to or in conjunction with the issue of a section 224(c) RMA certificate in the case of a subdivision consent application; and/or

ii. Prior to the occupation of any dwellings, commercial, and/or community activities in the case of a land use consent application.

(2) Any application lodged in terms of IX.6.1(1) b) or c) above must confirm the applicant's express agreement in terms of section 108AA(1)(a) of the RMA and on an *Augier* basis to the imposition of consent conditions requiring (as relevant) that:

(a) no dwellings, retail, commercial and/or community floorspace shall be occupied until the relevant infrastructure upgrades are constructed and operational; and/or

(b) no section 224(c) certificate shall be issued and no subdivision survey plan shall be deposited until the relevant infrastructure upgrades are constructed and operational.

Any resource consent(s) granted on one or both of the above bases must be made

subject to consent conditions as described in IX.6.1 (2) 2)(a) and/or IX.6.2 (2)(b) above. Those conditions will continue to apply until appropriate evidence is supplied to Council confirming that the relevant infrastructure upgrades are operational.

(3) For the purpose of this standard:

(a) 'dwelling' and 'retail/commercial/community floorspace' means buildings for those activities that have a valid land use consent or a subdivision that has a section 224(c)~~C~~ certificate that creates additional vacant lots.

(b) 'Occupation' and 'occupied' mean occupation and use for the purposes permitted by the resource consent but not including occupation by personnel engaged in construction, fitting out or decoration; and

(c) 'Operational' means the relevant upgrade is available for use and open to all traffic (be it road traffic in the case of road upgrades, or rail traffic in the case of the Drury Central train station).

(4) Any proposal for land use or subdivision for dwellings, retail, commercial and/or community activities must demonstrate compliance with this rule in accordance with the Special Information Requirements in IX.9(5).

Table IX.6.1.1 Threshold for Subdivision and Development as shown on IX.10.2 Drury East: Precinct Plan 2

	Column 1 **Activities, development or subdivision, enabled by Transport Infrastructure in column 2**	**Column 2** **Transport infrastructure required to enable activities, development or subdivision in column 1**
(a)	Up to a maximum of 710 dwellings	Interim upgrade to Great South Road/Waihoehoe Road roundabout to signals in accordance with IX.11: Appendix 1 and 1a, including pedestrian connections to existing footpaths; and Interim upgrade of Waihoehoe Road in accordance with IX.11: Appendix 1 and 1a, including walking and cycling provisions on the Waihoehoe Road bridge.
(b)	Up to a maximum of: (i) 1,300 dwellings; and/or (ii) 24,000m^2 retail GFA; and/or (iii) 6,000m^2 other commercial GFA; and/or (iv) 800m^2 community GFA.	Upgrades in (a) above and State Highway 1 widening – Stage 1, being six lanes between the Papakura interchange and Drury interchange.

(c)	Up to a maximum of: (i) 1,800 dwellings; and/or (ii) 32,000m^2 retail GFA; and/or (iii) 8,700m^2 other commercial GFA; and/or 1,000m^2 community GFA.	Upgrades in (a) and (b) above and: Drury Central train station, including a pedestrian connection to Waihoehoe Road*; and Direct connection from State Highway 1 to the Drury Centre via a single lane slip lane from SH1 interchange to Creek Road. Creek Road is within the Drury Centre Precinct and is shown on Precinct Plan 2**. Notes: * Refer to IX.4.1(A2) – non-compliance is a non-complying activity ** Refer to IX.4.1(A3) – non-compliance is a discretionary activity
(d)	Up to a maximum of: (i) 3,300 dwellings; and/or (ii) 56,000m^2 retail GFA; and/or (iii) 17,900m^2 other commercial GFA; and/or 2,000m^2 community GFA.	Upgrades in (a)-(c) above and: Ultimate Waihoehoe Road upgrade between Fitzgerald Road and Great South Road in accordance with IX.11: Appendix 1, including: i. Two general traffic lanes and two bus lanes, footpaths and cycleways on both sides, and a new six-lane bridge over the railway corridor; and ii. Signalisation and increased capacity at the Great South Road/Waihoehoe Road intersection, including fully separated active mode facilities and 3-4 approach lanes in each direction.
(e)	Up to a maximum of: (i) 3,800 dwellings; and/or (ii) 64,000m^2 retail GFA; and/or (iii) 21,000m^2 other commercial GFA; and/or 2,400m^2 community GFA.	Upgrades in (a)-(d) above and: Mill Road southern connection between Fitzgerald Road and State Highway 1, providing four traffic lanes and separated active mode facilities, including a new SH1 Interchange at Drury South - the "Drury South interchange"
(f)	Up to a maximum of: (i) 5,800 dwellings; and/or (ii) 97,000m^2 retail GFA; and/or (iii) 47,000m^2 other commercial GFA; and/or 10,000m^2 community GFA.	Upgrades in (a)-(e) above and: Mill Road northern connection between Fitzgerald Road and Papakura, providing four traffic lanes and separated active modes including ultimate upgrade of Waihoehoe Road East from Fitzgerald Road to Mill Road; and Ultimate Opa~~a~~āheke Northern connection, providing four lanes including bus lanes and active mode facilities between Waihoehoe Road and Opa~~a~~āheke Road in Papakura

IX.6.2 Minimum Bicycle Parking

(1) In addition to the bicycle parking requirements in standard E27.6.2(6), at least one secure (long stay) bicycle park must be provided for every dwelling.

(2) For multi-unit development, at least one visitor (short stay) bicycle space must be provided for every 20 dwellings.

IX.6.2A Road Design and Upgrade of Existing Rural Roads

Purpose: To ensure that any activity, development and/or subdivision complies with IX.11: Appendix 1: Road Function and Design Elements Table, and that existing rural roads are progressively upgraded to an urban standard.

(1) Any activity, development and /or subdivision that includes the construction of new roads, or the upgrade of existing roads, must comply with IX.11 Appendix 1: Road Function and Design Elements Table.

(2) Existing rural roads within and adjoining the Drury East precinct must be upgraded to an urban standard where vehicle access is proposed for any new activity, development and/or subdivision to or from these roads, and where the upgrade has not already occurred. The portion of the existing rural roads to be upgraded must extend from the proposed vehicle access to the intersection of Waihoehoe / Fitzgerald Roads.

IX.6.3 Riparian Margin

Purpose: Contribute to improvements to water quality, habitat and biodiversity.

(1) Riparian margins of permanent or intermittent streams must be planted either side to a minimum width of 10m measured from the top of bank of the stream, provided that:
   (i) This rule shall not apply to road crossings over streams;
   (ii) Walkways and cycleways must not locate within the riparian planting area;
   (iii) Any archaeological site identified in a site specific archaeological survey must not be planted;
   (iv) The riparian planting area is vested in Council or protected and maintained in perpetuity by an appropriate legal mechanism.

(2) A building, or parts of a building, must be setback at least 20m from the bank of a river or stream measuring 3m or more in width, consistent with the requirements of E38.7.3.2.

IX.6.4 Stormwater Quality

Purpose: Contribute to improvements to water quality and stream health.

(1) Stormwater runoff from new, or redevelopment of existing, high contaminant generating carparks, all publicly accessible carparks exposed to rainfall, and all ~~or public~~ roads must be treated with a stormwater management device(s) meeting the following standards:

   (a) the device or system must be sized and designed in accordance with 'Guidance Document 2017/001 Stormwater Management Devices in the

Auckland Region (GD01)'; or

(b) where alternative devices are proposed, the device must demonstrate it is designed to achieve an equivalent level of contaminant or sediment removal performance to that of 'Guidance Document 2017/001 Stormwater Management Devices in the Auckland Region (GD01)'.

(c) For all other trafficked impervious surfaces, water quality treatment in accordance with the approved stormwater management plan must be installed.

(2) New buildings, and additions to buildings must be constructed using inert cladding, roofing and spouting building materials that avoid the use of high contaminant yielding building products which have:

a) exposed surface(s) or surface coating of metallic zinc of any alloy containing greater than 10% zinc; or

b) exposed surface(s) or surface coating of metallic copper or any alloy containing greater than 10% copper; or

c) exposed treated timber surface(s) or any roof material with a copper-containing or zinc-containing algaecide.

IX.6.5 Fences adjoining publicly accessible open space

Purpose: Ensure development positively contributes to the visual quality and interest of open spaces.

(1) Fences, or walls, or a combination of these structures, within a side or rear yard adjoining a publicly accessible open space (excluding roads) must not exceed the heights specified below, measured from the ground level at the boundary:

(i) 1.2m in height, or;

(ii) 1.8m in height if the fence is at least 50 per cent visually open.

IX.6.6 Maximum Impervious Area in Area A – in IX.10.4 -Precinct Plan 4

Purpose: To appropriately manage stormwater effects generated within Area A.

(1) The maximum impervious area within Area A shown on Precinct Plan 4 must not exceed 60 per cent of site area.

IX.6.7 ~~Noise sensitive activities~~ Activities sensitive to noise within 40m of an existing or future arterial shown on Precinct Plan 1 ~~Road in Table IX6.1.1~~

Purpose: Ensure Activities sensitive to noise adjacent to an arterial road are designed to protect people's health and residential amenity while they are indoors.

(1) Any new buildings or alterations to existing buildings containing an activity sensitive to noise within 40m to the boundary of Waihoehoe Road (shown as a future arterial road on Precinct Plan 1) ~~an existing or future arterial road~~ must be designed, constructed and maintained so that road traffic noise does ~~to~~ not

exceed 40 dB LAeq (24 hour) ~~for~~ in all noise sensitive spaces.

(2) If windows must be closed to achieve the design noise levels in Standard ~~Rule~~ IX.6.7(1), the building must be designed, constructed and maintained with a mechanical ventilation system that meets the requirements of E25.6.10(3)(b) and (d) to (f).

(3) A design report must be submitted by a suitably qualified and experienced person to the council demonstrating that compliance with Standard~~Rule~~ IX.6.7~~8~~(1) and (2) can be achieved prior to the construction or alteration of any building containing an activity sensitive to noise located within the areas specified in IX.6.~~8~~7(1). In the design, road noise is based on:

(a) current measured noise levels plus 3 dB, or
(b) current modelled noise levels plus 3 dB, or
(c) future predicted noise levels.

For the purposes of this standard, future predicted noise levels shall be either based on computer noise modelling undertaken by a suitably qualified and experienced person on behalf of the applicant or those levels modelled as part of the Auckland Transport designations D2 and D3 (Jesmond to Waihoehoe West Frequent Transit Network Upgrade and Waihoehoe Road East upgrade).

Should noise modelling undertaken on behalf of the applicant be used for the purposes of the future predicted noise levels under this standard, modelling shall be based on the following inputs:

(i) An asphaltic concrete surfacing (or equivalent low-noise road surface)
(ii) 50km/hr speed environment
(iii) The concept alignment authorised by Auckland Transport designations D2 and D3 (Jesmond to Waihoehoe West Frequent Transit Network Upgrade and Waihoehoe Road East upgrade) or, if the arterial road upgrade works have been completed in full, as built plans available from Auckland Transport on request
(iv) The following Waihoehoe Road Annual Average Daily Traffic (AADT) flow predictions for 2048 and heavy vehicles % for 2048:

Section	2048	
	AADT	HV%
Fitzgerald Road to Fielding Road	6700	7%
Fielding Road to Cossey Road	2700	8%
East of Cossey Road	7000	10%

(v) Screening from any buildings that exist or buildings for which building consent has been granted and issued.

Should Auckland Transport's noise modelling be used for the purposes of this standard:

(i) The future predicted noise levels are those modelled as part of Auckland Transport designations D2 and D3, which are based on an assumed posted speed limit of 50km/h, the use of an asphaltic concrete surfacing (or equivalent low-noise road surfacing) and a traffic design year of 2048.
(ii) The information and the associated assumptions and parameters in (i) above are available on request from Auckland Transport and on the project website for the Jesmond to Waihoehoe West Frequent Transit Network Upgrade and Waihoehoe

Road East Upgrade.

IX.7 Assessment – controlled activities

There are no controlled activities in this precinct.

IX.8 Assessment – restricted discretionary activities

IX.8.1 Matters of discretion

The Council will reserve its discretion to all of the following matters when assessing a restricted discretionary activity resource consent application, in addition to the matters specified for the relevant restricted discretionary activities in the overlays, Auckland-wide or zones provisions:

(1) Subdivision, or new buildings prior to subdivision, including private roads:

a) Location and design of the collector street, local streets and connections with neighbouring sites to achieve an integrated street network, and appropriately provide for all modes;

b) Provision of cycling and pedestrian networks;

c) Location, design and sequencing of connections to the Drury Central train station;

d) Design and sequencing of upgrades to the existing road network;

e) Open space network;

f) Servicing;

g) Stormwater and flooding effects; and

h) Matters of discretion IX.8.1(1) (a)-(g) apply in addition to the matters of discretion in E38.12.1.; and

i) The imposition of consent conditions of the kind referred to in rule IX.6.1(1) and (2).

(2) Subdivision or development that does not comply with Standard IX.6.1 Staging of Development with Transport Upgrades:

(a) Effects of traffic generation on the safety and efficiency of the surrounding road network consistent with Policies IX.3 (2), IX.3 (3), IX.3 (5), IX.3 (6), IX.3 (7), IX.3 (8) and IX.3 (10);

~~(b) An Integrated Transport Assessment;~~

~~(c) The rate of public transport uptake and travel management measures;~~

~~(d) The rate of coordination of retail, commercial and residential development in the wider Drury East area shown on Precinct Plan 2; and~~

~~(e) The outcome of engagement with the road controlling authority.~~

~~**Note –** See IX.9 Special information requirements below.~~

(2) Infringement of standard IX.6.2 Minimum cycle parking:

(a) Matters of discretion E27.8.2(7) apply.

(3) Infringement to standard IX.6.3 Riparian Margins:

(a) Effects on water quality, biodiversity and stream erosion.

(4) Infringements to standard IX.6.4 Stormwater Quality

(a) Matters of discretion E9.8.1(1) apply.

(5) Infringement of standard IX.6.5 Fences adjoining publicly accessible open space

(a) Effects on the amenity and safety of the open space.

(6) Development that does not comply with Standard IX.6.6 Maximum Impervious Area in Area A – in IX.10.4 -Precinct Plan 4:

(a) Matters of discretion in H6.8.1(4) apply.

(7) Infringement of standard IX.6.7 – Development within 40m of an existing or future arterial road.

(a) Effects on human health and residential amenity while indoors.

(b) The location of buildings.

(c) Topographical, building design features or other alternative mitigation that will mitigate potential adverse health and amenity effects relevant to noise.

(8) Infringement to standard IX.6.2A(1) Road Design and Upgrade of Existing Rural Roads

(a) The design of the road and associated road reserve and whether it achieves policies IX.3(3), (5), (6) and (7).

(b) Design constraints.

(c) Interface design treatment at property boundaries, particularly for pedestrians and cyclists.

IX.8.2 Assessment criteria

The Council will consider the relevant assessment criteria below for restricted discretionary activities, in addition to the assessment criteria specified for the relevant restricted discretionary activities in the overlays, Auckland-wide or zones provisions:

(1) Subdivision, and new building prior to subdivision, including:

Location of roads

(a) Whether the east to west collector road is provided generally in the location shown on IX.10.1 Drury East: Precinct Plan 1 to achieve a highly connected street layout that integrates with the surrounding transport network. An alternative alignment that provides an equal or better degree of connectivity and amenity within and beyond the precinct may be appropriate, having regard to the following functional matters:

i. Landowner patterns and t~~T~~he presence of natural features, natural hazards, contours or other constraints and how these impact on the placement of roads;

ii. The need to achieve an efficient block structure and layout within the precinct suitable to the proposed activities;

iii. The constructability of roads and the ability for them to be connected beyond any property boundary; and

iv. The need for the east to west collector road to provide frontage to the planned neighbourhood centre to the east of Cossey Road.

(b) Whether a high quality and integrated network of local roads is provided within the precinct that has a good degree of accessibility and supports a walkable street network. Whether roads are aligned to provide visual and physical connections to open spaces, including along the stream network, where the site conditions allow.

(c) Whether subdivision and development provides for collector roads and local roads to the site boundaries to coordinate with neighbouring sites and support the integrated completion of the network within the precinct over time;

Design of Roads

(d) Whether the design of new collector and local roads accords with the road design details provided in IX.1~~0.1~~ Drury East: Appendix 1.

(e) Whether the layout of the street network provides a good degree of accessibility and supports a walkable street network. As a general principle, the length of a block should be no greater than 280m, and the perimeter of the block should be no greater than 600m;

(f) Whether, within the walkable catchment of the Drury Central train station in the Terrace Housing and Apartment Buildings zone, development provides for a direct, legible and safe pedestrian and cycle connection to the Drury Central train station via connections through the Drury Centre precinct, or via Fitzgerald Road, Waihoehoe Road and Flanagan Road/Drury Boulevard.

Sequencing of upgrades to the existing road network

(g) ~~Whether the existing rural roads adjoining the Drury East precinct are progressively upgraded to ensure that safe connections are provided from the site to the Waihoehoe Road/Fitzgerald Road intersection. The section of upgraded road should extend from the site being developed to the Waihoehoe Road/Fitzgerald Road intersection.~~

(h) ~~Whether the design of the upgraded road accords with the interim road design details included in Appendix 1a. Where an Applicant controls land on one or both sides of the road, a wider footpath and back berm should be provided on the development side, to integrate with the final design width of 23m.~~

(g) Whether a further upgrade to the intersection of State Highway 22 / Great South intersection beyond what is required by the Drury South Precinct (I410.8.2(1)(f)) is necessary, to ensure it can operate safely and efficiently. This will be assessed for development exceeding the level set out in IX.6.1.1(a), but prior to the full upgrade of Waihoehoe Road required by IX.6.1.1(d). If required, the further upgrade will provide an additional right turn lane from Great South Road.

(h) Whether a temporary unsealed active modes connection, within the existing road reserve, has been provided to Drury South Precinct along Fitzgerald Road to Quarry Road (except for sections where impracticable due to constraints).

(i) Prior to the upgrade of Fielding Road, Cossey Road, Fitzgerald Road, Waihoehoe Road (East) and Drury Hills Road to an urban standard, whether;

i. any works are required within the existing road reserve to ensure the roads are of a suitable condition to maintain safe traffic movement including any shoulder widening, localised widening or safety works and/or interim intersection upgrades having regard to any additional traffic on those roads generated by the Drury East Precinct.

ii. temporary unsealed active mode connections are provided, within the land in the Drury East Precinct, to connect to Waihoehoe Road and/or Fitzgerald Road where there is no alternative safe and convenient connection.

Open space network

(j) Whether open spaces are provided in the locations generally consistent with the indicative locations shown on IX.10.1 Drury East Precinct Plan 1. This includes providing for a shared path along the Fitzgerald stream shown on Precinct Plan 1, which delivers a connection from the Drury East precinct to the Drury Central train station.

(k) Neighbourhood and suburb parks should have adequate street frontage to ensure they are visually prominent and safe.

Servicing

(l) Whether there is sufficient capacity in the existing or proposed utilities network, and public reticulated water supply, wastewater and stormwater network to service the proposed development having particular regard to the capacity of the Fitzgerald culvert and culverts under Great South Road; and

(m) Where adequate network capacity is not available, whether adequate mitigation or staging is proposed.

(n) Whether development has considered the presence of the 110kv Counties Power electricity lines and the need to achieve safe distances under existing Codes of Practice, or whether the existing lines can be relocated.

Stormwater and flooding

(o) Whether development is in accordance with the approved Stormwater Management Plan and policies E1.3(1) – (14);

(p) Whether the design and efficacy of infrastructure and devices is appropriate with consideration given to the likely effectiveness, ease of access, operation and integration with the surrounding environment;

(q) Whether the proposal ensures that development manages flooding effects upstream and downstream of the site and in the Drury East precinct so that the risks to people and property (including infrastructure) are not increased for all flood events, up to a 1% AEP ~~100-year ARI~~ flood event; and

(r) Whether the location, size, design and management of any interim flood attenuation areas that may be necessary is appropriate to ensure that development does not increase flooding risks prior to upgrades of culverts.

Te Aranga Design Principles

(s) Whether the design of streets and publicly accessible open spaces incorporate Te Aranga design principles.

~~(2) Development or subdivision that does not comply with IX.6.1 Staging of Development with Transport Upgrades~~

~~A proposal that does not comply with IX.6.1 Staging of Development with Transport Upgrades will be assessed in terms of the matters below, as informed by an Integrated Transport Assessment.~~

~~(a) Whether the proposal is in accordance with Policies IX.3 (2), IX.3 (3), IX.3 (5), IX.3 (6), IX.3 (7), IX.3 (8) and IX.3 (10) in addition to any relevant AUP policy that is within the scope of the matters of discretion in IX.8.1(2).~~

~~(b) Whether public transport routes that connect to the Drury Central train station and the Drury Centre can operate effectively and efficiently at all times;~~

~~(c) Whether the Waihoehoe/Great South Road intersection can operate safely and with reasonable efficiency during the inter-peak period, being generally no worse than a Level of Service D for the overall intersection;~~

(d) ~~Whether increased use of public transport within the Drury East precinct or the wider area, has provided additional capacity within the transport network including by implementing travel demand management measures.~~

(e) ~~Whether the proposal would have a similar or lesser trip generation and similar effects on the surrounding road network to the development mix provided for in the Table IX.6.1.1 Threshold for Development.~~

(f) ~~Whether residential development is coordinated with retail and commercial development within the wider Drury East area shown on Precinct Plan 2 to minimise trips outside of the precinct providing additional capacity within the transport network.~~

(g) ~~Whether the actual rate of development in the wider area is slower than anticipated and provides additional capacity in the transport network;~~

(h) ~~The effect of the timing and development of any other transport upgrades or transport innovations not anticipated by the Drury East precinct.~~

(i) ~~Whether the integrated transport assessment supporting the application documents the outcome of engagement with the road controlling authority.~~

(j) ~~Whether the proposal demonstrates methods that promote the increased use of public transport, including details of how those methods would be implemented, monitored and reviewed so as to contribute to a reduction in vehicle trips.~~

(k) ~~Whether the intersection of Great South Road/Quarry Road and the Drury South Precinct roads can operate safely and efficiently prior to the full upgrade of Waihoehoe Road between Fitzgerald Road and Great South Road.~~

(2) Infringement of standard IX.6.2 Minimum cycle parking

a. Assessment criteria in E27.8.2(6) apply.

(3) Infringement to standard IX.6.3 Riparian Planting

a. Whether the infringement is consistent with Policy IX.3(9).

(4) Infringement to standard IX.6.4 Stormwater Quality

a. Assessment criteria E9.8.2(1) apply.

b. Whether the proposal is in accordance with the approved Stormwater Management Plan and Policies E1.3(1) – (10) and (12) – (14).

c. Whether a treatment train approach is implemented to treat runoff so that all contaminant generating surfaces are treated, including cumulative effects of lower contaminant generating surfaces.

(5) Infringement of standard IX.6.5 Fences adjoining publicly accessible open space

a. Whether the proposal positively contributes to the visual quality and interest of the adjoining open space, while providing an adequate degree of privacy and security for the development.

(6) Development that does not comply with Standard IX.6.6 Maximum Impervious Area within Area A – in IX.10.4 -Precinct Plan 4:

a. The assessment criteria within H6.8.2(10) apply.

(7) Infringement of standard IX.6.7 – Development within 40m of Waihoehoe Road ~~an~~ arterial road

a. Whether ~~A~~activities sensitive to noise adjacent to Waihoehoe Road ~~an~~ arterial road are designed to protect people from adverse health and amenity effects while they are indoors.

b. Whether any identified topographical or building design features, or the location of the building or any other existing buildings, will mitigate any potential health and amenity effects.

c. The extent to which the alternative mitigation measures avoid, remedy or mitigate the effects of non-compliance with the noise standards on the health and amenity of potential building occupants.

(8) Infringement to standard IX.6.2A(1) Road Design and Upgrade of Existing Rural Roads

a. Whether there are constraints or other factors present which make it impractical to comply with the required standards.

b. Whether the design of the road, and associated road reserve achieves policies IX.3(3), (5), (6) and (7).

c. Whether the proposed design and road reserve:

i. incorporates measures to achieve the required design speeds;

ii. can safely accommodate required vehicle movements;

iii. can appropriately accommodate all proposed infrastructure and roading elements including utilities and/or any stormwater treatment;

iv. assesses the feasibility of upgrading any interim design or road reserve to the ultimate required standard.

d. Whether there is an appropriate interface design treatment at property boundaries, particularly for pedestrians and cyclists.

IX.9 Special information requirements

(1) Riparian planting plan

An application for land modification, development and subdivision which adjoins a permanent or intermittent stream must be accompanied by a riparian planting plan identifying the location, species, planter bag size and density of the plants. Plant species should be native. The riparian planting plan must be prepared in accordance with Appendix 16 - Guideline for native revegetation plantings.

(2) Permanent and intermittent streams and wetlands

All applications for land modification, development and subdivision must include a plan identifying all permanent and intermittent streams and wetlands on the application site.

(3) Archaeological assessment

An application for land modification within the area shown on IX.10.3~~X~~ Precinct Plan 3, must be accompanied by an archaeological assessment, including a survey. This also applies to any development providing riparian planning in accordance with IX.6.3. The purpose of this assessment is to evaluate the effects on archaeological values prior to any land disturbance, planting or demolition of a pre-1900 building, and to confirm whether the development will require an Authority to Modify under the Heritage New Zealand Pouhere Taonga Act 2014.

(4) Integrated transport assessment

An application to infringe standard IX.6.1 Staging of Subdivision and Development with Transport Upgrades, must be accompanied by an integrated transport assessment prepared by suitably qualified transport planner or traffic engineer prepared in accordance with the Auckland Transport Integrated Transport Assessment Guidelines in force at the time of the application.

The integrated transport assessment must include a register of development and subdivision that has been previously approved under standard IX.6.1 Staging of Subdivision and Development with Transport Upgrades.

Without limiting the scope of the integrated transport assessment, the integrated transport assessment must assess and provide details of the following:

a) Whether the proposal is in accordance with Policies IX.3 (2), IX.3 (3), IX.3 (5), IX.3 (6), IX.3 (7), IX.3 (8) and IX.3 (10) in addition to any other relevant AUP policy;

b) Whether public transport routes that connect to the Drury Central train station and the Drury Centre can operate effectively and efficiently at all times;

c) Whether the Waihoehoe/Great South Road intersection can operate safely and with reasonable efficiency during the inter-peak period, being generally no worse than a Level of Service D for the overall intersection;

d) Whether increased use of public transport within the Drury East precinct or the wider area, has provided additional capacity within the transport network including by implementing travel demand management measures;

e) Whether the proposal would have a similar or lesser trip generation and similar effects on the surrounding road network to the development mix provided for in the Table IX.6.1.1 Threshold for Subdivision and Development;

f) Whether residential development is coordinated with retail and commercial development within the wider Drury East area shown on Precinct Plan 2 to minimise trips outside of the precinct providing additional capacity within the transport network;

g) Whether the actual rate of development in the wider area is slower than anticipated and provides additional capacity in the transport network;

h) The effect of the timing and development of any other transport upgrades or transport innovations not anticipated by the Drury East precinct;

i) Whether the integrated transport assessment supporting the application documents the outcome of engagement with the road controlling authority;

j) Whether the proposal demonstrates methods that promote the increased use of public transport, including details of how those methods would be implemented, monitored and reviewed so as to contribute to a reduction in vehicle trips;

k) Whether the intersection of Great South Road/Quarry Road and the Drury South Precinct roads can operate safely and efficiently prior to the full upgrade of Waihoehoe Road between Fitzgerald Road and Great South Road;

l) Whether the surrounding transport network can operate safely and efficiently when considering traffic generated by construction activities within the Precinct Plan 2 area.

(5) Monitoring of Rule IX.6.1 Staging of Subdivision and Development with Transport Upgrades

Any proposal for dwellings, retail, commercial and/or community activities must demonstrate compliance with rule IX.6.1 Staging of Subdivision and Development with Transport Upgrades. Any application must contain details of the maximum number of dwellings or amount of retail, commercial or community GFA proposed to be enabled (as well as anticipated dwellings/GFA for any subdivision proposal involving superlots).

(6) Transport Design Report

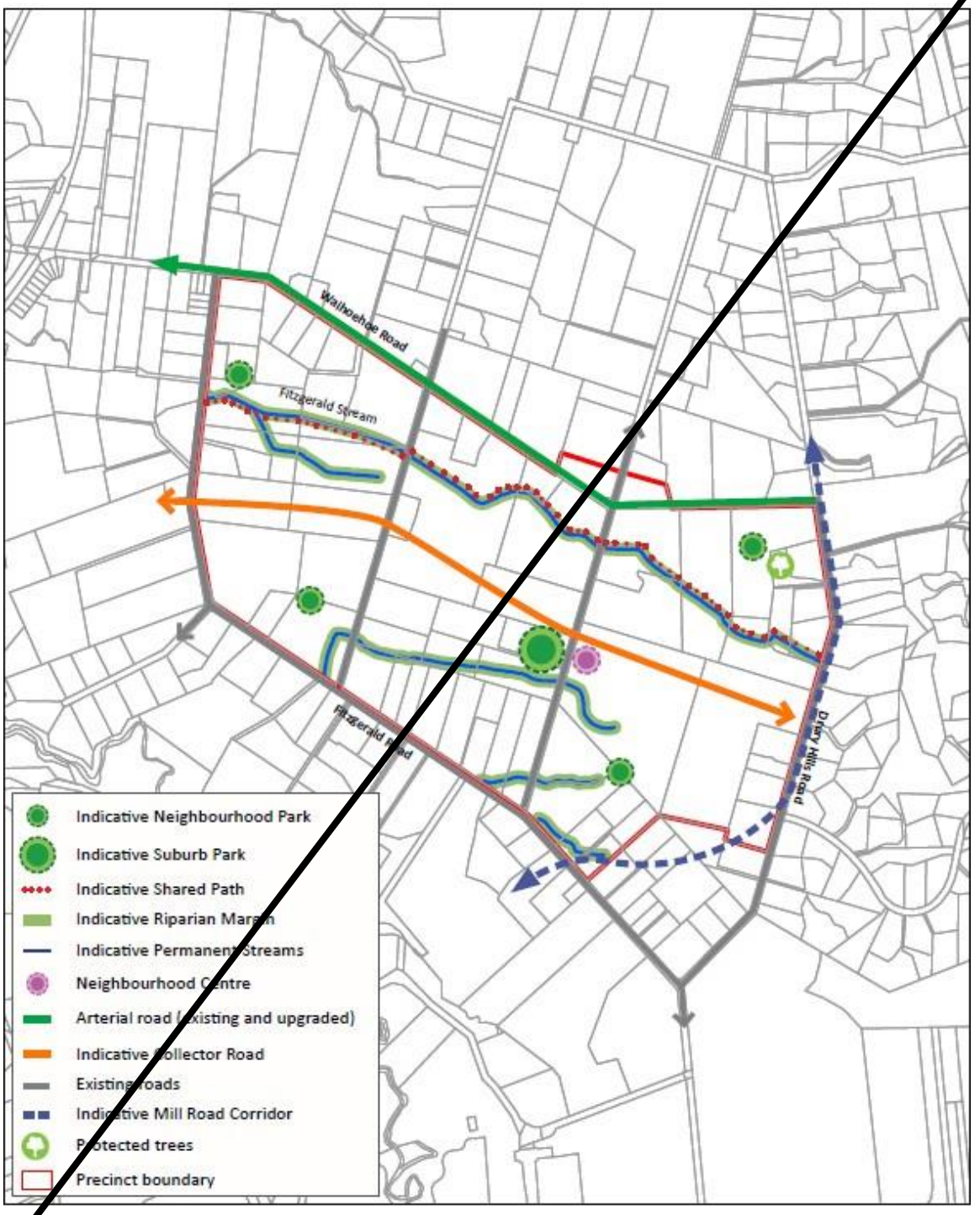
Any proposed new road intersection or upgrading of existing road intersections must be supported by a Transport Design Report and Concept Plans (including forecast transport modelling and land use assumptions), prepared by a suitably qualified transport engineer confirming the location and design of any road and its intersection(s) supports the safe and efficient function of the existing and future (ultimate) transport network and can be accommodated within the proposed or available road reserves. This may be included within a transport assessment supporting land use consent.

In addition, where an interim upgrade is proposed, information must be provided, detailing how the design allows for the ultimate upgrade to be efficiently delivered.

IX.10 Precinct plans

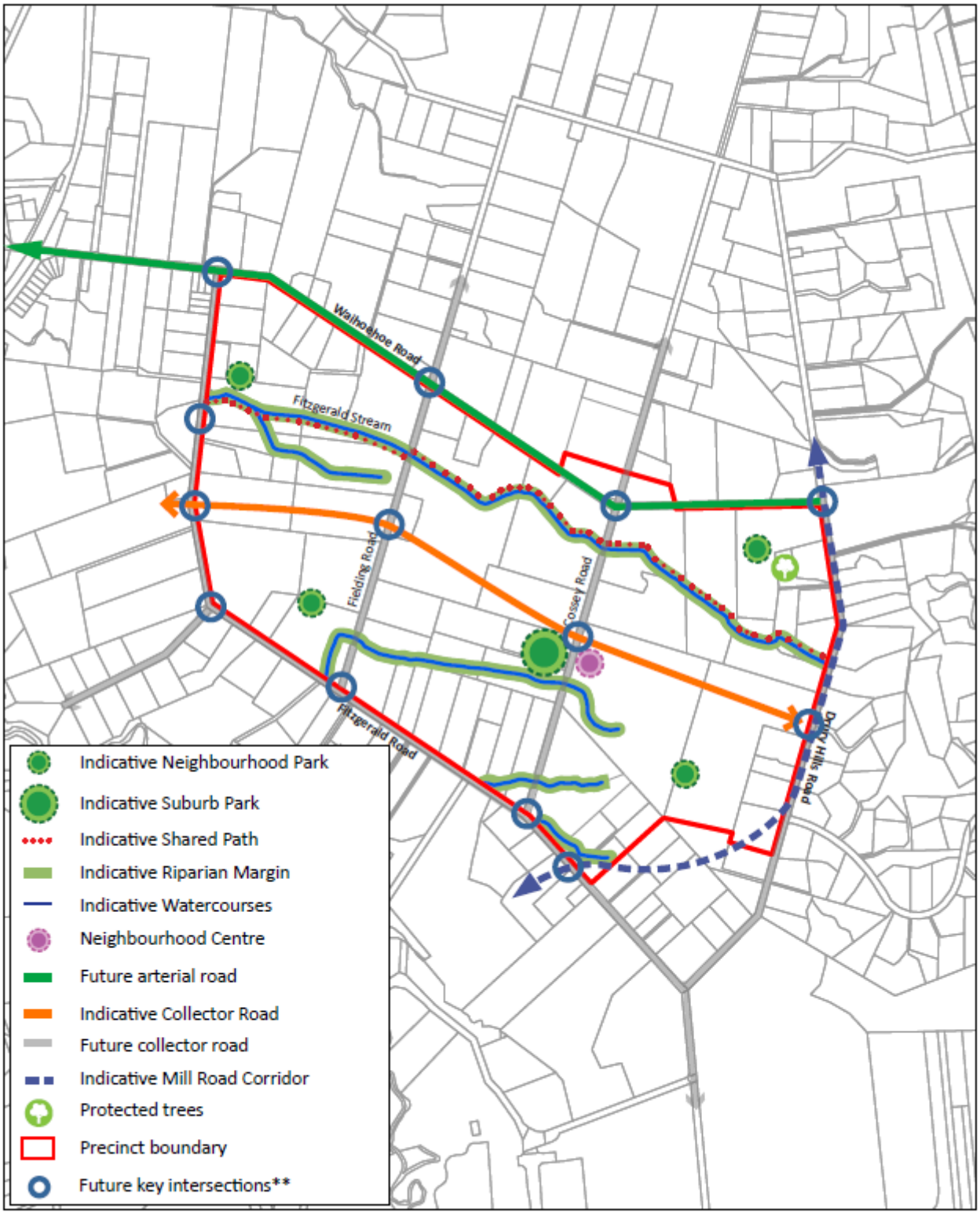
IX.10.1 Drury East: Precinct plan 1 – Indicative Road and Open Space Network

Drury East Precinct Plan 1 - Indicative Road and Open Space Network



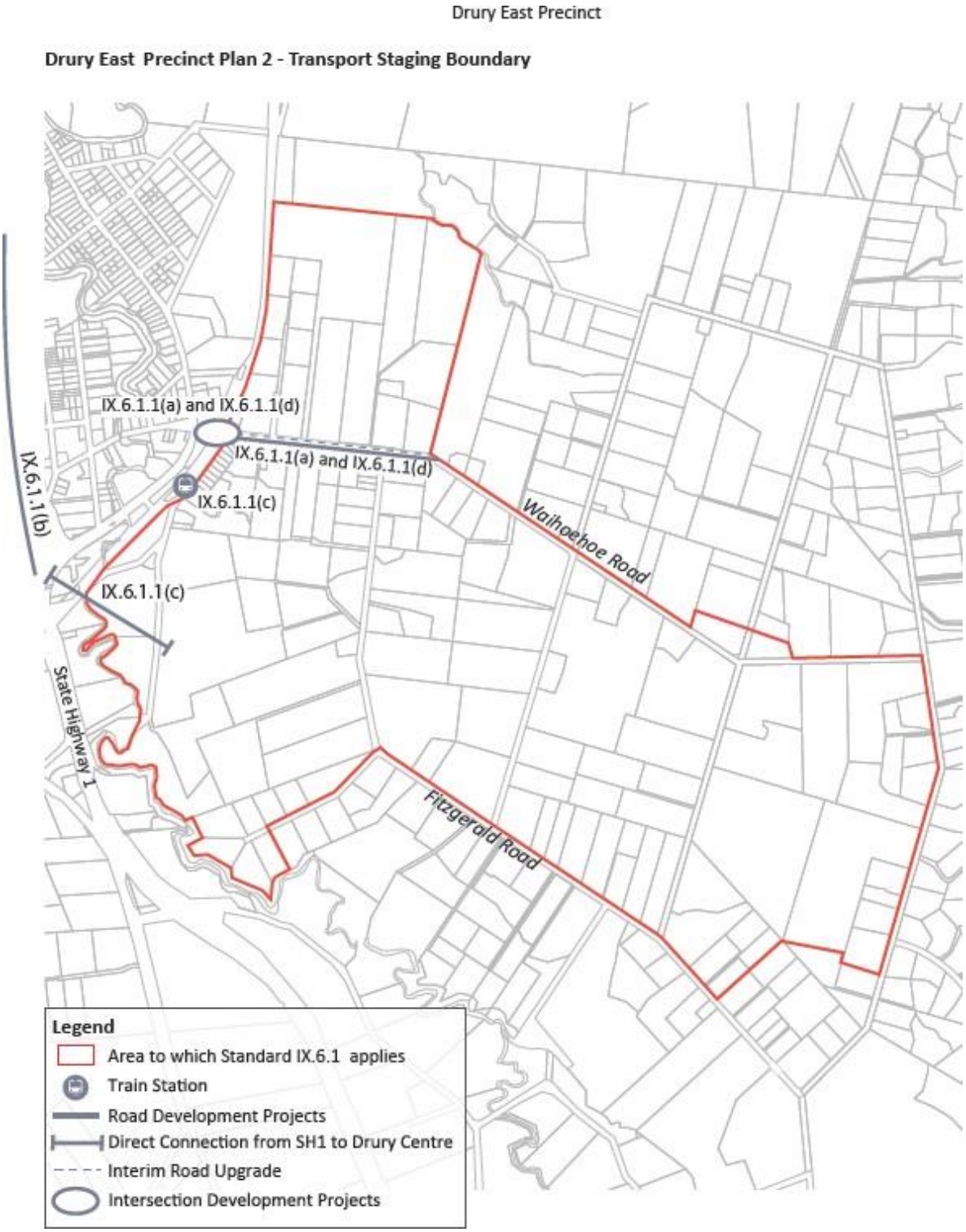
Note: All elements shown are indicative only and subject to detailed design and investigation as part of the resource consent process.

Drury East Precinct Plan 1 - Indicative Road and Open Space Network



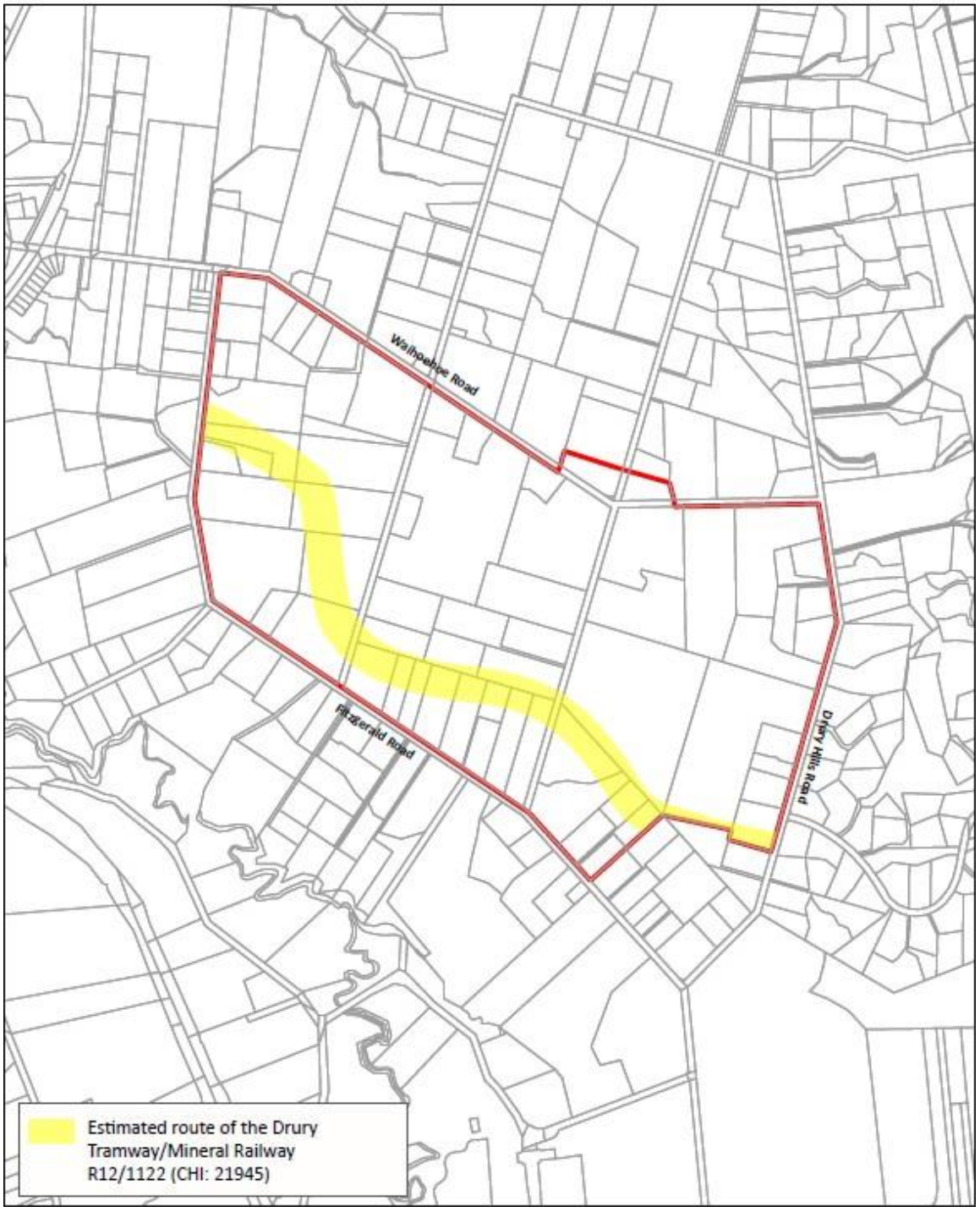
Note: All elements shown are indicative only and subject to detailed design and investigation as part of the resource consent process.
**All future key intersections subject to detailed design and special information requirements.

IX.10.~~23~~ Drury East: Precinct plan 2 – Transport Staging Boundary

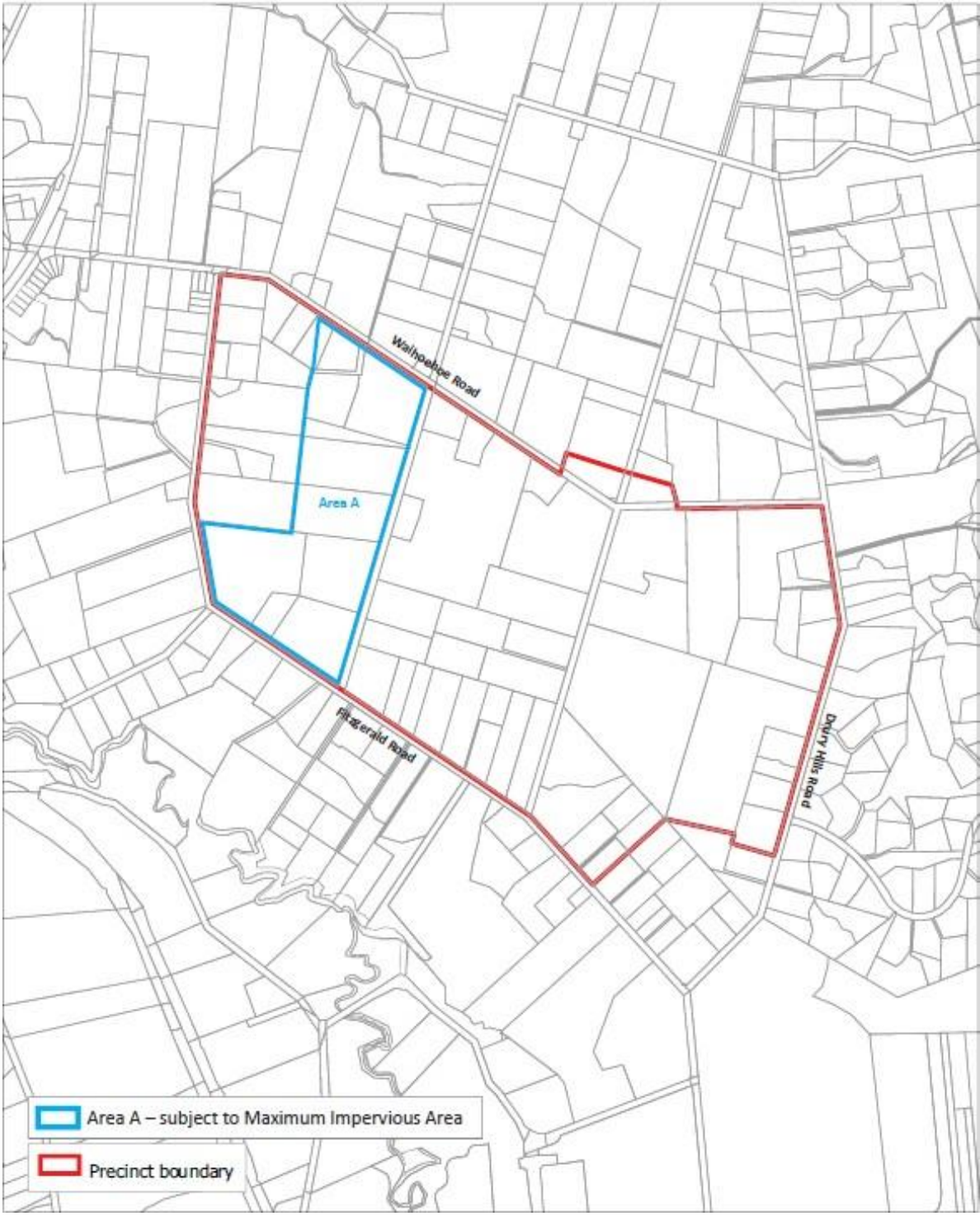


IX.10.3 Drury East: Precinct plan 3 – Drury Tramway/Mineral Railway Archaeological Assessment

Drury East Precinct Plan 3 - Drury Tramway/Mineral Railway Archaeological Assessment



Drury East Precinct Plan 4 - Maximum Impervious Area in Area A



IX.10.4 Drury East: Precinct plan 4 – Maximum Impervious Area in Area A

IX.11 Appendices

Appendix 1: Design

Role and function of road	Minimum road reserve	Total number of lanes	Design speed	Median	Cycle provision	Pedestrian provision	Street trees/rain garden/ parking	Vehicle access restriction
Collector Road	23m	2	40 km/h	No	Yes Separated both sides	Both sides	Trees /rain garden each side On-street parking (interspersed between trees)	No
Local Road	16m	2	30 km/h	No	No	Yes	Trees /rain garden each side On-street parking (interspersed between trees)	No
Local Road – Park Edge	13.5m	2	30 km/h	No	Yes (3m shared path park side)	Yes (Lot side)	Trees /rain garden each side On-street parking (interspersed between trees)	No

Road Function and Required Design Elements Table										
Road Function and Required Design Elements Road Name (refer to Precinct Plan 1)	**Proposed Role and Function of Road in Precinct Area**	**Min. Road Reserve (subject to note 1)**	**Total number of lanes (subject to note 3)**	**Speed Limit (Design)**	**Access Restrictions**	**Median**	**Bus Provision (subject to note 2)**	**On Street Parking**	**Cycle Provision**	**Pedestrian Provision**
Waihoehoe Road West Ultimate Upgrade (Great South Road to Fitzgerald Road) with separated active transport provisions	Arterial	30m	4	50	Yes	Yes	Yes	No	Yes separated on both sides	Yes both sides
Waihoehoe Road West Interim Upgrade (Great South Road to Fitzgerald Road)	Arterial	20m	2[1]	50	Yes	No	Yes	No	Yes Shared path on one side with safe crossing points.	Yes Shared path on one side with safe crossing points.
Ultimate Waihoehoe Road (Fitzgerald Road to Mill Road northern connection) with separated active transport	Arterial	24m	2	50	yes	Yes	yes	No	Yes separated on both sides	Yes both sides-

[1] *Note: an additional bus lane will be provided between the Waihoehoe bridge and the turning lanes at Fitzgerald Road intersection, as shown at Appendix 1a.

Road Function and Required Design Elements Table										
Road Function and Required Design Elements Road Name (refer to Precinct Plan 1)	**Proposed Role and Function of Road in Precinct Area**	**Min. Road Reserve (subject to note 1)**	**Total number of lanes (subject to note 3)**	**Speed Limit (Design)**	**Access Restrictions**	**Median**	**Bus Provision (subject to note 2)**	**On Street Parking**	**Cycle Provision**	**Pedestrian Provision**
provisions										
Waihoehoe Road East Interim Constrained Upgrade (future width 24m) (subject to note 4)	Arterial	20m	2	50	Yes	No	Yes	No	Yes separated on both sides	Yes - Pedestrian provision only required on one side.
Collector Roads with separated active transport provisions including Fielding Road, Cossey Road and Fitzgerald Road	Collector	23m	2	40	No	No	Yes	Optional	Yes separated on both sides	Yes both sides
Collector Roads Interim Hybrid Upgrade (future width 23 m) including Fielding Road, Cossey Road and Fitzgerald Road (subject to note 4)	Collector	21.5m	2	40	No	No	Yes	Optional	Yes separated on both sides	Yes both sides[2]

[2] * Note: Pedestrian provision is not required along the frontage of any Future Urban zoned site

Road Function and Required Design Elements Table										
Road Function and Required Design Elements Road Name (refer to Precinct Plan 1)	**Proposed Role and Function of Road in Precinct Area**	**Min. Road Reserve (subject to note 1)**	**Total number of lanes (subject to note 3)**	**Speed Limit (Design)**	**Access Restrictions**	**Median**	**Bus Provision (subject to note 2)**	**On Street Parking**	**Cycle Provision**	**Pedestrian Provision**
Collector Road Interim Constrained Upgrade (future width 23 m) including Fielding Road, Cossey Road, and Fitzgerald Road (subject to note 4)	Collector	20m	2	40	No	No	Yes	Optional	Yes separated both sides	Yes both sides[3]
Local Roads (Residential)	Local	16m	2	30	No	No	No	Optional	No	Yes both sides
Local Roads (Residential Park Edge)	Local	13.5m	2	30	No	No	No	Optional	No	One side NB: provided that a shared path is provided within park outside the road reserve

Note 1: Typical minimum width which may need to be varied in specific locations where required to accommodate network utilities, batters, structures, stormwater treatment, intersection design, significant constraints or other localised design requirements.

Note 2: Carriageway and intersection geometry capable of accommodating buses.

Note 3: Any interim, hybrid, constrained or ultimate upgrades must be designed and constructed to include a new road pavement and be sealed to their appropriate standard in accordance with the Proposed Role and Function of the Road.

[3] * Note: Pedestrian provision is not required along the frontage of any Future Urban zoned site

Note 4: Any interim hybrid or constrained upgrades shall only apply where the applicant does not have access to the land on one or both sides of the existing road reserve. Where an application is only undertaken on one side of the road, a wider footpath and back berm shall be provided on that side, to integrate with the final design width of the road once fully upgraded.

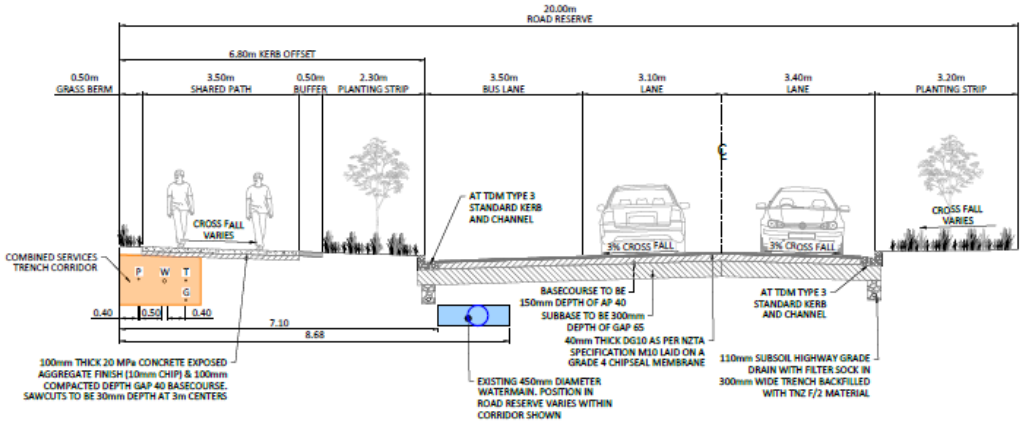
Appendix 1a: Interim Design Details for Existing Roads

Note: all drawings in this appendix are indicative designs to be refined through the EPA process.

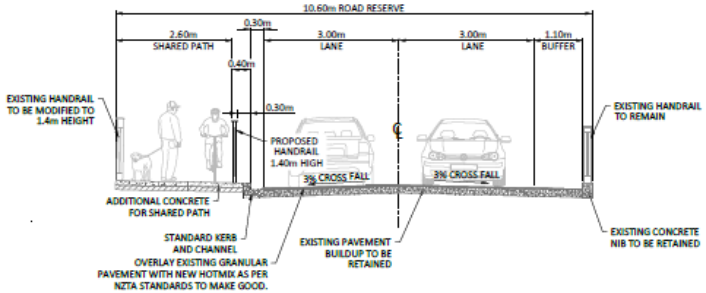
(1) Waihoehoe Road (west of Fitzgerald Road)

*any upgrade works will need to be integrated with the design of the Ultimate Waihoehoe bridge and station access works.





PROPOSED INTERIM WAIHOEHOE ROAD TYPICAL CROSS SECTION 1 (C370)
SCALE 1:50 (A1)

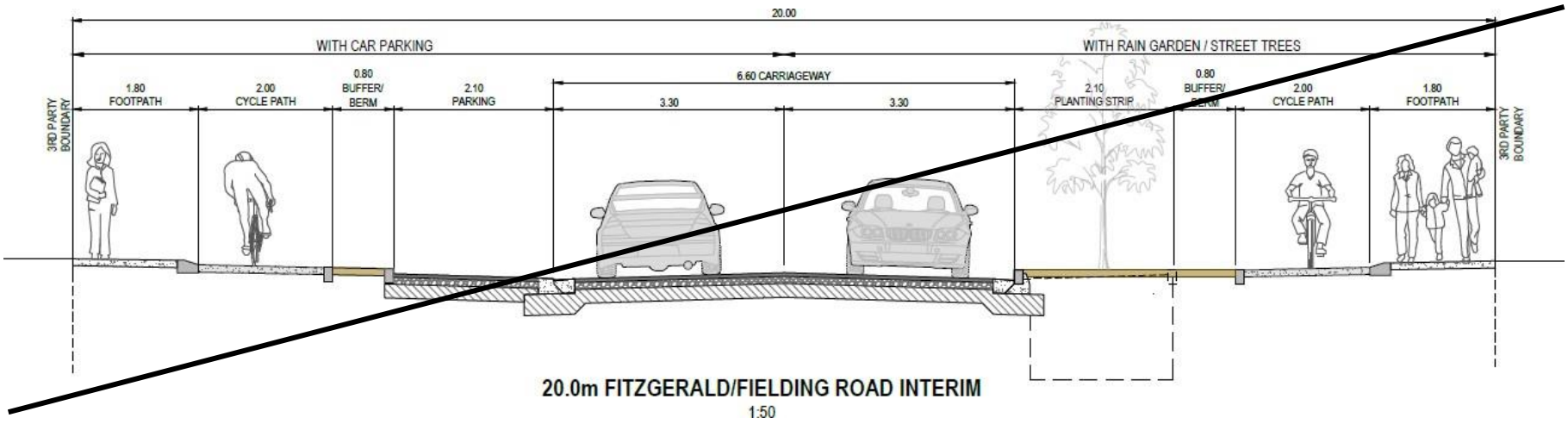


WAIHOEHOE ROAD BRIDGE CROSSING TYPICAL CROSS SECTION 2 (C370)
SCALE 1:50 (A1)

*any upgrade works will need to be integrated with the design of the Ultimate Waihoehoe bridge and station access works
**The Waihoehoe Road (West) Bridge Crossing design is indicative and will be refined through EPA process

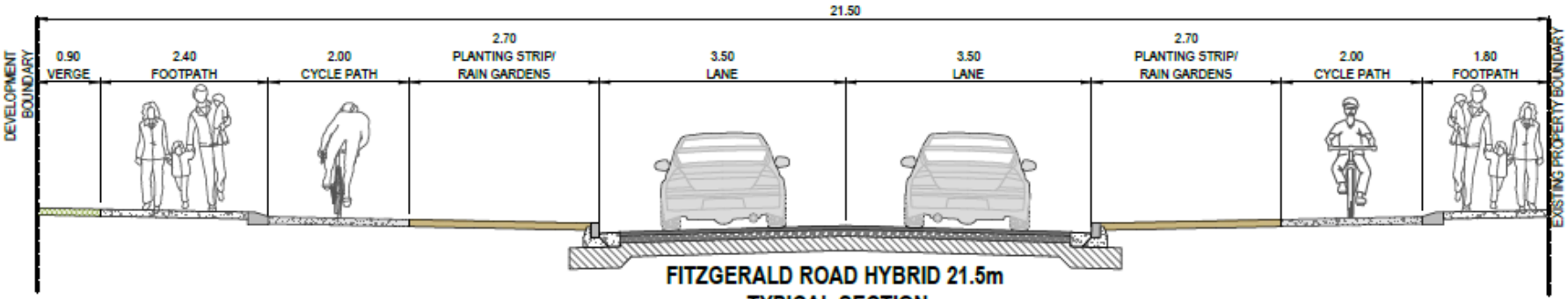
(2) Fitzgerald Road/Fielding Road

Indicative design to be refined through EPA process



20.0m FITZGERALD/FIELDING ROAD INTERIM

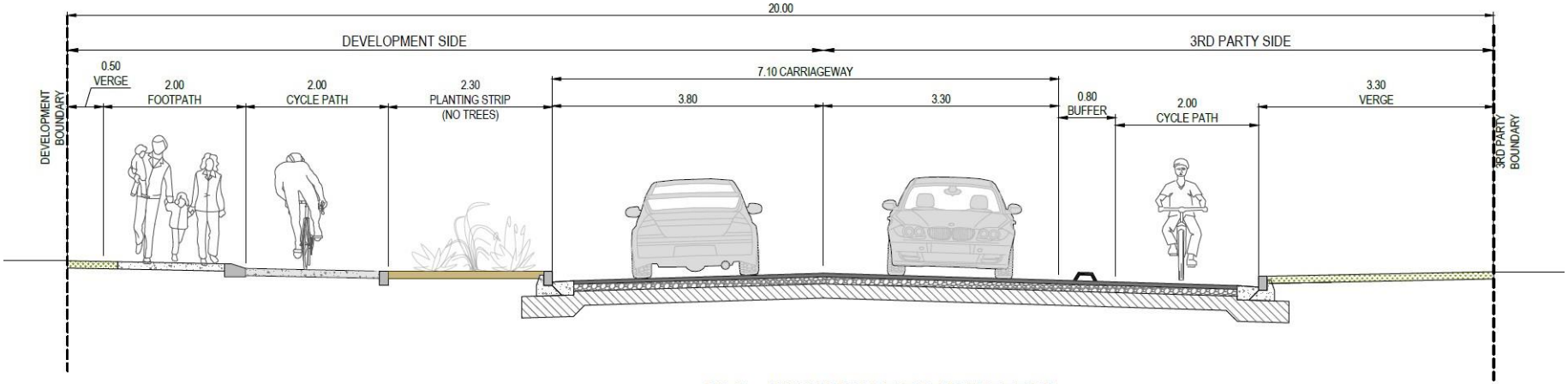
1:50



FITZGERALD ROAD HYBRID 21.5m
TYPICAL SECTION
1:50

(3) Waihoehoe Road (east of Fitzgerald Road)

Indicative design to be refined through EPA process



20.0m WAIHOEHOE ROAD INTERIM

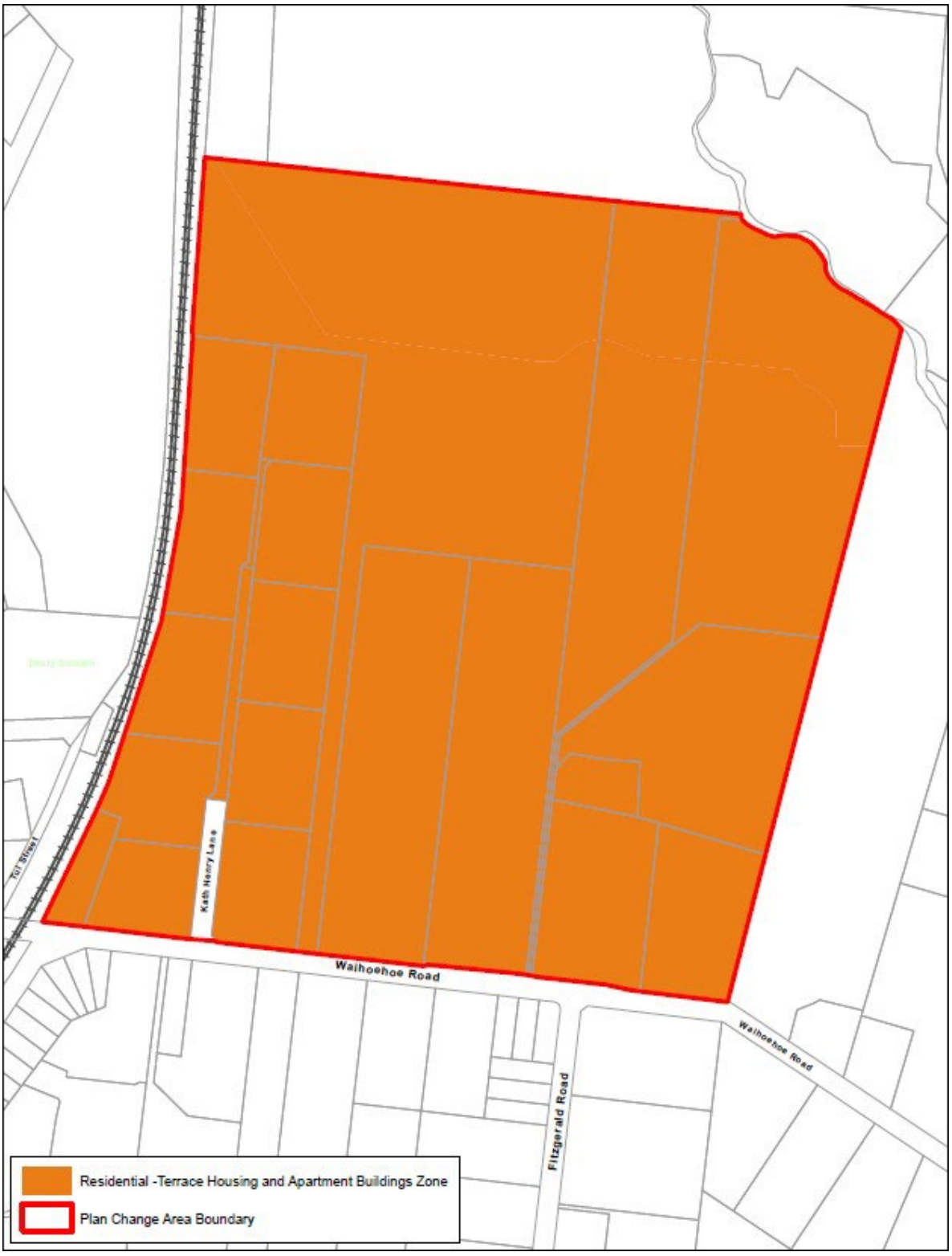
1:50

Appendix 4 (Plan Change 50)

Notes:

Amendments agreed between the parties to the Appeals are shown ~~strikethrough~~ and underline.

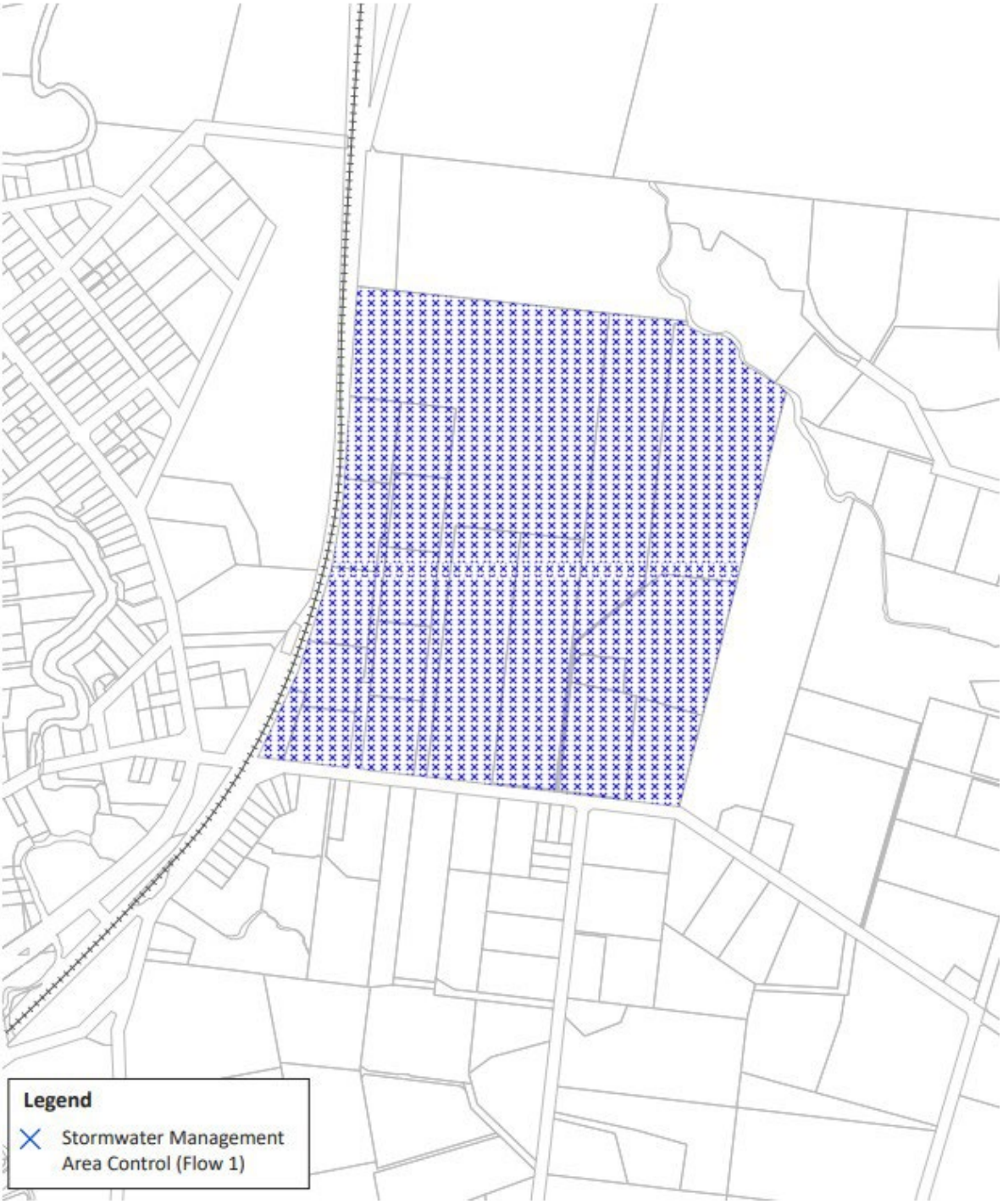
IX. Waihoehoe Precinct



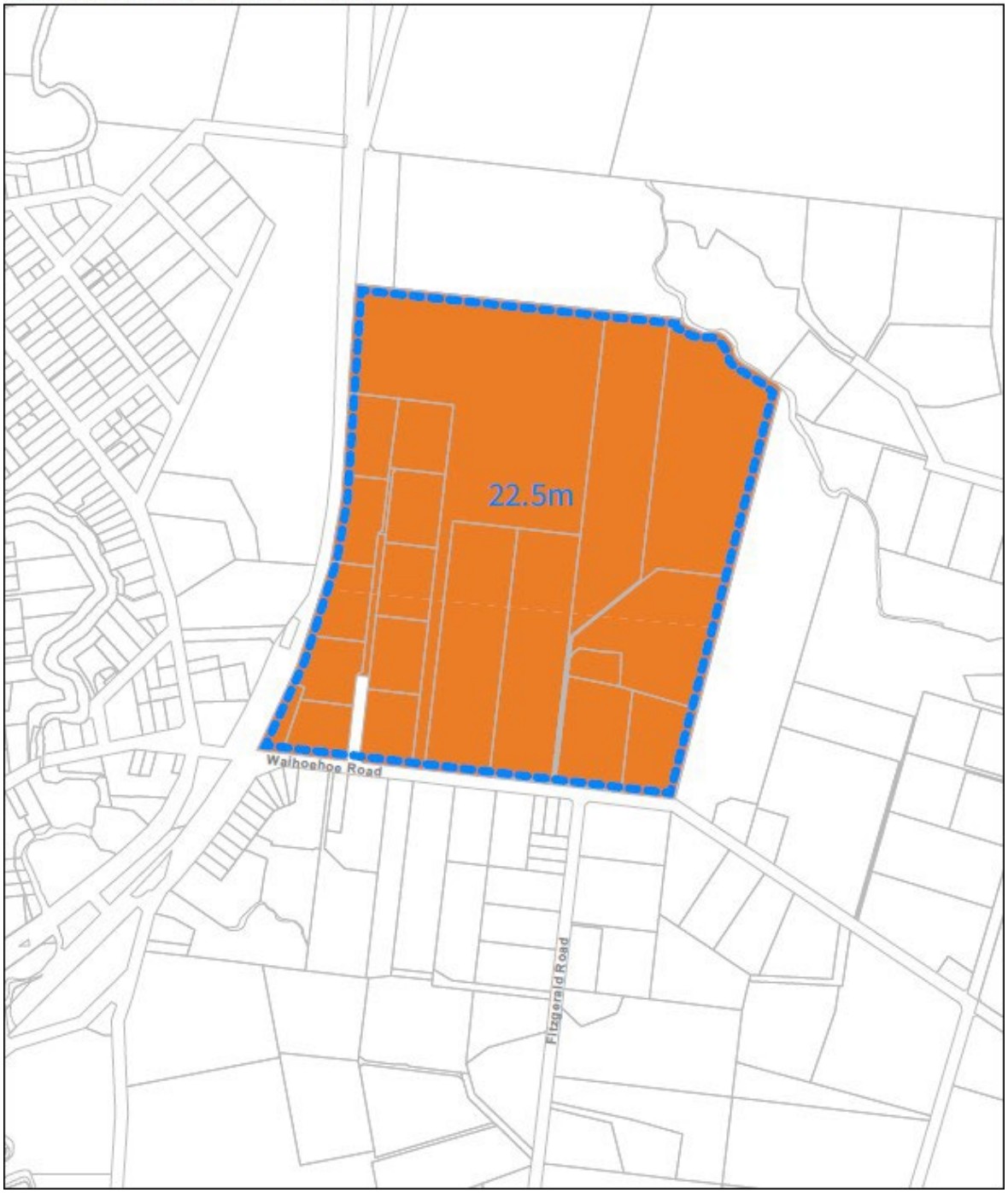
Waihoehoe Precinct - Precinct Plan



Waihoehoe Precinct - Stormwater Management Area Control (Flow 1)



Waihoehoe Precinct - Height Variation Control



IX.1 Precinct Description

The Waihoehoe Precinct applies to approximately 49 hectares of land in Drury East generally bounded by Waihoehoe Road to the south and North Island Main Trunk Line to the west.

The purpose of the Waihoehoe Precinct is to provide for the development of a new, comprehensively planned residential community in Drury East that supports a quality compact urban form. There are two Sub-precincts in the Waihoehoe Precinct, both relating to impervious coverage. Sub-precinct B provides for a lower impervious area to manage the volume of stormwater runoff.

The precinct emphasises the need for development to create a unique sense of place for Drury, by integrating existing natural features, responding to landform, and respecting Mana Whenua values. In particular there is a network of streams throughout Waihoehoe precinct, including the Waihoihoi stream. The precinct seeks to maintain and enhance these waterways and integrate them with the open space network as a key feature.

The transport network in the wider Drury East area as defined on Precinct Plan 2 will need to be progressively upgraded over time to support development in the wider area. The precinct includes provisions to ensure that the subdivision and development of land for housing and related activities is coordinated with the construction of safe, efficient and effective access to the Drury Central train station and other upgrades necessary to manage adverse effects on the local and wider transport network. The precinct provides for safe and convenient active transport access to and from the Drury Central train station. At the time of the Waihoehoe Precinct provisions being made operative, there is insufficient council family or central government funding available for transport and other infrastructure to support the full build-out of Drury East, which may affect the speed at which land within Drury East can be developed.

The precinct manages and mitigates the adverse effects of traffic generation on the transport network and achieves the integration of land use and transport by:

(a) Requiring particular transport infrastructure upgrades to be operational by the time a certain level of subdivision and development is reached within the wider Drury East area (see IX.6.1), recognising that the area functions as an integrated transport network;

(b) Requiring a comprehensive assessment and an Integrated Transport Assessment to be prepared for subdivision and development that does not comply with IX.6.1;

(c) Requiring safe, legible and direct connection/s to the Drury Central train station to be in place as subdivision and development occurs;

(d) Requiring new collector and arterial roads within the precinct generally in the locations shown on Precinct Plan 1, and new local roads to be located to form a high quality and integrated network including to any new schools within the Precinct Plan 2 area;

(e) Requiring all proposed roads to be designed in accordance with IX.11 Appendix 1, consistent with the functions and elements outlined in the table.

Open spaces in the Waihoehoe precinct other than esplanade reserve may be privately owned, owned by the Crown, or (subject to Council approval) vested in the Council.

Acoustic attenuation provisions are proposed within the Precinct to protect activities sensitive to noise from adverse effects arising from the road traffic noise associated with the operation of Waihoehoe Road and the Opaheke North-South FTN Arterial (shown as future arterial roads on Precinct Plan 1).

An area within the Precinct which may experience vibration levels higher than would normally be expected because of proximity to the rail corridor is identified on Precinct Plan 4.

All relevant overlay, Auckland-wide and zone provisions apply in this precinct unless otherwise specified below.

IX.2 Objectives

(1) Waihoehoe Precinct is a comprehensively developed residential environment that integrates with the Drury Centre and the natural environment, supports public and active transport use, and respects Mana Whenua values.

(2) Subdivision and development does not occur in advance of the availability of operational transport infrastructure, including regional and local transport infrastructure.

(3) Access to and from the precinct occurs in an effective, efficient and safe manner that ~~manages~~ mitigates adverse effects of traffic generation on the surrounding road network.

(4) The Waihoehoe precinct develops and functions in a way that:

(a) Results in a mode shift to public and active modes of transport; and

(b) Provides safe and effective movement between, housing and open spaces, and the Drury Central train station, by active modes.

(5) Development is coordinated with the supply of sufficient three waters, energy and communications infrastructure.

(6) Freshwater, sediment quality, and biodiversity is improved.

(7) Activities sensitive to noise adjacent to the rail corridor and/or ~~an~~ arterial roads are designed to protect people's health and residential amenity while they are indoors, and in a way which does not unduly constrain the operation of the railway corridor.

IX.3 Policies

(1) Require collector and arterial roads to be provided generally in the locations shown in IX.10.1~~X~~ Waihoehoe: Precinct Plan 1 while allowing for variation, where it would achieve a highly connected street layout that integrates with the surrounding and proposed transport network.

(2) Ensure that development provides a local road network that achieves a highly

connected street layout and integrates with the collector and arterial road network within the precinct, and the surrounding transport network, and supports the safety and amenity of the open space and stream network.

(3) Require the transport network ~~streets~~ to be attractively designed and appropriately provide for all transport modes in accordance with IX.11 Appendix 1.

(4) In addition to matters (a)-(c) of Policy E38.3.18, ensure that the location and design of publicly accessible open spaces contribute~~s~~ to a sense of place and a quality network of open spaces for the Waihoehoe Precinct and Drury-Opāheke, including by:

(a) incorporating any distinctive site features; and

(b) integrating with the stream network to create a green corridor.

(5) Promote a mode shift to public and active modes of transport by:

a) Requiring active mode connections to the Drury Central train station and Drury Centre for all stages of development;

b) Requiring streets to be designed to provide safe separated access for cyclists on collector roads and arterial roads; and

c) Requiring safe and secure cycle parking for all residential activities.

(6) ~~Manage~~ Ensure that the adverse effects of traffic generation on the surrounding transport network are mitigated, including by ensuring:

a) Public transport can operate efficiently at all times;
b) The surrounding road network can operate with reasonable efficiency during inter-peak periods;
c) Safe and efficient movement of freight vehicles within and through the Drury South Industrial precinct; ~~and~~
d) Any upgrades to the transport network are safe for pedestrians, cyclists and motorists~~.~~; and
e) The transport network operates safely at all times.

(7) Provide for the progressive upgrade of existing roads and key intersections adjoining the Waihoehoe precinct, including the upgrade of road frontages to an urban standard at the time of development or subdivision of adjoining land ~~adjoining the Waihoehoe precinct~~, to provide for all modes and connect with the existing transport network to the Drury Central train station.

(8) ~~Ensure~~ Require that subdivision and development does not occur in advance of the availability of operational transport infrastructure, including regional and local transport infrastructure.

(9) Ensure that development in the Waihoehoe Precinct is coordinated with sufficient stormwater, wastewater, water, energy and communications infrastructure.

(10) Require subdivision and development, as it proceeds, to provide access to safe, direct and legible pedestrian and cycling connections to the Drury Central train station and schools within the Precinct Plan 2 area.

(11) Contribute to improvements to water quality, habitat and biodiversity, including by providing planting on the riparian margins of permanent and intermittent streams.

(12) Limit the maximum impervious area within Sub-precinct B to manage the stormwater runoff generated by a development to ensure that adverse flooding effects are avoided or mitigated.

(13) Provide opportunities to deliver a range of site sizes and densities in the Residential -Terrace Housing and Apartment Buildings zone.

(14) In addition to the matters in Policy E1.3(8) and E1.3(11)a, manage erosion and associated effects on stream health and values arising from development in the precinct, and enable in- stream works to mitigate any effects.

Stormwater Management

(15) Require subdivision and development to be consistent with the treatment train approach outlined in the supporting stormwater management plan including:

a. Application of water sensitive design to achieve water quality and hydrology mitigation;

b. Requiring the use of inert building materials to eliminate or minimise the generation and discharge of contaminants;

c. Requiring treatment of runoff from public road carriageways and publicly accessible carparks at or near source by a water quality device designed in accordance with GD01;

d. Requiring runoff from other trafficked impervious surfaces to apply a treatment train approach to treat contaminant generating surfaces, including cumulative effects of lower contaminant generating surfaces;

e. Providing planting on the riparian margins of permanent or intermittent streams;

f. Ensuring development is coordinated with sufficient stormwater infrastructure.

Natural Hazards

(16) Ensure development manages flooding effects upstream and downstream of the site and in the Waihoehoe precinct so that the risks to people and property (including infrastructure) are not increased for all flood events, up to a ~~100-year ARI~~ 1% AEP flood event. This includes appropriately designed and sited flood attenuation devices and providing sufficient floodplain storage within the precinct.

Mana Whenua values

(17) Development responds to Mana Whenua values by:

(a) Delivering a green corridor following the stream network;

(b) Taking an integrated approach to stormwater management;

(c) Ensuring the design of streets and publicly accessible open spaces incorporate Te Aranga design principles.

~~Noise sensitive activities~~ Activities sensitive to noise adjacent to ~~the~~ rail and ~~current~~ existing and future arterial road corridors

(18) Ensure that ~~A~~activities sensitive to noise adjacent to the railway corridor and/or ~~current~~ existing and future arterial roads are designed with acoustic attenuation measures to protect people's health and residential amenity while they are indoors and that such activities do not unduly constrain the operation of the railway corridor.

All relevant overlay, Auckland-wide and zone objectives and policies apply in this precinct in addition to those specified above.

IX.4 Activity table

All relevant overlay, Auckland-wide and zone activity tables apply unless the activity is listed in Activity Table IX.4.1 below.

Activity Table IX.4.1 specifies the activity status of district land use activities and development in the Waihoehoe Precinct pursuant to section(s) 9(3) of the Resource Management Act 1991 and the activity status for subdivision pursuant to section 11 of the Resource Management Act 1991.

Table IX.4.1 Activity table

Activity		**Activity Status**
Subdivision and Development		
(A1)	Subdivision, or new buildings prior to subdivision, including private roads (excluding alterations and additions that are a permitted activity in the underlying zone)	RD
(A2)	Subdivision and/or d~~D~~evelopment that does not comply with Standard IX.6.1 Staging of Subdivision and Development with Transport Upgrades with respect to the following elements of Table IX.6.1.1: i. Upgrades in rows (a) and (b) ii. The upgrade in row (c) relating to Drury Central train station	~~RD~~ NC

(A3)	Subdivision and/or development that does not comply with Standard IX.6.1 Staging of Subdivision and Development with Transport Upgrades with respect to the following elements of Table IX.6.1.1: i. The upgrade in row (c) relating to the Direct connection from State Highway 1 to the Drury Centre ii. Upgrades in rows (d) to (f)	D
(A4)	Subdivision and/or development that does not comply with Standard IX6.2A(1) Road Design	RD
(A5)	Any application to amend an existing resource consent that gives rise to non-compliance with Standard IX.6.1 Staging of Subdivision and Development with Transport Upgrades and Table IX.6.1.1	NC in relation to transport infrastructure upgrades subject to (A2) above D in relation to transport infrastructure upgrades subject to (A3) above
~~**Subdivision**~~		
~~(A5)~~	~~Subdivision that does not comply with Standard IX.6.1 Staging of Development with Transport Upgrades~~	~~RD~~

IX.5 Notification

(1) Any application for resource consent for an activity listed in Table IX.4.1 Activity table will be subject to the normal tests for notification under the relevant sections of the Resource Management Act 1991.

(2) When deciding who is an affected person in relation to any activity for the purposes of section 95E of the Resource Management Act 1991 the Council will give specific consideration to those persons listed in Rule C1.13(4).

IX.6 Standards

(1) Unless specified in Standard IX.6(2), ~~or~~ IX.6(3) or IX.6(4) below, all relevant overlay, Auckland- wide and zone standards apply to the activities listed in Activity Table IX.4.1 above.

(2) The following Auckland-wide standards do not apply to activities listed in Activity Table IX.4.1 above:

(a) E27.6.1 Trip generation

(3) The following zone standards do not apply within Sub-precinct B:

(a) H6.6.10 Maximum impervious area

(4) In addition to IX.6 (1) activities listed in Activity Table IX.4.1 must comply with the following standards IX.6.0 to IX.6.9.

IX.6.0 Building Height

Purpose:

- Enable building height to be maximised close to the Drury Central train station and the frequent transport network;
- Contribute positively to Drury's sense of place;
- Manage the effects of building height, including visual dominance.

(1) Buildings in the Residential - Terrace Housing and Apartment Buildings zone must not exceed the height in metres shown in the Height Variation Control on the planning maps.

IX.6.1 Staging of Subdivision and Development with Transport Upgrades

Purpose:

- ~~Manage~~ Mitigate the adverse effects of traffic generation on the surrounding local and wider road network, consistent with Policy 6.
- Achieve the integration of land use and transport consistent with Policies IX.3(5), (7), (8) and (10).

(1) Development and subdivision within the area shown on IX.10.2 Precinct Plan 2 must not exceed the thresholds in Table IX.6.1.1 until such time that the identified infrastructure upgrades are constructed and are operational. Applications for resource consent in respect of activities, development or subdivision identified in Column 1 of the Table will be deemed to comply with this standard IX.6.1(1) if the corresponding infrastructure identified in Column 2 of the Table is:

a) Constructed and operational prior to lodgement of the resource consent application; or
b) Under construction with relevant consents and/or designations being given effect to prior to the lodgement of the resource consent application and the application is expressly made on the basis that the relevant infrastructure upgrade(s) will be completed and operational prior to:
    i. the issue of a section 224(c) RMA certificate in the case of a subdivision consent application; and/or
    ii. the occupation of any dwellings, commercial, and/or community activities in the case of a land use consent application; or
c) Proposed to be constructed by the applicant as part of the resource consent application and the application is expressly made on the basis that the relevant infrastructure upgrade(s) will be completed and operational:
    i. Prior to or in conjunction with the issue of a section 224(c) RMA certificate in the case of a subdivision consent application; and/or
    ii. Prior to the occupation of any dwellings, commercial, and/or community activities in the case of a land use consent application.

(2) Any application lodged in terms of IX.6.1(1) b) or c) above must confirm the applicant's express agreement in terms of section 108AA(1)(a) of the RMA and on an *Augier* basis to

the imposition of consent conditions requiring (as relevant) that:

i. no dwellings, retail, commercial and/or community floorspace shall be occupied until the relevant infrastructure upgrades are constructed and operational; and/or

ii. no section 224(c) certificate shall be issued and no subdivision survey plan shall be deposited until the relevant infrastructure upgrades are constructed and operational.

Any resource consent(s) granted on one or both of the above bases must be made subject to consent conditions as described in IX.6.1 (2)i and/or IX.6.1 (2)ii above. Those conditions will continue to apply until appropriate evidence is supplied to Council confirming that the relevant infrastructure upgrades are operational.

(3) For the purpose of this standard:

a) 'dwelling' and 'retail/commercial/community floorspace' means buildings for those activities that have a land use consent, or subdivision that has a section 224(c)~~C~~ certificate that creates additional vacant lots;

b) 'Occupation' and 'occupied' mean occupation and use for the purposes permitted by the resource consent but not including occupation by personnel engaged in construction, fitting out or decoration; and

c) 'Operational' means the relevant upgrade is available for use and open to all traffic (be it road traffic in the case of road upgrades, or rail traffic in the case of the Drury Central train station).

(4) Any proposal for dwellings, retail, commercial or community activities must demonstrate compliance with this rule in accordance with the Special Information Requirements in IX.9(5).

Table IX.6.1.1 Threshold for Subdivision and Development as shown on IX.10.3 Waihoehoe: Precinct Plan 2

Column 1 **Activities, development or subdivision, enabled by Transport Infrastructure in column 2**		**Column 2** **Transport infrastructure required to enable activities, development or subdivision in column 1**
(a)	Up to a maximum of 710 dwellings	Interim upgrade to Great South Road/Waihoehoe Road roundabout to signals in accordance with Appendix 2 ~~1a~~, including pedestrian connections to existing footpaths~~.~~; and Interim upgrade of Waihoehoe Road in accordance with Appendix 2 ~~1a~~, including walking and cycling provisions on the Waihoehoe Road bridge.

(b)	Up to a maximum of: (i) 1,300 dwellings; and/or (ii) 24,000m^2 retail GFA; and/or (iii) 6,000m^2 other commercial GFA; and/or (iv) 800m^2 community GFA.	Upgrades in (a) above and State Highway 1 widening – Stage 1, being six lanes between the Papakura interchange and Drury interchange.
(c)	Up to a maximum of: (i) 1,800 dwellings; and/or (ii) 32,000m^2 retail GFA; and/or (iii) 8,700m^2 other commercial GFA; and/or (iv) 1,000m^2 community GFA.	Upgrades in (a) and (b) above and: Drury Central train station, including a pedestrian connection to Waihoehoe Road*; and. Direct connection from State Highway 1 to the Drury Centre via a single lane slip lane from SH1 interchange to Creek Road. Creek Road is within the Drury Centre Precinct and is shown on Precinct Plan 2**. Notes: * Refer to IX.4.1(A2) – non-compliance is a non-complying activity ** Refer to IX.4.1(A3) – non-compliance is a discretionary activity
(d)	Up to a maximum of: (i) 3,300 dwellings; and/or (ii) 56,000m^2 retail GFA; and/or (iii) 17,900m^2 other commercial GFA; and/or 2,000m^2 community GFA.	Upgrades in (a)-(c) above and: Ultimate Waihoehoe Road upgrade between Fitzgerald Road and Great South Road in accordance with Appendix 2, including: i. Two general traffic lanes and two bus lanes, footpaths and cycleways on both sides, and a new six-lane bridge over the railway corridor; and ii. Signalisation and increased capacity at the Great South Road/Waihoehoe Road intersection, including fully separated active mode facilities and 3-4 approach lanes in each direction.
(e)	Up to a maximum of: (i) 3,800 dwellings; and/or (ii) 64,000m^2 retail GFA; and/or (iii) 21,000m^2 other commercial GFA; and/or 2,400m^2 community GFA.	Upgrades in (a)-(d) above and: Mill Road southern connection between Fitzgerald Road and State Highway 1, providing four traffic lanes and separated active mode facilities, including a new SH1 Interchange at Drury South - the "Drury South interchange"
(f)	Up to a maximum of: (i) 5,800 dwellings; and/or (ii) 97,000m^2 retail GFA; and/or (iii) 47,000m^2 other commercial GFA; and/or	Upgrades in (a)-(e) above and: Mill Road northern connection between Fitzgerald Road and Papakura, providing four traffic lanes and separated active modes, including ultimate upgrade of Waihoehoe Road East from Fitzgerald Road to Mill Road and

	10,000m^2 community GFA.	Ultimate Opaaheke Northern connection, providing four lanes including bus lanes and active mode facilities between Waihoehoe Road and Opaaheke Road in Papakura

IX.6.2 Minimum Bicycle Parking

(1) In addition to the bicycle parking requirements in standard E27.6.2(6), at least one secure (long stay) bicycle park must be provided for every dwelling.

(2) For multi-unit development, at least one visitor (short stay) bicycle space must be provided for every 20 dwellings.

IX.6.2A Road Design

Purpose: To ensure that any activity, development and/or subdivision complies with IX.11 Appendix 1: Road Function and Design Elements Table.

(1) Any activity, development and/or subdivision that includes the construction of new roads, or the upgrade of existing roads, must comply with IX.11 Appendix 1: Road Function and Design Elements Table.

IX.6.3 Riparian Margin

Purpose: Contribute to improvements to water quality, habitat and biodiversity.

(1) Riparian margins of permanent or intermittent streams must be planted either side to a minimum width of 10m measured from the top of bank of the stream, provided that:
   (i) This rule shall not apply to road crossings over streams;
   (ii) Walkways and cycleways must not locate within the riparian planting area;
   (iii) Any archaeological site identified in a site specific archaeological survey must not be planted;
   (iv) The riparian planting area is vested in Council or protected and maintained in perpetuity by an appropriate legal mechanism.

(2) A building, or parts of a building, must be setback at least 20m from the bank of a river or stream measuring 3m or more in width, consistent with the requirements of E38.7.3.2.

IX.6.4 Maximum Impervious Area within Sub-Precinct B

Purpose: To appropriately manage stormwater effects generated within Sub-Precinct B.

(1) Within Sub-Precinct B the maximum impervious area must not exceed 60 per cent of the site area.

(2) Within Sub-Precinct B the maximum impervious area within a riparian yard must not exceed 10 per cent of the riparian yard area.

IX6.5 Stormwater Quality

Purpose: Contribute to improvements to water quality and stream health.

(1) Stormwater runoff from new, or redevelopment of existing, high contaminant generating carparks, all publicly accessible carparks exposed to rainfall, and all roads must be treated with a stormwater management device(s) meeting the following standards:

(a) the device or system must be sized and designed in accordance with 'Guidance Document 2017/001 Stormwater Management Devices in the Auckland Region (GD01)'; or

(b) where alternative devices are proposed, the device must demonstrate it is designed to achieve an equivalent level of contaminant or sediment removal performance to that of 'Guidance Document 2017/001 Stormwater Management Devices in the Auckland Region (GD01)'.

(c) For all other trafficked impervious surfaces, water quality treatment in accordance with the approved stormwater management plan must be installed.

(2) New buildings, and additions to buildings must be constructed using inert cladding, roofing and spouting building materials that avoid the use of high contaminant yielding building products which have:

(a) exposed surface(s) or surface coating of metallic zinc of any alloy containing greater than 10% zinc; or
(b) exposed surface(s) or surface coating of metallic copper or any alloy containing greater than 10% copper; or
(c) exposed treated timber surface(s) or any roof material with a copper-containing or zinc-containing algaecide.

IX.6.6 Fences adjoining publicly accessible open space

Purpose: Ensure development positively contributes to the visual quality and interest of open spaces.

(1) Fences, or walls, or a combination of these structures, within a side or rear yard adjoining a publicly accessible open space (excluding roads) must not exceed the heights specified below, measured from the ground level at the boundary:

(i) 1.2m in height, or;

(ii) 1.8m in height if the fence is at least 50 per cent visually open.

IX.6.7 ~~Noise sensitive activities~~ Activities sensitive to noise within 60m of the rail corridor

Purpose: Ensure Activities sensitive to noise adjacent to the railway corridor are designed to protect people's health and residential amenity while they are indoors and that such

activities do not unduly constrain the operation of the railway corridor.

(1) Any new building or alteration to an existing building that contains an activity sensitive to noise, within 60 metres of the rail corridor, must be designed, constructed and maintained to not exceed 35 dB LAeq (1 hour) for sleeping areas and 40 dB LAeq (1 hour) for all other habitable spaces.

Note Railway noise is assumed to be 70 dB LAeq(1 hour) at a distance of 12 metres from the track and must be deemed to reduce at a rate of 3 dB per doubling of distance up to 40 metres and 6 dB per doubling of distance beyond 40 metres.

(2) If windows must be closed to achieve the design noise levels in Standard Rule IX.6.7(1)~~8~~, the building must be designed, constructed and maintained with a mechanical ventilation system that meets the requirements of E25.6.10(3)(b) and (d) to (f).

(3) A report must be submitted by a suitably qualified and experienced person to the council demonstrating compliance with Rule IX.6.7~~8~~(1) and (2) prior to the construction or alteration of any building containing an activity sensitive to noise located within the areas specified in IX.6.7~~8~~(1).

IX.6.8 ~~Noise sensitive activities~~ Activities sensitive to noise within ~~40~~75m of an existing or future Arterial Road ~~in Table 1X 6.1.1~~ shown on Precinct Plan 1

Purpose: Ensure Activities sensitive to noise adjacent to the arterial road are designed to protect people's health and residential amenity while they are indoors.

(1) Any new buildings or alterations to existing buildings containing an activity sensitive to noise within ~~40~~75m to the boundary of Waihoehoe Road and/or the Opaheke North-South FTN Arterial (shown as future arterial roads on Precinct Plan 1) ~~an arterial road~~ must be designed, constructed and maintained so that road traffic noise does ~~to~~ not exceed 40 dB LAeq (24 hour) ~~for~~ in all noise sensitive spaces.

(2) If windows must be closed to achieve the design noise levels in Standard ~~Rule~~ IX.6.8~~9~~(1), the building must be designed, constructed and maintained with a mechanical ventilation system that meets the requirements of E25.6.10(3)(b) and (d) to (f).

(3) A design report must be submitted by a suitably qualified and experienced person to the council demonstrating that compliance with Standard ~~Rule~~ IX.6.8~~9~~(1) and (2) can be achieved prior to the construction or alteration of any building containing an activity sensitive to noise located within the areas specified in IX.6.8~~9~~ (1). In the design, road noise for the Auckland Transport designations D2 and D3 (Jesmond to Waihoehoe West Frequent Transit Network Upgrade and Waihoehoe Road East upgrade) and for designation D4 (Opaheke North-South FTN Arterial) is based on:

(a) current measured noise levels plus 3 dB, or
(b) current modelled noise levels plus 3 dB, or
(c) future predicted noise levels,

save that road noise for Opaheke North-South FTN Arterial shall only be based on future predicted noise levels, until that arterial road is completed and operational.

For the purposes of this Standard, future predicted noise levels shall be either based

on computer noise modelling undertaken by a suitably qualified and experienced person on behalf of the applicant or those levels modelled as part of the Auckland Transport designations D2, D3 and D4 (Jesmond to Waihoehoe West Frequent Transit Network Upgrade, Waihoehoe Road East upgrade and Opaheke North-South FTN Arterial).

Should noise modelling undertaken on behalf of the applicant be used for the purposes of the future predicted noise levels under this standard, modelling shall be based on the following inputs:

(i) An asphaltic concrete surfacing (or equivalent low-noise road surface)

(ii) 50km/hr speed environment

(iii) The concept alignment authorised by Auckland Transport designations D2, D3 and D4 (Jesmond to Waihoehoe West Frequent Transit Network Upgrade, Waihoehoe Road East upgrade and Opaheke North-South FTN Arterial) or, if the arterial road upgrade works have been completed in full, as built plans available from Auckland Transport on request

(iv) The following Waihoehoe Road and Opaheke North-South FTN Arterial Annual Average Daily Traffic (AADT) flow predictions for 2048 and heavy vehicles % for 2048:

	2048	
Section	AADT	HV%
Waihoehoe Road (Great South Road to Fitzgerald Road)	18200	7%
Waihoehoe Road (Fitzgerald Road to Fielding Road)	6700	7%
NS Arterial	10500	9%

(v) Screening from any buildings that exist or buildings for which building consent has been granted and issued.

Should Auckland Transport's noise modelling be used for the purposes of this standard:

(i) The future predicted noise levels are those modelled as part of Auckland Transport designations D2, D3 and D4, which are based on an assumed posted speed limit of 50km/h, the use of an asphaltic concrete surfacing (or equivalent low-noise road surfacing) and a traffic design year of 2048.

(ii) The information and the associated assumptions and parameters in (i) above are available on request from Auckland Transport and on the project website for the Jesmond to Waihoehoe West Frequent Transit Network Upgrade, Waihoehoe Road East Upgrade and Opaheke North-South FTN Arterial.

IX.6.9 Safe operation of the NIMT

Purpose: To ensure the safe operation of the North Island Main Trunk Line by providing for buildings on adjoining sites to be maintained within their site boundaries.

(1) Buildings must be setback at least ~~2.5~~5 metres from any boundary which adjoins the North Island Main Trunk Line.

IX.7 Assessment – controlled activities

There are no controlled activities in this precinct.

IX.8 Assessment – restricted discretionary activities

IX.8.1 Matters of discretion

The Council will reserve its discretion to all of the following matters when assessing a restricted discretionary activity resource consent application, in addition to the matters specified for the relevant restricted discretionary activities in the overlays, Auckland-wide or zones provisions:

(1) Subdivision, or new buildings prior to subdivision, including private roads:

(a) Location and design of the arterial roads, collector ~~streets~~ roads, local ~~streets~~ roads and connections with neighbouring sites to achieve an integrated street network, and appropriately provide for all modes;

(b) Provision of cycling and pedestrian networks;

(c) Location, design and sequencing of connections to the Drury Central train station;

(d) Open space and floodplain / drainage network;

(e) Design and sequencing of upgrades to the existing road network;

(f) Servicing;

(g) Stormwater and flooding effects; ~~and~~

(h) Matters of discretion IX.8.1(1) (a)- (g) apply in addition to the matters of discretion in E38.12.1~~.~~; and

(i) The imposition of consent conditions of the kind referred to in rule IX.6.1(1) and (2).

~~(2) Development or subdivision that does not comply with Standard IX.6.1 Staging of Development with Transport Upgrades:~~

~~(a) Effects of traffic generation on the safety and efficiency of the surrounding road network consistent with Policies IX.3 (2), IX.3 (3), IX.3 (5), 1X.3 (6), 1X.3 (7), 1X.3 (8) and IX.3 (10);~~

~~(b) An Integrated Transport Assessment;~~

~~(c) The rate of public transport uptake and travel management measures;~~

~~(d) The coordination of retail, commercial and residential development in Drury East; and~~

~~(e) The outcome of engagement with the road controlling authority.~~

~~**Note –** See IX.9 Special information requirements below.~~

(3) Infringement of standard IX.6.2 Minimum cycle parking:

(a) Matters of discretion E27.8.2(7) apply.

(4) Infringement to standard IX6.3 Riparian Margins:

(a) Effects on water quality, biodiversity and stream erosion.

(5) Development that does not comply with Standard IX.6.4 Maximum Impervious Area within Sub-precinct B:

(a) Matters of discretion in H6.8.1(4) apply.

(6) Infringements to standard IX6.5 Stormwater Quality

(a) Matters of discretion E9.8.1(1) apply.

(7) Infringement of standard IX.6.6 Fences adjoining publicly accessible open space

(a) Effects on the amenity and safety of the open space.

(8) Infringement of standard IX.6.7 – Development within 60m of the rail corridor

(a) Effects on human health and residential amenity while people are indoors and effects on the operation of the railway corridor.

(9) Infringement of standard IX.6.8 – Development within ~~40~~75m of an existing or future arterial road~~.~~

(a) Effects on human health and residential amenity while people are indoors.

(b) The location of buildings.

(c) Topographical, building design features or other alternative mitigation that will mitigate potential adverse health and amenity effects relevant to noise.

(10) Infringement of standard IX.6.9 Safe operation of the NIMT

(a) Effects on the safe operation of the North Island Main Trunk Line, by providing for buildings on adjoining sites to be maintained within their site boundaries.

(11) Infringement to standard IX.6.2A Road Design

(a) The design of the road~~,~~ and associated road reserve and whether it achieves policies IX.3(3), (5), (6) and (7).

(b) Design constraints.

(c) Interface design treatment at property boundaries, particularly for pedestrians and cyclists.

IX.8.2 Assessment criteria

The Council will consider the relevant assessment criteria below for restricted discretionary activities, in addition to the assessment criteria specified for the relevant restricted discretionary activities in the overlays, Auckland-wide or zones provisions:

(1) Subdivision, and new building prior to subdivision, including private roads:

Location of roads

(a) Whether the arterial and collector roads are provided generally in the locations shown on IX.10.1 Waihoehoe: Precinct Plan 1 to achieve a highly connected street layout that integrates with the surrounding transport network. An alternative alignment that provides an equal or better degree of connectivity and amenity within and beyond the precinct may be appropriate, having regard to the following functional matters:

(i) Landowner patterns and the presence of natural features, natural hazards or contours or other constraints and how theseis impacts on the placement of roads;

(ii) The need to achieve an efficient block structure and layout within the precinct suitable to the proposed activities; and

(iii) The constructability of roads and the ability for them it to be connected beyond any property boundary. delivered by a single landowner.

(b) Whether a high quality and integrated network of local roads is provided within the precinct that provides a good degree of accessibility and supports a walkable street network.

(c) Whether roads and pedestrian and cycle paths are aligned to provide visual and physical connections to open spaces, including along the stream network, where the site conditions allow.

(d) Whether subdivision and development provide for arterial roads, collector roads and local roads to the site boundaries to coordinate with neighbouring sites and support the integrated completion of the network within the precinct over time;

Design of Roads

(e) Whether the design of new arterial, collector and local roads accords with the road design details in IX.10.1 Waihoehoe: IX.11 Appendix 1.

(f) Whether the layout of the street network provides a good degree of accessibility and supports a walkable street network. As a general principle, the length of a block should be no greater than 280m, and the perimeter of the block should be no greater than 600m;

(g) Whether safe and legible pedestrian and cycle connections to the Drury Central train station are provided, via facilities on Waihoehoe Road and Flanagan Road/Drury Boulevard, from the Fitzgerald Rd extension to the Drury Rail Station. Or an alternative is provided that achieves an equal or better degree of connectivity. Where development precedes the upgrade of Waihoehoe Road and connecting roads, interim pedestrian and cycle facilities may be provided.

(h) Whether a further upgrade to the intersection of State Highway 22 / Great South intersection beyond what is required by the Drury South Precinct (I410.8.2(1)(f)) is necessary, to ensure it can operate safely and efficiently. This will be assessed for development exceeding the level set out in IX.6.2.1(a), but prior to the full upgrade of Waihoehoe Road required by IX.6.2.1(d). If required, the further upgrade will provide an additional right turn lane from Great South Road.

(i) Whether Waihoehoe Road (East) to the Waihoehoe Precinct boundary and Kath Henry Lane is of a suitable condition to maintain safe traffic movement prior to its upgrade to the required urban standard or whether any shoulder widening, localised widening or safety works and/or interim intersection upgrades or interim active mode connections within the existing road reserve are required having regard to the additional traffic on that road generated by the Waihoehoe Precinct.

Open space and floodplain / drainage reserve network

(j) Whether open spaces and floodplain / drainage reserves are provided in the locations generally consistent with the indicative locations shown on IX.10.1~~X~~ Waihoehoe Precinct Plan 1.

(k) Neighbourhood and suburb parks should have adequate street frontage to ensure they are visually prominent and safe.

Servicing

(l) Whether there is sufficient capacity in the existing or proposed utilities network, and public reticulated water supply, wastewater and stormwater network to service the proposed development.

(m) Where adequate network capacity is not available, whether adequate mitigation or staging is proposed.

(n) Whether development has considered the presence of the 110kv Counties Power electricity lines and the need to achieve safe distances under existing Codes of Practice, or whether the existing lines can be relocated.

Stormwater and flooding

(o) Whether development is in accordance with the approved Stormwater Management Plan and policies E1.3(1) – (14);

(p) Whether the design and efficacy of infrastructure and devices is appropriate with consideration given to the likely effectiveness, ease of access, operation and integration with the surrounding environment.

(q) Whether the proposal ensures that development manages flooding effects upstream and downstream of the site and the Waihoehoe precinct so that the risks to people and property (including infrastructure) are not increased for all flood events, up to a 1% AEP ~~100-year ARI~~ flood event.

(r) Whether the location, size, design and management of any flood attenuation devices is appropriate to ensure that development does not increase flooding risks.

Te Aranga Design Principles

(s) Whether the design of streets and publicly accessible open spaces incorporate Te

Aranga design principles.

~~(2) Development and/or subdivision that does not comply with IX.6.1 Staging of Development with Transport Upgrades:~~

~~A proposal that does not comply with IX.6.1 Staging of Development with Transport Upgrades will be assessed in terms of the matters below, as informed by an Integrated Transport Assessment.~~

~~(a) Whether the proposal is in accordance with Policies IX.3 (2), IX.3 (3), IX.3 (5), IX.3 (6), IX.3 (7), IX.3 (8) and IX.3 (10) in addition to any relevant AUP policy that is within the scope of the matters of discretion in IX.8.1(2).~~

~~(b) Whether public transport routes that connect to the Drury Central train station and the Drury Centre can operate effectively and efficiently at all times;~~

~~(c) Whether the Waihoehoe/Great South Road intersection can operate safely and with reasonable efficiency during the inter-peak period, being generally no worse than a Level of Service D for the overall intersection;~~

~~(d) Whether increased use of public transport within the Waihoehoe precinct or the wider area, has provided additional capacity within the transport network including by implementing travel demand management measures;~~

~~(e) Whether the proposal would have a similar or lesser trip generation and similar effects on the surrounding road network to the development mix provided for in the Table IX.6.2.1 Threshold for Development.~~

~~(f) Whether residential development is coordinated with retail and commercial development within the wider Drury East area identified on Precinct Plan 2 to minimise trips outside of the precinct providing additional capacity within the transport network.~~

~~(g) Whether the actual rate of development in the wider area is slower than anticipated and provides additional capacity in the transport network;~~

~~(h) The effect of the timing and development of any other transport upgrades or transport innovations not anticipated by the Waihoehoe precinct.~~

~~(i) Whether the integrated transport assessment supporting the application documents the outcome of engagement with the road controlling authority.~~

~~(j) Whether the proposal demonstrates methods that promote the increased use of public transport, including details of how those methods would be implemented, monitored and reviewed so as to contribute to a reduction in vehicle trips.~~

~~(k) Whether the intersection of Great South Road / Quarry Road and the Drury South Precinct roads can operate safely and efficiently prior to the full upgrade of Waihoehoe Road between Fitzgerald Road and Great South Road.~~

(3) Infringement of standard IX.6.2 Minimum cycle parking

(a) Assessment criteria in E27.8.2(6) apply.

(4) Infringement to standard IX.6.3 Riparian Planting

(a) Whether the infringement is consistent with Policy IX.3(8).

(5) Development that does not comply with Standard IX.6.4 Maximum Impervious Area within Sub-precinct B:

(a) The assessment criteria within H6.8.2(10) apply.

(6) Infringement to standard IX.6.5 Stormwater Quality

(a) Assessment criteria E9.8.2(1) apply.

(b) Whether the proposal is in accordance with the approved Stormwater Management Plan and Policies E1.3(1) – (14)~~(10) and (12) – (14)~~.

(c) Whether a treatment train approach is implemented to treat runoff so that all contaminant generating surfaces are treated, including cumulative effects of lower contaminant generating surfaces.

(7) Infringement of standard IX.6.6 Fences adjoining publicly accessible open space

(a) Whether the proposal positively contributes to the visual quality and interest of the adjoining open space, while providing an adequate degree of privacy and security for the development.

(8) Infringement of standard IX.6.7 – ~~Development~~ Activities sensitive to noise within 60m of the rail corridor

(a) Whether ~~Noise sensitive~~ activities sensitive to noise adjacent to the railway corridor are designed to protect people's health and amenity while they are indoors, and whether such activities unduly constrain the operation of the railway corridor. This includes:

(i) the extent to which building(s) containing activities sensitive to noise have been located and designed with particular regard to proximity to the rail corridor;

(ii) the extent of non-compliance with the noise standard and the effects of any non-compliance;

(iii) the extent to which topographical features or location of other buildings or structures will mitigate noise effects; and

(iv) any noise management implications arising from technical advice from an acoustic rail noise expert and KiwiRail.

(9) Infringement of standard IX.6.8 – Development within ~~40~~75m of Waihoehoe Road and/or Opaheke North-South FTN ~~an~~ arterial roads

(a) Whether ~~the building accommodating a~~Activities sensitive to noise adjacent to Waihoehoe Road and/or Opaheke North-South FTN ~~an~~ arterial roads are ~~is~~ designed to protect people~~'s~~ from adverse health and amenity effects while they are indoors.

(b) Whether any identified topographical or building design features, or the location of the building or any other existing buildings, will mitigate any potential health and amenity effects.

(c) The extent to which the alternative mitigation measures avoid, remedy or mitigate the effects of non-compliance with the noise standards on the health and amenity of potential building occupants.

(10) Infringement of standard IX.6.9 Safe operation of the NIMT

(a) Whether the proposal ensures that buildings can be maintained within their site boundaries while providing for the safe operation of the North Island Main Trunk Line, including:

(i) the size, nature and location of the buildings on the site;

(ii) the extent to which the safety and efficiency of railway operations will be adversely affected;

(iv) any characteristics of the proposal that avoid or mitigate any effects on the safe operation of the North Island Main Trunk Line; and

(v) any implications arising from advice from KiwiRail.

(11) Infringement to standard IX.6.2A Road Design

(a) Whether there are constraints or other factors present which make it impractical to comply with the required standards.

(b) Whether the design of the road and associated road reserve achieves policies IX.3(3), (5), (6) and (7).

(c) Whether the proposed design and road reserve:

(i) incorporates measures to achieve the required design speeds;

(ii) can safely accommodate required vehicle movements;

(iii) can appropriately accommodate all proposed infrastructure and roading elements including utilities and/or any stormwater treatment;

(iv) assesses the feasibility of upgrading any interim design or road reserve to the ultimate required standard.

(d) Whether there is an appropriate interface design treatment at property boundaries, particularly for pedestrians and cyclists.

IX.9 Special information requirements

(1) Riparian Planting

An application for land modification, development and subdivision which adjoins a permanent or intermittent stream must be accompanied by a riparian planting plan identifying the location, species, planter bag size and density of the plants. Plant species should be native. The riparian planting plan must be prepared in accordance with Appendix 16 - Guideline for native revegetation plantings.

(2) Permanent and intermittent streams and wetlands

All applications for land modification, development and subdivision must include a plan identifying all permanent and intermittent streams and wetlands on the application site.

(3) Archaeological assessment

An application for land modification within the area shown on IX.10.3~~X~~ Precinct Plan 3, must be accompanied by an archaeological assessment, including a survey. This also applies to any development providing riparian planting in accordance with IX.6.3. The purpose of this assessment is to evaluate the effects on archaeological values prior to any land disturbance, planting or demolition of a pre-1900 building, and to confirm whether the development will require an Authority to Modify under the Heritage New Zealand Pouhere Taonga Act 2014.

(4) Integrated transport assessment

An application to infringe standard IX.6.1 Staging of Subdivision and Development with Transport Upgrades must be accompanied by an integrated transport assessment prepared by suitably qualified transport planner or traffic engineer prepared in accordance with the Auckland Transport Integrated Transport Assessment Guidelines in force at the time of the application.

The integrated transport assessment must include a register of development and subdivision that has been previously approved under standard IX.6.1 Staging of Subdivision and Development with Transport Upgrades.

Without limiting the scope of the integrated transport assessment, the integrated transport assessment must assess and provide details of the following:

(a) Whether the proposal is in accordance with Policies IX.3 (2), IX.3 (3), IX.3 (5), IX.3 (6), IX.3 (7), IX.3 (8) and IX.3 (10) in addition to any other relevant AUP policy;

(b) Whether public transport routes that connect to the Drury Central train station and the Drury Centre can operate effectively and efficiently at all times;

(c) Whether the Waihoehoe/Great South Road intersection can operate safely and with reasonable efficiency during the inter-peak period, being generally no worse than a Level of Service D for the overall intersection;

(d) Whether increased use of public transport within the Waihoehoe precinct or the wider area, has provided additional capacity within the transport network including by implementing travel demand management measures;

(e) Whether the proposal would have a similar or lesser trip generation and similar effects on the surrounding road network to the Subdivision and development mix provided for in the Table IX.6.1.1 Threshold for Development;

(f) Whether residential development is coordinated with retail and commercial development within the wider Drury East area identified on Precinct Plan 2 to minimise trips outside of the precinct providing additional capacity within the transport network;

(g) Whether the actual rate of development in the wider area is slower than anticipated and provides additional capacity in the transport network;

(h) The effect of the timing and development of any other transport upgrades or transport innovations not anticipated by the Waihoehoe precinct;

(i) Whether the integrated transport assessment supporting the application documents the outcome of engagement with the road controlling authority;

(j) Whether the proposal demonstrates methods that promote the increased use of public transport, including details of how those methods would be implemented, monitored and reviewed so as to contribute to a reduction in vehicle trips;

(k) Whether the intersection of Great South Road / Quarry Road and the Drury South Precinct roads can operate safely and efficiently prior to the full upgrade of Waihoehoe Road between Fitzgerald Road and Great South Road;

(l) Whether the surrounding transport network can operate safely and efficiently when considering traffic generated by construction activities within the Precinct Plan 2 area.

(5) Monitoring of Rule IX.6.1 Staging of Subdivision and Development with Transport Upgrades

Any proposal for dwellings, retail, commercial or community activities must demonstrate compliance with rule IX.6.1 Staging of Subdivision and Development with Transport Upgrades. Any application must contain details of the maximum number of dwellings or amount of retail, commercial or community GFA proposed to be enabled (as well as anticipated dwellings/GFA for any subdivision proposal involving superlots).

(6) Transport Design Report

Any proposed new road intersection or upgrading of existing road intersections shall be supported by a Transport Design Report and Concept Plans (including forecast transport modelling and land use assumptions), prepared by a suitably qualified transport engineer confirming the location and design of any road and its intersection(s) supports the safe and efficient function of the existing and future (ultimate) transport network and can be accommodated within the proposed or available road reserves. This may be included within a transport assessment supporting land use consent.

In addition, where an interim upgrade is proposed, information must be provided, detailing how the design allows for the ultimate upgrade to be efficiently delivered.

(7) Flood and Stormwater Assessment Report

A flood and stormwater assessment report must accompany a resource consent application for any subdivision or development proposal in the Waihoehoe precinct. The purpose of the assessment is to determine if the development proposal creates or worsens flood extent, frequency or hazard on land or generate adverse effects on infrastructure and land outside the development proposal area.

The assessment must:

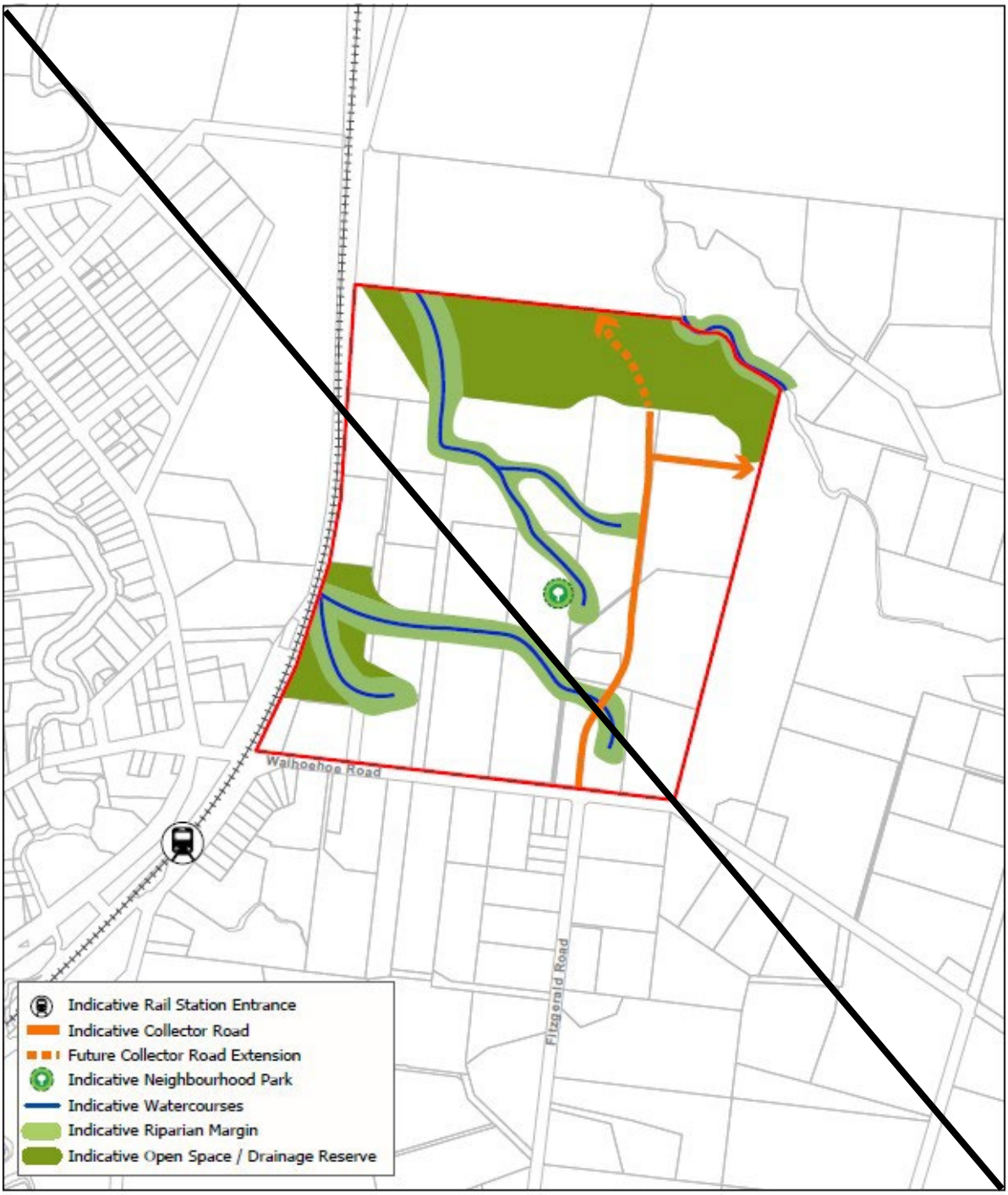
a) Include a detailed hydraulic model to assess:
    i. Frequency of flood event using the 5, 10, 50 and 100 ARI Events
    ii. Duration of flood event
    iii. Extent of flooding and any inundation
    iv. Whether any flooding effects will be temporary or permanent
    v. If there is any exacerbation of existing natural hazard risks or creation of new hazards, including the impact on floodplain storage in the Slippery Creek catchment
    vi. The interaction of the proposed development with nearby infrastructure.
b) Specify mitigation of any flood effects that the development proposal creates including:
    i. Hydraulic sizing of any mitigation devices (including attenuation)
    ii. Indicative location of any mitigation devices (including attenuation)
    iii. The design of any structure or devices or floodplain storage areas
    iv. the nature and extent of any off-site stormwater management devices and how these devices are to be delivered if they are on land outside the development site
    v. if stormwater management devices are to be located within the modified 1% AEP floodplain, describe how these devices are to be designed to be resilient to flood-related damage while not exacerbating flood risks for upstream or downstream activities.

(8) Activities sensitive to noise proposed within 60m of the rail corridor which infringe Standard IX.6.7 and/or buildings proposed within 5m from any boundary which adjoins the North Island Main Trunk Line which infringe Standard IX.6.9:

a) Evidence of consultation with KiwiRail and its responses to that consultation.

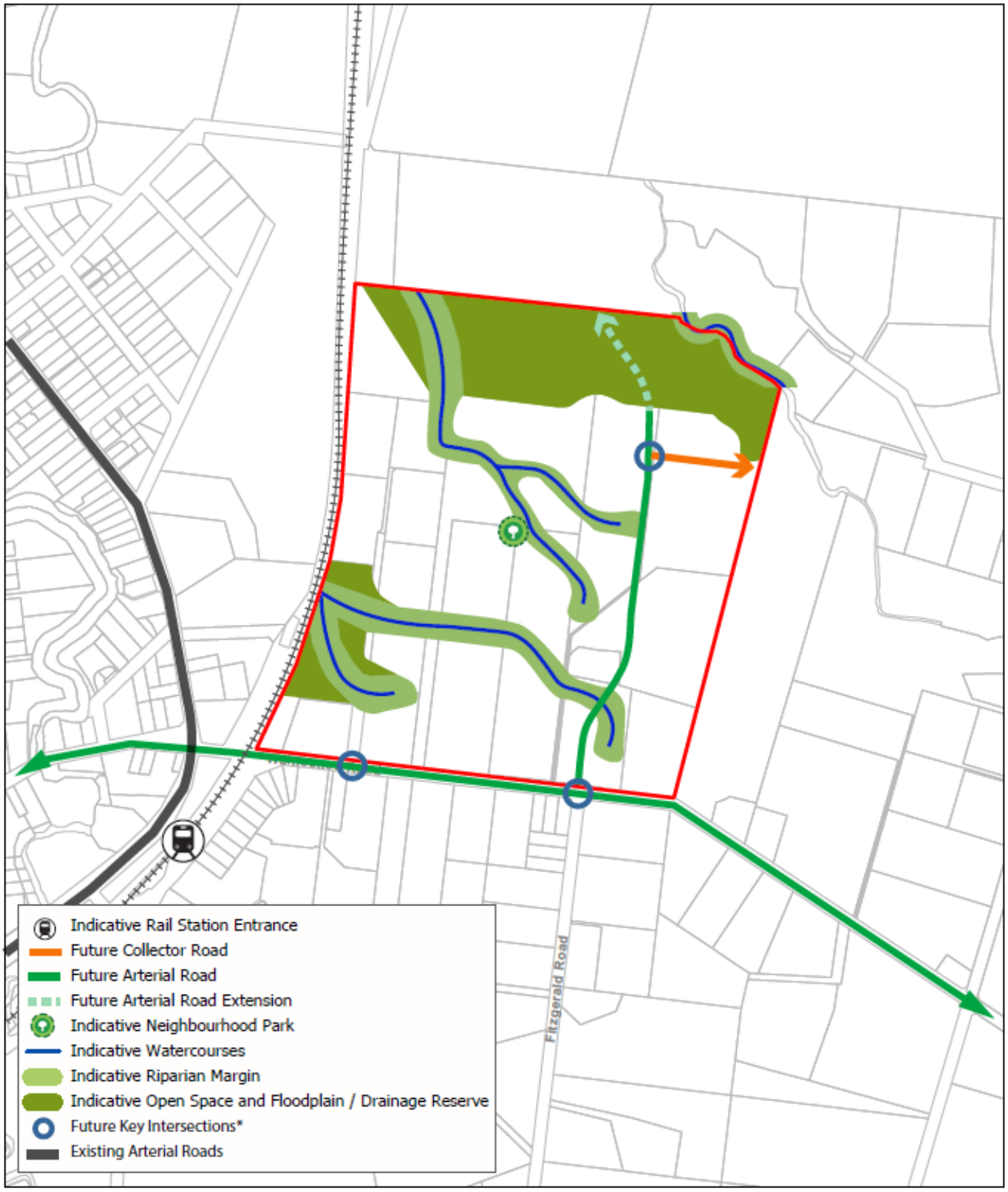
IX.10 Precinct plans

IX.10.1 : Waihoehoe: Precinct plan 1 – Indicative Road and Open Space Network



Note: All elements shown are indicative only and subject to detailed design and investigation as part of the resource consent process.

Precinct Plan 1 - Structuring Elements

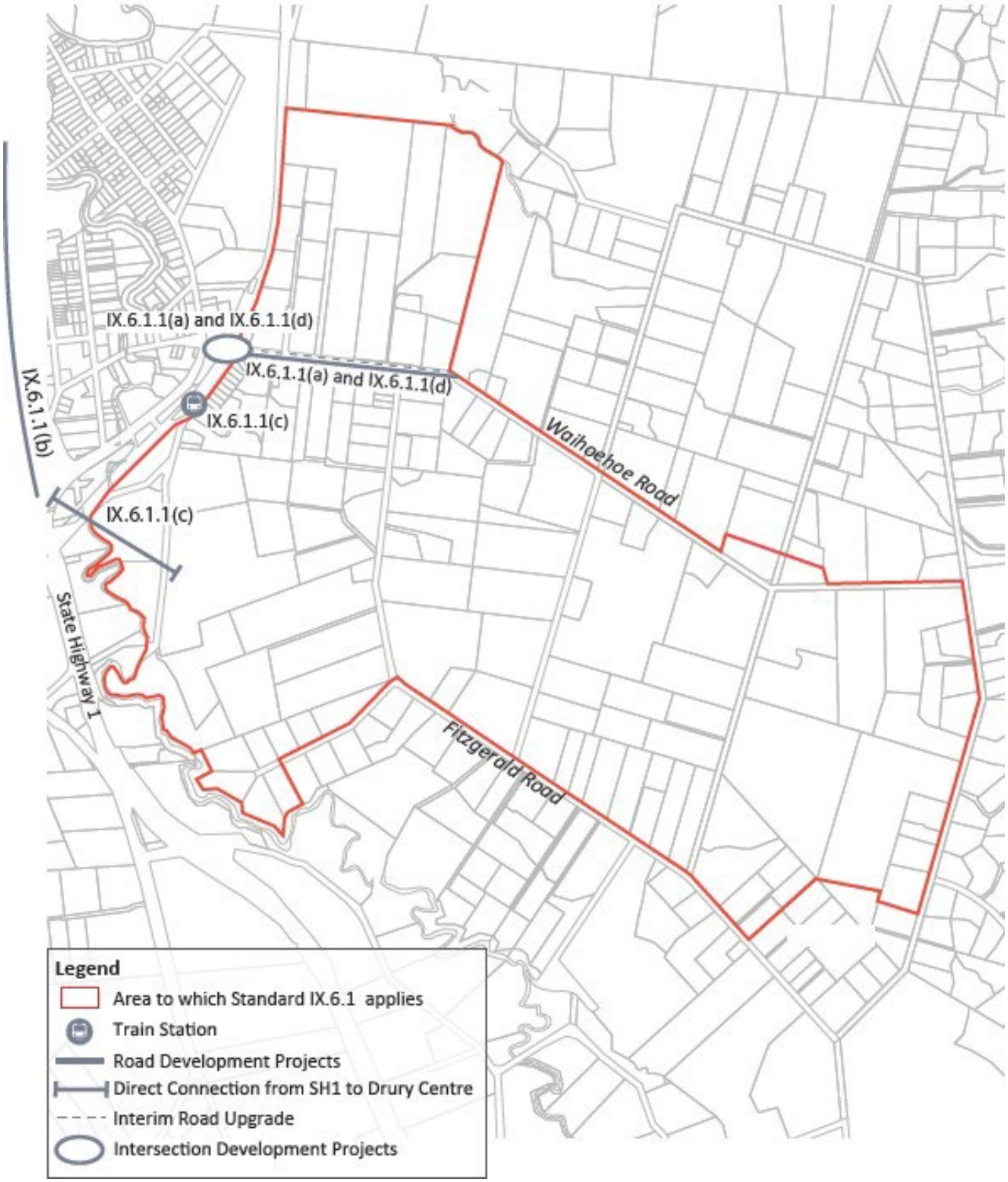


Note: All elements shown are indicative only and subject to detailed design and investigation as part of the resource consent process.
Note: Opaheke North-South Arterial Road designed as interim collector, future arterial road in long-term.
*All future key intersections subject to detailed design and special information requirements.

Precinct Plan 1 - Structuring Elements

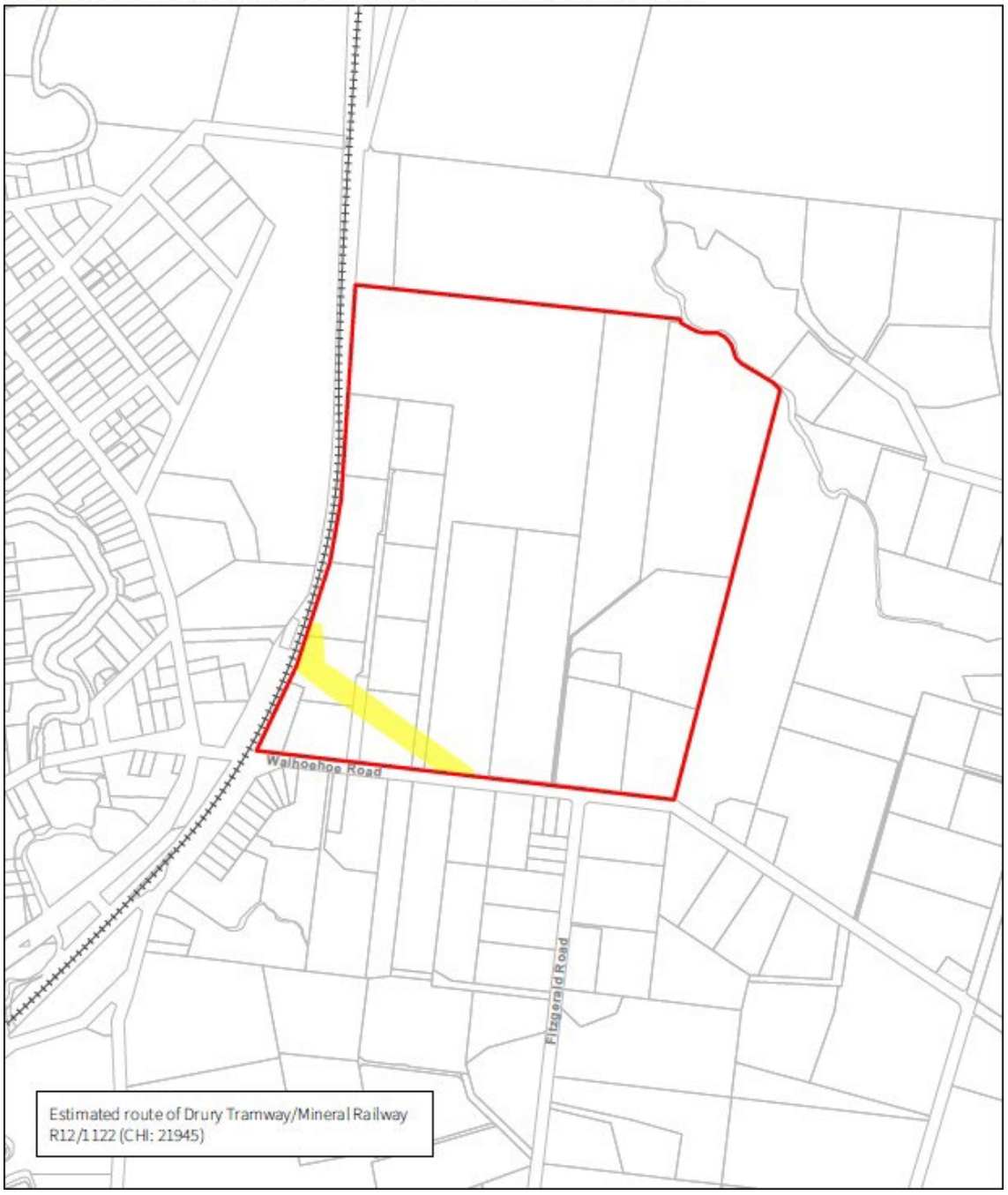
IX.10.2 Waihoehoe: Precinct plan 2 – Transport Staging Boundary

Waihoehoe Precinct Plan 2 - Transport Staging Boundary

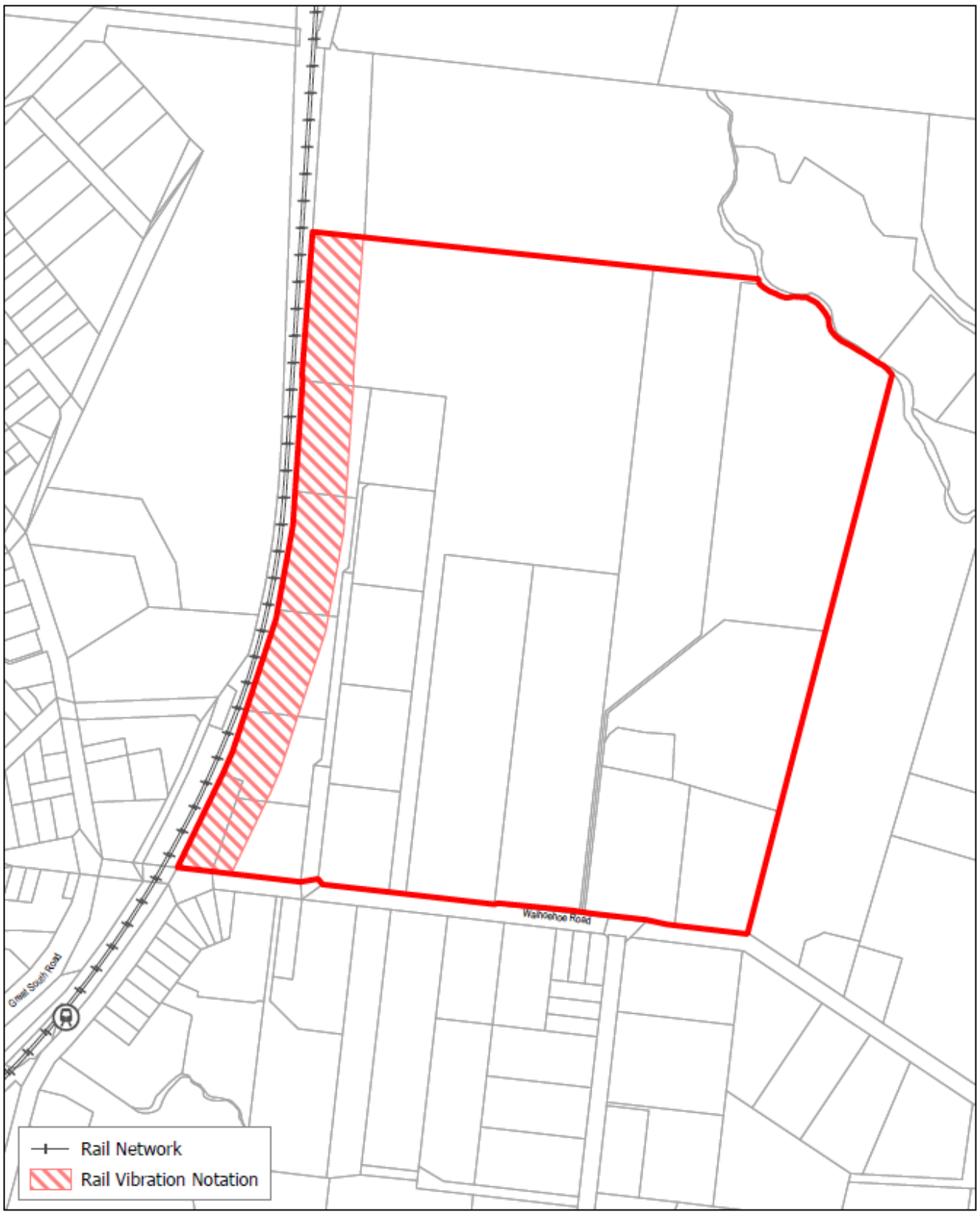


IX.10.3 Waihoehoe: Precinct plan 3 – Drury Tramway/Mineral Railway Archaeological Assessment

Waihoehoe Precinct Plan 3 - Drury Tramway/Mineral Railway Archeological Assessment



IX.10.4 Waihoehoe: Precinct Plan 4 - Rail Vibration Plan



The "Rail Vibration Notation" identifies an area that may experience vibration levels higher than would normally be expected, because of proximity to the rail corridor.

Appendices

IX.11 Appendix 1: Design ~~Road Cross Section~~ Details

~~Role and function of road~~	~~Minimum road reserve~~	~~Total number of lanes~~	~~Design speed~~	~~Median~~	~~Cycle provision~~	~~Pedestrian provision~~	~~Street trees/rain garden/ parking~~	~~Vehicle access restriction~~
~~Collector Road~~	~~23m~~	~~2~~	~~40 km/h~~	~~No~~	~~Yes~~ ~~Separated both sides~~	~~Both sides~~	~~Trees /rain garden each side~~ ~~On-street parking (interspersed between trees)~~	~~No~~
~~Local Road~~	~~16m~~	~~2~~	~~30 km/h~~	~~No~~	~~No~~	~~Yes~~	~~Trees /rain garden each side~~ ~~On-street parking (interspersed between trees)~~	~~No~~
~~Local Road – Park Edge~~	~~13.5m~~	~~2~~	~~30 km/h~~	~~No~~	~~Yes~~ ~~(3m shared path park side)~~	~~Yes (Lot side)~~	~~Trees /rain garden each side~~ ~~On-street parking (interspersed between trees)~~	~~No~~

Road Function and Required Design Elements Table										
Road Function and Required Design Elements Road Name (refer to Precinct Plan 1)	**Proposed Role and Function of Road in Precinct Area**	**Min. Road Reserve (subject to note 1)**	**Total number of lanes (subject to note 3)**	**Speed Limit (Design)**	**Access Restrictions**	**Median**	**Bus Provision (subject to note 2)**	**On Street Parking**	**Cycle Provision**	**Pedestrian Provision**
Waihoehoe Road West Ultimate Upgrade (Great South Road to Fitzgerald Road) with separated active transport provisions	Arterial	30m	4	50	Yes	Yes	Yes	No	Yes separated on both sides	Yes both sides
Waihoehoe Road West Interim Upgrade (Great South Road to Fitzgerald Road)	Arterial	20m	2[1]	50	Yes	No	Yes	No	Yes Shared path on one side with safe crossing points.	Yes Shared path on one side with safe crossing points.
North-South Opaheke Road (Ultimate)	Arterial	27m	4	40	Yes	No	Yes	Optional	Yes separated on both sides	Yes both sides

[1] *Note: an additional bus lane will be provided between the Waihoehoe bridge and the turning lanes at Fitzgerald Road intersection, as shown at Appendix 2~~1a~~.

Road Function and Required Design Elements Table										
Road Function and Required Design Elements Road Name (refer to Precinct Plan 1)	**Proposed Role and Function of Road in Precinct Area**	**Min. Road Reserve (subject to note 1)**	**Total number of lanes (subject to note 3)**	**Speed Limit (Design)**	**Access Restrictions**	**Median**	**Bus Provision (subject to note 2)**	**On Street Parking**	**Cycle Provision**	**Pedestrian Provision**
North-South Opahake Road (Interim)	Collector	27m	2	40	Yes	No	Yes	Optional	Yes separated on both sides	Yes both sides
Collector Roads with separated active transport provisions	Collector	23m	2	40	No	No	Yes	Optional	Yes separated on both sides	Yes both sides
Local Roads (Residential)	Local	16m	2	30	No	No	No	Optional	No	Yes both sides
Local Roads (Residential Park Edge)	Local	13.5m	2	30	No	No	No	Optional	No	One side NB: provided that a shared path is provided within park outside the road reserve

Note 1: Typical minimum width which may need to be varied in specific locations where required to accommodate network utilities, batters, structures, stormwater treatment, intersection design, significant constraints or other localised design requirements.

Note 2: Carriageway and intersection geometry capable of accommodating buses.

Note 3: Any interim, hybrid, constrained or ultimate upgrades must be designed and constructed to include a new road pavement and be sealed to the# appropriate standard in accordance with the Proposed Role and Function of the Road.

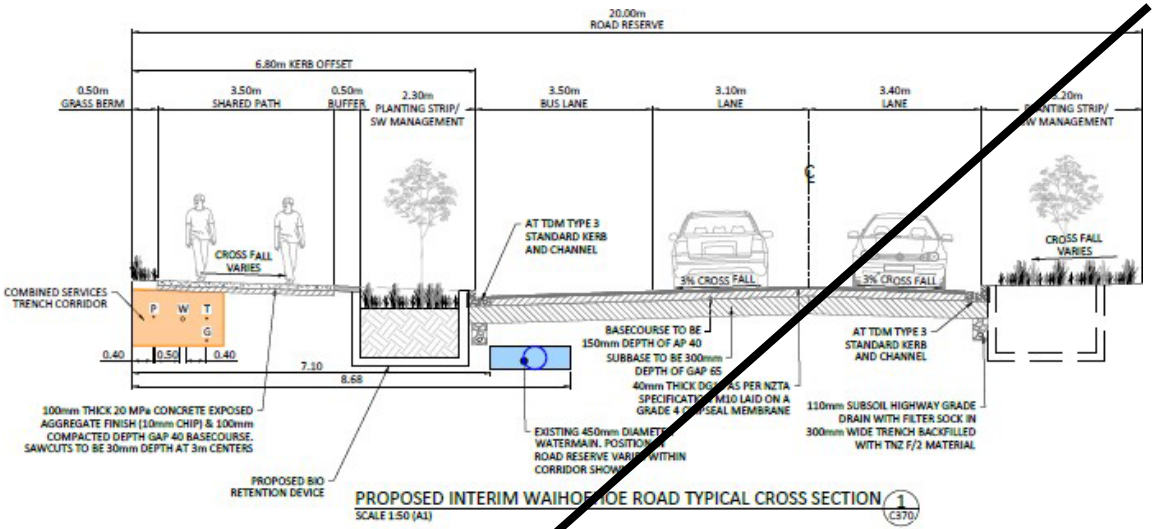
~~*Note 4: Any interim hybrid or constrained upgrades shall only apply where the applicant does not have access to the land on one or both sides of the*~~

~~*existing road reserve.-Where an application is only undertaken on one side of the road, a wider footpath and back berm shall be provided on that side, to integrate with the final design width of the road once fully upgraded.*~~

IX.11 Appendix 2: Interim upgrade to Waihoehoe Road

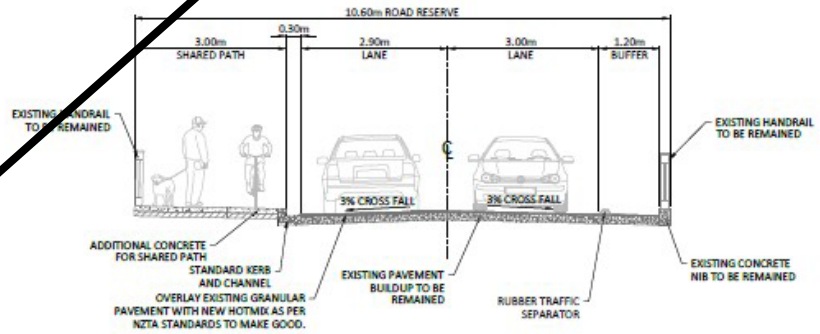
Note: all drawings in this appendix are indicative designs to be refined through the EPA process.
*any upgrade works will need to be integrated with the design of the Ultimate Waihoehoe bridge and station access works.





PROPOSED INTERIM WAIHOEHOE ROAD TYPICAL CROSS SECTION 1 C370

SCALE 1:50 (A1)



WAIHOEHOE ROAD BRIDGE CROSSING TYPICAL CROSS SECTION 2 C370

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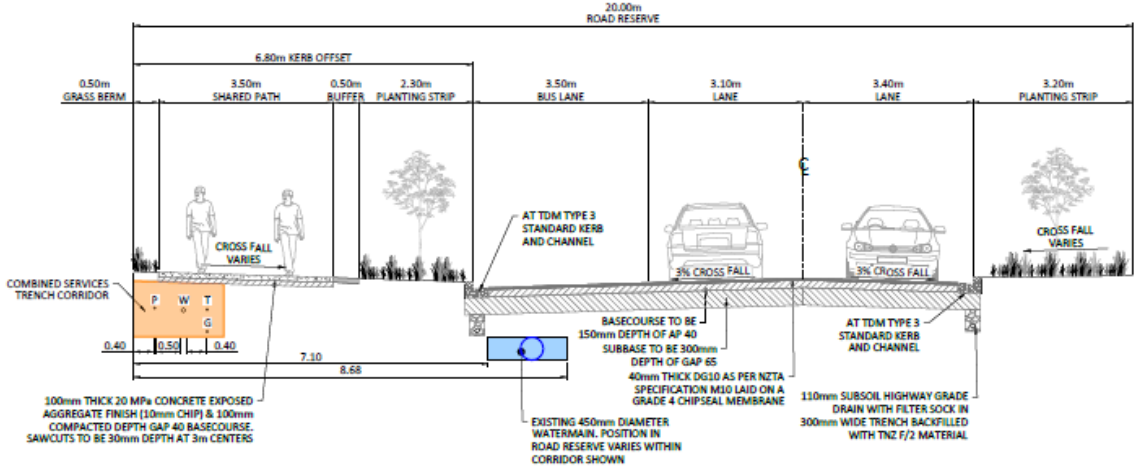
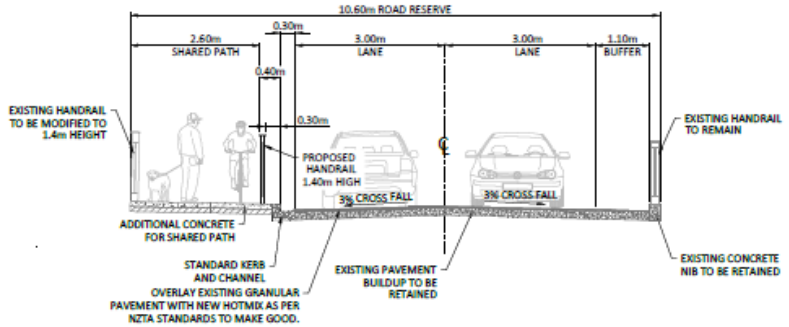


PROPOSED INTERIM WAIHOEHOE ROAD TYPICAL CROSS SECTION 1 C370
SCALE 1:50 (A1)



WAIHOEHOE ROAD BRIDGE CROSSING TYPICAL CROSS SECTION 2 C370
SCALE 1:50 (A1)

*any upgrade works will need to be integrated with the design of the Ultimate Waihoehoe bridge and station access works
**The Waihoehoe Road (West) Bridge Crossing design is indicative and will be refined through EPA process

IN THE MATTER
of the Resource Management Act 1991

AND

IN THE MATTER
of Hearing of Submissions and Further Submissions
on the Wellington City Proposed District Plan –
Hearing Stream 5

JOINT STATEMENT OF ACOUSTIC INSULATION EXPERTS (JWS 2)

Date of conferencing: 6 September 2023

INTRODUCTION

1. This joint witness statement relates to expert conferencing on the topic of standards for acoustic insulation, as requested by the Panel in Minute 33.

2. Acoustic experts in attendance as participants in the conferencing were:

    - Jon Styles engaged by Kāinga Ora – Homes and Communities
    - Stephen Chiles engaged by Waka Kotahi and KiwiRail
    - Darran Humpheson engaged by Wellington International Airport Limited
    - Malcolm Hunt engaged by Wellington City Council
    - Sean Syman engaged by Wellington City Council
    - Matthew Borich engaged by Wellington City Council

3. Planning experts in attendance as observers to this conferencing were:

    - Catherine Heppelthwaite engaged by Waka Kotahi and KiwiRail
    - Kirsty O'Sullivan engaged by Wellington International Airport Limited
    - Matthew Lindenberg engaged by Kāinga Ora – Homes and Communities

4. As observers, the planning experts are not signatories of this JWS.
5. The conferencing was in person at Wellington City Council's Boulcott Office and on-line (Microsoft Teams), facilitated by Mark Ashby as observer.
6. We confirm that we have read the Environment Court's Code of Conduct set out in the Environment Court's Practice Note 2023. We have complied with the Code of Conduct in

preparing this joint statement. Except where we state that we are relying on the evidence of another person, this evidence is within our area of expertise. We have not omitted to consider material facts known to us that might alter or detract from the opinions expressed in this evidence.

7. The primary data on which the opinions are based is:
    - The Wellington City Proposed District Plan (PDP)[1]
    - Section 42A report for Hearing Stream 5 relating to Noise. [2]
    - The statement of evidence of Jon Styles for Kāinga Ora – Homes and Communities (2023)[3]
    - The statement of evidence of Malcolm Hunt for Wellington City Council (2023)[4]
    - The statement of evidence of Sean Syman for Wellington City Council (2023)[5]
    - The statement of evidence of Stephen Chiles for KiwiRail and Waka Kotahi (2023)[6]
    - The statement of evidence of Darran Humpheson for Wellington International Airport Limited (2023)[7]

MATTERS COVERED BY THIS STATEMENT

8. At the conferencing session held on 06/09/2023, the following matters were assessed by the experts against both the Internal Sound Level (ISL) and Standardised Level Difference (SLD) methods:
    - Construction cost.
    - Assessment cost.
    - Council compliance processing.
    - All costs.
    - Physical testing using sound level measurement equipment.
    - Effects on occupants.
    - Assumptions required for assessment.
    - Low frequency noise.
    - Building design outcomes.
9. Some of these matters were directed by the panel in minute 33, whilst others were considered useful by the experts in attendance to address, within the scope of the directions in minute 33. Where necessary, Airport, Road and Rail noise were assessed separately.

[1] Wellington City Council Proposed District Plan
[2] Section 42A Report - Noise
[3] Statement of evidence of Jon Styles for Kāinga Ora
[4] Statement of evidence of Mr Malcolm Hunt on behalf of Wellington City Council
[5] Statement of evidence of Mr Sean Syman on behalf of Wellington City Council
[6] Statement of evidence of Mr Stephen Chiles for KiwiRail and Waka Kotahi
[7] Statement of evidence of Mr Darran Humpheson for Wellington International Airport (2023)

10. During the session, the matters were debated, and the text was recorded in a table. Notes were taken recording any matters that required further actions or direction and following the session the table was reviewed in sequence by the experts and have come to consensus on the matters and wording of the analysis.
11. The finalised table, attached in Appendix 1 - Joint Witness Statement analysis table, sets out the agreed facts, assumptions, and positions on the matters. Definitive answers to the matters above are noted in bold in the table.
12. As requested by the panel, the acoustic experts have also provided their individual preferred method in the table below:

Stephen Chiles (KiwiRail and Waka Kotahi)	Position unchanged from written and oral evidence. Prefers ISL for road and rail noise provisions.
Darran Humpheson (WIAL)	Position unchanged from written and oral evidence. Prefers ISL for aircraft noise provisions.
Sean Syman (WCC)	Position unchanged from written and oral evidence. Prefers SLD generally. Considers that ISL may be applied in cases where external noise levels are published in detailed (1 dB increment) contours and noise source spectra are provided in the plan.
Malcolm Hunt (WCC)	Position unchanged from written and oral evidence. Prefers SLD for highway noise, rail noise and aircraft noise provisions.
Matthew Borich (WCC)	Sees advantages and disadvantages in both options. Prefers ISL for Airport as they have published aircraft noise contours and sound spectra available, and there is potential construction cost savings and design benefits. Prefers SLD for road and rail as the same level of noise information is not available.
Jon Styles (Kāinga Ora)	Position remains unchanged from the hearing. Sees advantages and disadvantages in both options. SLD will often give lower indoor noise levels (than ISL) but in those cases will be more expensive than ISL, whereas ISL likely to give reasonable indoor noise levels in all cases but lower overall cost compared to SLD. Cost to be weighed by others.

PARTICIPANTS TO JOINT WITNESS STATEMENT

We confirm that we agree that the outcome(s) of the expert conferencing are as recorded in this statement and Appendix 1 – Joint Witness Statement analysis table.

15 September 2023

Jon Styles for
Kāinga Ora



Malcolm Hunt
for Wellington City Council



Matthew Borich
for Wellington City Council

M.J.Borich

Sean Syman
for Wellington City Council



Darran Humpheson
for Wellington International
Airport Limited



Stephen Chiles
for KiwiRail and Waka Kotahi



APPENDIX 1 – Joint Witness Statement analysis table

Internal noise insulation standards for the Air Noise Overlay and Major Transport Corridors

Terms used in this statement:

ISL or **Internal Sound Level** – Where a specific noise level must be achieved in the rooms subject to the rule. Referred to as the 'dBA method' in some statements of evidence.

SLD or **Standardised Level Difference** – Where the degree of acoustic treatment is specified using the Dtr,2m,nT,w+Ctr method according to ISO171-1:2020 *Acoustics — Rating of sound insulation in buildings and of building elements — Part 1: Airborne sound insulation.* This is the method in the notified version of the PDP.

HNA or **High Noise Area** – As adopted in the notified version of NOISE-S4 in the PDP and the recommended definition in the Statement of supplementary evidence of Mark Ashby – Noise.

MNA or **Moderate Noise Area** – As adopted in the notified version of NOISE-S5 in the PDP and the recommended definition in the Statement of supplementary evidence of Mark Ashby – Noise.

Issue	ISL / Internal Sound Level	SLD / Standardised Level Difference
Construction cost – the cost of constructing a building incorporating acoustic treatment, where the 'additional cost' is the difference between constructing the rooms without any specific acoustic treatment, and the cost of constructing the rooms with acoustic treatment as it would be required using the ISL or SLD options.	The ISL option allows the designer to customise the design and construction of the building envelope depending on the level of noise that each part of the building might be exposed to. The design might confirm that certain elements of the building envelope will not require any specific treatment for acoustics, and / or some elements may require less treatment than others. **This is the lowest cost option.**	Performance of external building envelope is fixed by the two design standards that apply in the HNA and MNA. This means that the additional construction costs are inflexible for a given design. Part (4) of the notified versions of S4 and S5 (renumbered as S4.5 and S5.5 in the version attached to the s42A report) allow the applicant to avoid any acoustic treatment in certain circumstances where they can demonstrate that the external noise level outside any particular habitable room is sufficiently low. These circumstances will result in no additional construction cost for the rooms that qualify for the exemption. *For example, the most exposed façade of a bedroom facing away from the road might receive noise levels lower than 57dB $L_{Aeq(24hr)}$ and therefore qualify for the exemption (where no acoustic treatment is required). The noise level on the façade of all other habitable rooms might be higher to the point where they don't qualify for the exemption. These rooms are required to be acoustically treated.*
Assessment cost – the cost of input from a suitably qualified and experienced acoustic expert	Each building requires an acoustic design report. These reports are most-often a desktop assessment. The cost of a design report can range from $1000 - $2000 +GST for a typical freestanding single dwelling unit in an MNA. The cost can be proportionally less per unit for multi-unit developments. The cost of a design report may double for assessments in HNAs. Note - the WIAL drafting of ISL insulation standard (NOISE-S16) did not require an acoustic design assessment if compliance with the minimum construction requirements of Table I is achieved within the Inner Noise Overlay.	<u>Standardised level difference without using the construction schedules in Tables I or II of the notified PDP.</u> The SLD option avoids the need to calculate the external noise level incident on the building envelope, this means marginally less cost than the ISL assessment as there are fewer calculations involved. The cost for an assessment in the HNA will typically be slightly higher than an assessment in the MNA. <u>Standardised level difference using the construction schedules in Tables I or II of the notified PDP.</u> No acoustic specialist input required. **This is the lowest cost option.** <u>If external noise levels below the thresholds stated in S4(5) or S5(5) (s42A version numbering) justify exemption from acoustic treatment requirements</u> Assessment is limited to demonstrating external noise levels are below thresholds for rooms subject to the exemption. No calculation of sound insulation required. Similar cost to ISL assessment for these rooms.

Council compliance processing	Council processes and processing costs are similar for all approaches.	
All costs	Generally, differences in construction costs between the ISL and SLD will be greater than the differences in assessment costs across both HNA and MNA (note that the WIAL submission seeks that no noise insulation is required in the MNA). The additional construction costs will generally be far greater than the acoustic assessment costs. **Overall, generally ISL is the cheaper option.** We are unable to provide a meaningful indication of how much cheaper the ISL method might be, mainly because it will vary considerably between projects.	
Physical testing using sound level measurement equipment – this is not required by the notified rule or by any of the submissions lodged by any of the parties represented in this statement. Physical testing of the acoustic performance of building envelopes happens rarely, if ever in practice.	It is not easy to test in the field. Generally, it is not practical to directly measure the specified indoor noise level as a result of noise 'break-in' from the source (road, rail or aircraft) and therefore physical/field testing is only for one component, supplemented by desk-top calculations. The component that can be readily measured by a field test is the sound level difference of the building, which is the identical measurement used under the SLD method. The indoor level is then calculated based on the predicted outdoor noise levels (from future aircraft noise contours for example).	It is not easy to test in the field. The test is the same as for the ISL but does not require any subsequent calculations as measurements undertaken directly inform the acoustic performance (Dtr,2m,nT,w+Ctr) of the structure.
Effects on occupants	All occupants will experience noise levels no greater than the specified indoor noise level standard in all habitable rooms. The ISL method requires an acoustic design for each habitable room. The design process often includes an element of over-designing to provide for construction and design uncertainties (such as differences in materials, construction methods and contractor care). This can often result in indoor noise levels that are slightly lower than the standard specified in the rule. Note - the WIAL drafting of the ISL insulation standard (NOISE-S16) did not require an acoustic design assessment if compliance with the minimum construction requirements of Table I is achieved within the Inner Noise Overlay.	<u>Standardised level difference without using the construction schedules in Tables I or II of the notified PDP</u> A desirable indoor noise level may not always be achieved for habitable rooms exposed to the highest outdoor rail noise levels using the notified Proposed District Plan Standardised Level Difference standard. A desirable indoor noise level would be achieved in habitable rooms for air and road noise, and most cases of rail noise. The indoor noise levels will generally be lower (better) than a normally desirable level in most cases. An acoustic designer can include an element of over-designing to provide for construction and design uncertainties (such as differences in materials, construction methods and contractor care). This can often result in indoor noise levels that are slightly lower than what is typically intended. **The SLD option will generally result in quieter outcomes for the occupants.**
Assumptions required for assessment.	<u>Road and rail</u> Outdoor noise level and spectra need to be estimated by the acoustic expert in each case (the KiwiRail submission proposes fixed basic assumptions for rail noise levels, but does not provide spectra)	No assumptions needed for the standard design process or if using the standard construction schedules in Tables I or II of the notified PDP. Outdoor noise level and source spectra need to be estimated / predicted by the acoustic expert if the exemption in S4(5) or S5(5) (s42A version numbering) are going to be engaged (same as ISL method).

	<u>Airport</u> Outdoor noise level and spectra need to be estimated by the acoustic expert in each case. The estimations can be based on published aircraft noise contours. Sound spectra are available and can be provided by WIAL to reduce the need for assumptions.	
Low frequency noise.	Satisfactory indoor low frequency performance is dependent on the outdoor spectral assumptions outlined above. A suitably qualified and experienced acoustic expert should generally adopt a representative spectrum to achieve reasonable indoor low frequency noise levels. Frequency spectra specific to each mode of transport could be provided for in the PDP to reduce the need for assumptions to ensure that a reasonable indoor low frequency noise level is delivered in every case. The assessor may assess indoor low frequency specifically, and may assess frequencies lower than what is required by the metric adopted by the SLD method.	<u>Standardised level difference without using the standard construction schedules in Tables I or II of the notified PDP.</u> Satisfactory indoor low frequency performance (within the standardised range) is inherent in the SLD methodology prescribed by the rule. An assessor using the ISL method may consider sound insulation performance at lower frequencies than the frequency range prescribed within the Standard on which the SLD method is based.The indoor low frequency sound levels will be similar to the ISL method at the noisier extents of the HNA and MNA, but will be better (lower) than the ISL method when at the outer / quieter extents of the HNA and MNA. The standard construction schedules in Tables I or II of the notified PDP have been designed to deliver the Standardised Level Difference values prescribed in each rule (NOISE-S4 and NOISE-S5). These are intended to achieve a reasonable indoor low frequency performance.
	The ISL can provide a better indoor low frequency outcome depending on the methods used by the assessor. Whereas the SLD method will inherently deliver a reasonable performance in the indoor low frequency region in all cases.	
Building design outcomes	The ISL method incentivises designers to arrange the building layout to orientate habitable rooms and windows / doors away from road and rail noise sources where practicable because this reduces the cost of acoustic treatment. In some cases this may have benefits for the future occupants in terms of having the choice of opening windows and not having to use mechanical ventilation.	If external sound levels below the thresholds stated in S4(5) or S5(5) (s42A version numbering) justify exemption from acoustic treatment requirements there are similar incentives to orient habitable rooms away from roads and rail where a designer seeks to engage the exemptions under S4(5) and S5(5). However, this applies only to complete rooms and not separate building elements of the same room. If the thresholds enabling an exemption from acoustic treatment are exceeded, there is no acoustic reason to design buildings to place habitable rooms on quieter facades.

Christchurch City Council	Resource Management Act 1991 Christchurch District Plan Plan Change 5E **Section 32 Evaluation**	5E

Noise Insulation of Sensitive Activities Near Roads and Railways

REVISED PROVISIONS FOR ASPECTS OF RULE 6.1.7.2.1 *Sensitive Activities near Roads and Railways*

Introduction

The following report is in support of Omnibus Plan Change 5E to the Christchurch District Plan, which proposes to review aspects of District Plan Rule 6.1.7.2.1 – Sensitive Activities near Roads and Railways for areas outside the central city. It is in accordance with the requirements of Section 32 (s32) of the Resource Management Act 1991 (RMA).

- This change affects new developments or additions and alterations to existing buildings, for 'sensitive activities' identified in the District Plan (the Plan) that are within certain distances from Collector Roads, Major and Minor Arterials, State Highways and railways. The change does not apply to the central city.
- The Plan defines 'sensitive activities' as including residential activities, guest accommodation, care facilities, education, and pre-school activities, health care facilities, hospitals and custodial, and supervised living accommodation where detainees live on site. The purpose of the rule is to provide protection for sensitive activities from the adverse health and amenity effects of noise from roads and railways, which has the potential to disturb sleep and disrupt activities.
- Earlier iterations of the rule, which applied to the Central City Edge Zone and Living 3 and 4 Zones in the former City Plan, sought to manage the effects of noise by prescribing specific construction requirements to achieve a specified reduction in noise between the external surface of the building and the internal spaces in the building (referred to as the façade reduction method).
- The recent review of the District Plan applied noise insulation requirements to a wider range of locations and activities and introduced an additional alternative method to manage the effects of noise. This document refers to this method as the Internal Noise Level Method, which requires the achievement of specified internal noise levels as opposed to just a fixed amount of noise reduction as provided for under the façade reduction method. The Internal, Noise Level Method, specifies construction requirements as a way of complying with the internal noise level required but enables custom-tailored noise insulation solutions for buildings that can be certified as achieving the required internal noise levels.

The specific purpose of Plan Change 5E is to review the following aspects for areas outside the central city:

a) Whether the option of achieving the specified noise reduction between the outside and inside of buildings is sufficient to protect sleep and amenity values of residential and other sensitive activities?
b) Whether the distances specified from roads or railways, within which the internal sound levels of buildings must not be exceeded, are sufficient to protect sleep and amenity values of residential and other sensitive activities.
c) Whether any alteration of or addition to, an existing building within the specified distances should be required to comply with the noise reduction requirements?
d) Whether the two-tiered approach to compliance and certification is appropriate and effective?
e) How appropriate and clear the exemptions to compliance with the rule are?
f) The current ventilation specifications where alternative forms of ventilation are required?
g) How acoustic experts calculate noise and whether this achieves the desired outcomes sought by the objectives of the plan?

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1 Introduction

1.1 Purpose of this report

1.1.1 The overarching objective of section 32 of the Resource Management Act 1991 (RMA / Act) is to ensure that plans use sound evidence and rigorous policy analysis, leading to more robust and enduring provisions.

1.1.2 Section 32 (**s32**) of the Resource Management Act 1991 (**RMA**) requires that the Council provides an evaluation of the changes proposed in Omnibus Plan Change 5E to the Christchurch District Plan (**the Plan**). The evaluation must examine whether the proposed provisions are the most appropriate way to achieve the objectives of the plan change and the purpose of the RMA. The report must consider reasonably practicable alternatives and assess the benefits and costs of the environmental, economic, social and cultural effects anticipated from implementing the proposed rule on managing sensitive activities near road and rail corridors. The report must also assess the risk of acting or not acting if there is uncertain or insufficient information about the subject matter of the provisions.

1.1.3 The purpose of this report is to fulfil these s32 requirements for proposed Omnibus Plan Change 5E – Noise Insulation of Sensitive Activities Near Roads and Railways. Besides, the report examines any relevant directions from the statutory context, including higher-order documents.

2 Resource management issues

2.1 Council's legal obligations and strategic planning documents

2.1.1 Sections 74 and 75 of the RMA set out Council's obligations when preparing a change to its District Plan. The Council has a responsibility under Section 31 of the RMA to establish, implement and review objectives and provisions for, among other things, achieving integrated management of the effects of the use, development, or protection of land and associated resources. One of the Council's functions is to control the actual and potential effects of land use or development on the environment and to follow the provisions of Part 2.

2.1.2 Additionally, the Council has a responsibility to have particular regard to RMA Section 7 matters. For this plan change, the relevant matters that the Council must have particular regard to are:

(b) the efficient use and development of natural and physical resources

(c) the maintenance and enhancement of amenity values:

2.1.3 As required by s74 and s75, in developing this Plan Change the Council has taken explicitly into account or has had regard to the following relevant "higher-order" documents/provisions:

Document	Relevant provisions	The relevant direction gives effect to/ taken account of in the proposed Plan Change
Land Use Recovery Plan (LURP)	Outcome 4 – RMA plans and regulatory processes are efficient and effective. Outcome 5 – A supportive and certain regulatory environment Outcome 6 – The range, quality and price of new housing	The outcomes in the LURP relevant to this proposed plan change seek to ensure plans and regulatory processes enable rebuilding and development without unnecessary impediments (Outcome 4), and the regulatory environment is to be supportive and provide certainty to keep investor confidence up (Outcome 5) while ensuring the best outcomes are achieved with the available resources. This will help with ensuring that the range, quality and price of new housing meets the diverse and changing needs of those seeking to buy or rent (Outcome 6).
National Planning Standards which introduce standard terminology for noise provisions	Provision 34. "*Any noise-related metrics and noise measurement methods must be consistent with the '15. Noise and Vibrations Metrics' Standard.* *15. Noise and Vibration Metrics Standard –* • *15.1. Any plan rule to manage noise emissions must be in accordance with the mandatory noise measurement methods and symbols in the applicable New Zealand Standards incorporated by reference into the planning standards and listed below:* *New Zealand Standard 6806:2010 Acoustics – Road-traffic noise – New and altered roads -* • *15.2. Any plan rule to manage noise emissions must be consistent with the mandatory assessment methods in section 6 Rating Level and section 7 LMAX of New Zealand Standard*	The National Planning Standards are relevant to this proposed plan change because they seek to ensure nation-wide consistency in relation to metrics used and methods of measurement.

Document	Relevant provisions	The relevant direction gives effect to/ taken account of in the proposed Plan Change
	6802:2008 Acoustics – Environmental Noise (incorporated by reference into the planning standards), provided the type of noise emitted is within the scope of New Zealand Standard 6802:2008.	
Greater Christchurch Urban Development Strategy and Our Space	The GCUDS and Our Space envision "prosperous communities can enjoy a variety of lifestyles in good health and safety, enriched by the diversity of cultures and the beautiful environment of Greater Christchurch." Its strategic direction seeks to ensure "that the Greater Christchurch area is a liveable, safe, prosperous and healthy place." It also seeks to increase "the supply of well-located, affordable housing." as well as making sure "buildings and homes are energy-efficient, war, well-built, aesthetically pleasing and affordable." The strategic direction also seeks to redevelop "existing urban areas in the more concentrated form" and obtain "greater efficiencies from the transportation infrastructure."	The vision and strategic directions in the GCUDS and Our Space are relevant to this proposed plan change because they seek to ensure a clear planning framework which supports individuals ability to prevent illness, stay healthy, and manage disability appropriately. Housing is a factor critical to achieving and maintaining good health and the prevention of illness.
Christchurch Central Recovery Plan (CCRP)	The CCRP does not contain any noise relevant provisions and relies on the District Plan's rules at the time. In addition, the proposed plan change does not seek to alter Central City noise insulation regulation.	This plan change does not apply to the CCRP area.
National Policy Statement – Urban Development	Objective 1 seeks to ensure New Zealand has a well-	These objectives are relevant to this proposed plan change because the

Document	Relevant provisions	The relevant direction gives effect to/ taken account of in the proposed Plan Change
	functioning urban environment that among other things, enables all people and communities to provide for their health and safety in the present and future. Objective 2 seeks to ensure housing affordability improves. Objective 3 seeks to ensure that district plans enable more people and businesses to locate in urban environments. Objective 4 acknowledges that New Zealand urban environments, including their amenity values, change over time in response to changing needs of people, communities and future generations.	national policy statement promotes the increase of urbanisation and intensification. A higher degree of urban intensification will result in changes that affect people and communities' needs (health) and amenities. This plan change helps individuals to prevent illnesses and stay healthy, while also helping to keep the prices of developing houses affordable in some cases.
Mahaanui Iwi Management Plan	P3.2.(b) early, appropriate and effective involvement in the development and implementation of urban and township development plans and strategies including plan changes.	The Mahaanui Iwi Management Plan is relevant to this plan change in order to achieve our duties as Treaty Partners and identify appropriate responses to planning questions early.

2.1.4 The higher-order documents broadly identify the resource management issues relevant to the district and provide direction in resolving the issue.

2.1.5 No other management plans or strategies prepared under other Acts are relevant to the resource management issue identified.

2.1.6 In the District Plan, that higher-level policy direction has explicitly been given effect to or had regard to in Chapter 3 - Strategic Directions to reflect the outcomes sought and to ensure it achieves the purpose of the RMA. The Strategic Objective '3.3.2 – Clarity of language and efficiency' is of particular relevance to this plan change. It directs the Council to minimise transaction costs and reliance on the resource consent process while reducing the number, extent, and prescriptiveness of development controls and design standards in the rules and thus encourage choice and innovation. It also directs the concise usage of language that is easy to understand and use.

2.2 Problem definition

2.2.1 Description and Scope of the Changes

In terms of implementing the existing objectives and policies of the District Plan;

1. Whether the option of achieving the specified noise reduction between the outside and inside of buildings is sufficient to protect sleep and amenity values of residential and other sensitive activities?
2. Whether any alteration of or addition to, an existing building within the specified distances should be required to comply with the noise reduction requirements?
3. Whether the distances specified from roads or railways, within which the internal sound levels of buildings must not be exceeded, are sufficient to protect sleep and amenity values of residential and other sensitive activities?
4. How appropriate and clear the exemptions to compliance with the rule are?
5. Whether the two-tiered approach to compliance and certification is appropriate and effective?
6. Review of the current ventilation specifications, where alternative forms of ventilation are required?
7. How acoustic experts calculate noise and whether this achieves the desired outcomes sought by the objectives of the plan?
8. Should the external to internal noise reduction method be retained, whether also to retain the accompanying Appendix 6.11.4.1?

2.2.2 Table of Issues

2.2.3 The following table describes the identified issues, the aspect of the rule they relate to, and groups these into themes.

Table 2 Table of Issues

Issue Theme	***Relevant part of the Rule***	***Issue(s)***	***Description***
1. Methods of managing noise	*a.i.A. be designed and constructed to achieve a minimum external to internal noise reduction of 30 dB $D_{tr,2m,nT,w}$ + C_{tr} to any habitable space;*	Noise attenuation vs internal noise levels	a.i.A and B are two different options for achieving indoor noise levels in bedrooms or habitable spaces to comply with the rule, in respect of rail or road noise. A. requires an external to internal noise reduction (attenuation) of 30dB, and B. requires specified indoor noise levels to be achieved. There is a risk that the noise reduction required in A. may not achieve the internal noise levels specified in B., which are what is deemed healthy/safe for occupation, in all circumstances. This is because the external noise levels in some environments may be so high, that providing the standard noise reduction required in A. will still result in internal noise levels above the maximum levels prescribed in B. Earlier iterations of the rule, which applied to the Central City Edge Zone and Living 3 and 4 Zones, sought to manage the effects of noise by prescribing specific construction
	a.i.B. be designed and constructed to meet with the following indoor design sound levels: . *Rail noise inside bedrooms between 22:00 hours and 07:00 hours – 35 dB L_{AEq}(1h);* . *Rail noise inside habitable spaces excluding bedrooms – 40 dB L_{AEq}(1h);* . *Road traffic noise inside all habitable spaces – 40 dB L_{AEq} (24hr); and* . *Rail and road traffic noise within any other building intended for a sensitive activity – maximum*		

Issue Theme	Relevant part of the Rule	Issue(s)	Description
	value recommended in AS/NZS2107:2000.		requirements to achieve a specified reduction in noise between the external surface of the building and the internal spaces in the building (referred to as the façade reduction method). According to Acoustic Engineering Services (AES) (3.1, pp7-8), these former City Plan zones are characterised by relatively fixed base variables (e.g. multi-unit type developments, relatively consistent commuter traffic noise levels) that enabled a simplified approach to noise management that was likely to achieve appropriate indoor noise levels in most situations. Noise reduction insulation could be specified based on these relatively consistent variables, which provides certainty as to what is required by the District Plan and that the provided reduction will be sufficient to achieve the appropriate indoor noise levels. Following the last District Plan Review (DPR), these zones are now referred to as Residential Suburban Density Transition and Residential Medium Density Zones. The DPR resulted in an expansion in the number and type of zones and activities subject to the rule. It extended the rule to the entirety of Christchurch City. By comparison to previous iterations of the rule (City Plan), the base variables have become much more complex and diverse in terms of such factors as external noise levels and the nature of building construction and can vary significantly between zones. To better cope with the above complexities, the DPR introduced an additional alternative method to manage the effects of noise. This document refers to this method as the Internal Noise Level Method, which requires the achievement of specified internal noise levels as opposed to just a fixed amount of noise reduction as provided for under the façade reduction method. The Internal Noise Level Method specifies construction requirements as a way of complying with the internal noise level required but enables custom-tailored noise insulation solutions for buildings that can be certified as achieving the required internal noise levels.

Issue Theme	*Relevant part of the Rule*	*Issue(s)*	*Description*
			The issue is, having recognised that the external to the internal noise reduction method may not achieve appropriate indoor noise levels, resulting in adverse amenity and health outcomes, whether it should continue to be included in the District Plan as a method for achieving those levels. It can also result in over-engineered buildings, resulting in excess costs of development, where external noise levels are low, so require less noise reduction than prescribed to achieve the appropriate internal noise levels.
2. Application of rule to all alterations and additions	*The following activity standards apply to new buildings, or alterations or additions to existing buildings, intended for a sensitive activity:*	Additions vs alterations	Applying the requirements to all alterations and additions may not result in any significant reduction in internal noise levels where unaltered parts of the existing building are not insulated. This means that the desired amenity and health outcomes are not fully achieved, and the costs will be disproportionate to the acoustic results achieved.
3. Extent of properties affected by the noise insulation requirements	*a.i. External sound insulation - Any new building intended for a sensitive activity, and any alteration or addition to an existing building intended for a sensitive activity, located within 80 metres of the boundary of any state highway or railway designation, …*	The distance from state highways and railways within which the rules apply.	The advice is that buildings further than 80 m from roads and railways may result in internal noise levels that would not be appropriate for the occupant's health and amenity.
4. Confirming compliance with the façade reduction method (should the façade reduction method be retained)	*ii. Compliance with Rule 6.1.7.2.1 can be achieved by either:* *A. providing the Council with a design report (prior to construction) and a design certificate (prior to occupation) prepared by a suitably qualified acoustics specialist stating the design proposed is capable of meeting activity standard a.i.; and/or* *B. conforming to the acceptable solutions listed in Appendix 6.11.4 Noise Attenuation Construction Requirements.*	Whether a second confirmation of compliance should be necessary if the option in ii, A. is used (should the façade reduction method be retained)?	The option of complying with the façade method in a.ii.A requires both a design report and a certificate. Whereas using the compliance method in a.ii.B only requires a compliance check of the design. Requiring a two-tiered verification process seems to be an unnecessary additional cost on development.

Issue Theme	*Relevant part of the Rule*	*Issue(s)*	*Description*
	ii.B. conforming to the acceptable solutions listed in Appendix 6.11.4 Noise Attenuation Construction Requirements.	Appropriateness of Appendix 6.11.4 (should the façade reduction method be retained)	The option of complying with Appendix 6.11.4 for the facade reduction method, should the façade reduction method be retained, can result in construction specifications materials/methods that are in parts out of date. The specifications would have to be periodically updated via plan changes.
Allowance for future increases in noise	*v. Compliance with Rule 6.1.7.2.1 a.i.B. shall be confirmed by providing the Council with a design report prepared by a qualified acoustic engineer demonstrating compliance, prior to any sensitive activity or alteration occurring. The design shall take into account future permitted use of the collector roads and arterial roads, and railway and state highway designations outside the Central City, either by the addition of 2 dB to predicted sound levels or based on forecast traffic in 20 years' time.*	2dB additions for future increases in noise	The issue is that the addition of 2dB to external noise levels to take into account future increased traffic noise levels has been assessed as being too conservative. This means that occupants of developments may experience internal noise levels in the future that adversely affect health and amenity outcomes.
5. Alternative ventilation (should the façade reduction method be retained)	*vi. The indoor design sound levels in Rule 6.1.7.2.1 a.i.B shall be achieved at the same time as the ventilation requirements of the New Zealand Building Code. If windows are required to be closed to achieve the indoor design sound levels, then an alternative means of ventilation shall be required within bedrooms.*	Ventilation for the façade reduction method (should it be retained)	The rule in subclause vi. requires the provision of a ventilation system for the indoor design sound level method option in a.i.B. where open windows do not achieve indoor noise levels. The alternative façade reduction method option in a.i.A. (should it be retained), however, does not require ventilation at all. That can result in adverse health and amenity effects, either through lack of ventilation or through inappropriate noise levels for occupants, depending on whether windows are opened or kept closed.
1. Parts of buildings subject to the noise requirements		'habitable spaces'	The rule requirements apply to "habitable spaces", but this term only relates to residential and guest accommodation activities, despite the rule applying to other activities. This needs clarification.
		Additions and alterations	There is uncertainty as to whether the rule only applies to those "habitable space" parts of additions, alterations and new buildings that fall within the specified distance from the road. Alternatively, whether it applies to all "habitable space" parts of an addition, alteration, or new building that is partly within the specified distance, even if the habitable space is in part of the building that is beyond the specified distance. This needs

Issue Theme	*Relevant part of the Rule*	*Issue(s)*	*Description*
			clarification and can have significant cost implications for those parts of the building outside the specified distances with limited gain in terms of health and amenity.
Additional clarification on determining noise levels		Inconsistent approaches in assessments	There has been some degree of variability between how acoustic experts determine external and internal noise levels for the internal noise level method. To provide for a more consistent and appropriate approach, additional specifications are necessary to form the basis for assessments. These include the location from where to measure noise, any structural elements which are to form part of the assessment, and ventilation requirements with closed windows.
Appendix 6.11.4.1		If external to internal noise reduction method is retained, should the relevant Appendix 6.11.4.1 be retained with it because it is out of date and would rely on continuous plan change updates to remain current?	AES and internal Environmental Health Officers expressed concern that some of the building methods contained in the Appendix are out of date and/or require refinement to ensure solutions offered are consistent with common building methods and refer to available products. This suggests the appendix cannot be implemented in its entirety in order to comply with the rule. The external to internal noise reduction method refers to the appendix as an acceptable solution; however, it does not rely on it to function. Therefore, should the method be retained it is not necessary to also keep the appendix for the method to work.

3 Development of the plan change

3.1 Background

3.1.1 The resource management issues set out above have been identified through the following sources

a. commissioned research;

b. public feedback and comments through various sources including stakeholder consultation and public engagement;

c. matters raised in various forums by planning professionals, and statutory partners.

3.1.2 The Council has commissioned technical advice from external experts to assist with assessing the existing issues and the potential effects of the proposal on the environment, as well as the potential options for mitigating the adverse effects. This advice includes a technical report, where the key findings are described in section 3.1.5, below.

Table 3: Technical Reports informing Plan Change 4

	Title	Author	Description of Report
a.	Noise	Josh Luscombe Clare Dykes Dr Jeremy Trevathan	Review of District Plan Rule 6.1.7.2.1 – is a Stage 1 acoustic review for this plan change. The report sets the scene for future amendments to the rule by reviewing a sample of 49 Resource Consent and Building Consent applications which were subject to the rule. The report aimed to ensure the identified issues were, in fact, issues also from an acoustics point of view, and identify any further potential issues.

3.1.3 Acoustic Engineering Services (AES) – Report (Revision 1)

3.1.4 AES' report – Review of District Plan Rule 6.1.7.2.1 – Sensitive Activities near Roads and Railways Stage 1, issued 13 September 2019, provided technical advice on several matters identified. These matters range from feedback on the two primary methods (Façade Reduction Method and Internal Noise Levels Method) to more specific items such as alterations, distances, site-specific shielding, ventilation, and other issues.

3.1.5 The report findings on Issue i. Adequacy of the external to internal noise reduction method;

- AES confirms (3.1, p. 7) that the internal noise level method "provides the most appropriate outcome from an acoustic perspective". This is because the experience of adverse effects of noise "ultimately depends on the noise level experience" within the building, which is something the internal noise method seeks to control directly.
- AES firmly recommends (8, p24) that mechanical ventilation be provided where opening windows would not achieve the necessary internal noise levels, irrespective of the method used to achieve those noise levels.
- The report suggests (3.1, p. 7) that the façade reduction method may ensure in some cases "appropriate internal levels, in others internal noise levels may be too high, or money may be invested upgrading structures where noise levels were already satisfactory".
- Closely related to the point above, the report suggests (3.1, p. 7) that due to the rule's drafting, the façade reduction method does not require mechanical ventilation. AES also concluded that developers have to choose between appropriate internal noise levels and ventilation and, due to the additional cost implications from ventilation, are likely to choose no ventilation and accept potentially higher-than-ideal internal noise levels, more often. It may inadvertently skew the popularity of the two methods.
- On page 9, AES states it is "aware that some people prefer to spend money on something physical, which is arguably a 'benefit' to end-users, rather than on analysis and reports by engineers". It makes the appendix an attractive option but only holds so long as both (appendix construction requirements and engineer fees) are comparable.
- The report also points out situations (3.1, pp. 7-8), much like the former Central City Edge Zone and later Living 3 and Living 4 zones, in which the façade reduction method may be a reasonable approach. This includes scenarios where "some of the basic variables are fixed" such as "specific zones, where the types and arrangement of likely development, and noise sources". However, as AES acknowledges on p.8, the current rule does not face these prerequisites.
- There may be situations (3.1, p. 8) where "external noise levels are so high that the [internal noise level method] would lead to excessive or impractical construction, and essentially prohibit development on some sites". The façade reduction method would then effectively cap "the level of upgrades required" and consequently enable development. "Such an arrangement would knowingly enable developments to be completed where people would be exposed to potentially harmful noise levels".
- The façade reduction method is 'better than nothing' in some situations (3.1, p. 8).

3.1.6 AES' key finding is in sync with what internal council stakeholders have been reporting to resource consent and environmental health staff as part of the implementation of the rule. The report points out that due to the increased scope of the rule to apply to more roads and more parts of the city, the underlying variables which affect noise have become more dynamic. This has a profound effect on the façade reduction method achieving the strategic direction and objectives, and purpose of the Act. This means any suitable alternative has to be more capable in managing these new dynamics to better provide for health and amenity. This finding will have flow-on effects for Appendix 6.11.4.1, which details the noise attenuation construction requirements for this method.

3.1.7 Plan Change 53 to the previous City Plan introduced a rule which required outdoor to indoor noise reduction (the Façade Reduction method) for dwellings exposed to high levels of traffic noise an acceptable design solution was included in Volume 3, Part 11 Health and Safety Appendix 1 of the City Plan to achieve a noise reduction of 30dB. As an alternative to designing the building in accordance with Appendix 1, the plan change provided that an acoustic report could be obtained from a specialist that demonstrated that the proposed building design would achieve a sufficient reduction in noise.

3.1.8 The rule's scope was increased in 2014 to include all collector and arterial roads across all zones with sensitive activities. To better cope with the post-earthquake built landscape and new dynamics inherent to different zoning types and development environments, an Internal Noise Level Method was introduced. It serves as an alternative to the Façade Reduction Method.

3.1.9 The Internal Noise Level Method rule also included the following aspects:

- The distance from a state highway or railway designation within which is acoustic treatment required was increased from 40m to 80m.
- It required alternative ventilation for the Internal Noise Level Method where the internal noise levels can only be achieved with closed windows.
- Acoustic compliance required the provision of an acoustic report/certificate.
- More specific requirements on matters of ventilation, future traffic noise, and railways.

3.2 Current Christchurch District Plan provisions

3.2.1 The current Plan provisions relevant to this plan change are set out in the following table.

Table 4 – Relevant strategic directions, and chapter-relevant objectives and policies

Order	Title	Content
Strategic Direction	Objective 3.3.1 – Enabling recovery and facilitating the future enhancement of the district	The expedited recovery and future enhancement of Christchurch as a dynamic, prosperous and internationally competitive city, in a manner, that: . Meets the community's immediate and longer-term needs for housing, economic development, community facilities, infrastructure, transport, and social and cultural wellbeing; and . Fosters investment certainty; and
	Objective 3.3.2 – Clarity of language and efficiency	The District Plan, through its preparation, change, interpretation and implementation: . Minimises: 1. transaction costs and reliance on resource consent processes; and 2. the number, extent, and prescriptiveness of development controls and design standards in the rules, in order to encourage innovation and choice; and 3. the requirements for notification and written approval; and

		. Sets objectives and policies that clearly state the outcomes intended; and . Uses clear, concise language so that the District Plan is easy to understand and use
	Objective 3.3.4 – Housing capacity and choice	For the period 2018-2048, a minimum of 55,950 additional dwellings are enabled through a combination of residential intensification, brownfield and greenfield development, made up of: 1. 17,400 dwellings between 2018 and 2028, and 2. 38,550 dwellings between 2028 and 2048; and There is a range of housing opportunities available to meet the diverse and changing population and housing needs of Christchurch residents, including: 3. a choice in housing types, densities and locations; and 4. affordable, community and social housing and papakāinga.
	Objective 3.3.7 – Urban growth, form and design	A well-integrated pattern of development and infrastructure, a consolidated urban form, and a high-quality urban environment that: 2. Is attractive to residents, business and visitors; and 3. Have its areas of special character and amenity value identified and their specifically recognised values appropriately managed; and 4. Maintains and enhances the Central City, Key Activity Centres and Neighbourhood Centres as community focal points; and 5. Identifies opportunities for, and supports, the redevelopment of brownfield sites for residential, business or mixed-use activities; and
Chapter-relevant objectives and supporting policies	Objective 14.2.1 – Housing supply	An increased supply of housing that will: 1. enable a wide range of housing types, sizes, and densities, in a manner consistent with Objectives 3.3.4(a) and 3.3.7; 2. meet the diverse needs of the community in the immediate recovery period and longer-term, including social housing options; and 3. assist in improving housing affordability.
	Objective 14.2.4 – High-quality residential environments	High quality, sustainable, residential neighbourhoods which are well designed, have a high level of amenity, enhance local character and reflect the Ngāi Tahu heritage of Ōtautahi.
	Policy 14.2.4.1 – Neighbourhood character, amenity and safety	Facilitate the contribution of individual developments to high-quality residential environments in all residential areas (as characterised in Table 14.2.1.1a), through design: iii. providing a high level of on-site amenity; iv. minimising noise effects from traffic, railway activity, and other sources where necessary to protect residential amenity;
	Policy 14.2.4.8 – Best practice for health, building sustainability, energy and water efficiency	Promote new residential buildings that: i. provide for occupants' health, changing physical needs, and life stages; and ii. are energy and water efficient; iii. through non-regulatory methods, including incentives.
	14.2.7 Objective – Redevelopment of brownfield sites	On suitable brownfield sites, provide for new mixed-use commercial and residential developments that are comprehensively planned so that they are environmentally and socially sustainable over the long term.

	Policy 14.2.7.1 – Redevelopment of brownfield sites	b. Ensure the redevelopment is planned and designed to achieve: i. high-quality urban design and on-site amenity
	Objective 6.1.2.1 – Adverse noise effects	Adverse noise effects on the amenity values and health of people and communities are managed to levels consistent with the anticipated outcomes for the receiving environment.
	Policy 6.1.2.1.1 - Managing noise effects	Manage adverse noise effects by: requiring sound insulation for sensitive activities or limiting their location relative to activities with elevated noise levels.
	Policy 6.1.2.1.2 – Noise during night hours	Achieve lower noise levels during night hours to protect sleep, and the amenity values of residential and other sensitive environments, so far as is practicable.

3.3 Description and scope of the changes proposed

3.3.1 The Plan Change does not propose any changes to the objectives and policies of the Plan in relation to the management of the adverse effects of noise from roads and railways on sensitive activities.

3.3.2 In broad terms, the plan change seeks:

a. To provide greater certainty that the rule achieves appropriate health and amenity outcomes for sensitive activities in locations near roads and railways, and thereby achieve the objectives and policies, and purpose of the Act;
b. To ensure that rule is understandable and user-friendly;
c. To avoid any unreasonable additional transaction costs;

The specific purposes of the plan change are listed in the Introduction.

3.3.3 The Plan Change proposes a number of changes to the rule to ensure that the relevant Plan objectives and policies are achieved. These changes include:

a. Removing the external to the internal noise reduction method of compliance with the rule;
b. Increasing the distances from State Highways and railway lines within which buildings need to comply with the noise reduction requirements;
c. Reducing the range of alterations and additions to existing buildings that need to comply with the noise reduction requirements;
d. Simplifying the compliance and certification process by reducing it from a two-tiered approach to one;
e. Specifying exemptions from the rule by listing the spaces within a building used for a sensitive activity which does not require noise insulation;
f. Updating ventilation specifications to ensure where alternative forms of ventilation are required to comply with the Building Code;
g. Providing greater specificity on how noise measurements should be determined, and which parts of a building would have to be considered as part of the assessment.

3.4 Stakeholder Engagement

3.4.1 Stakeholder Meetings

NZTA and KiwiRail

There were two meetings, a joint meeting with KiwiRail (Rebecca Beals) and the New Zealand Transport Agency (NZTA) (Richard Shaw) on 22.02.2020, and a separate meeting (29.02.2020) with the planner tasked with reviewing the Selwyn District's noise provisions Vicki Barker from Harrison Grierson.

The meetings' purpose was to discuss the issues encountered with the operative rule and potential options for remedying. For the meetings, KiwiRail and NZTA shared a draft version of a rule that relates to highways and railway lines. The Utilities Sub-committee[1] has prepared this draft rule.

Although the KiwiRail/NZTA version is limited to only certain road classes, it demonstrated significant similarities with the changes prepared under this plan change. Most notably was the preference for the internal noise level method over allowing the façade reduction method as well the internal noise level method as currently permitted by the District Plan, or just the façade reduction method. Additionally, the rule required the provision of alternative forms of ventilation in all cases with exceptions. The rule had a simplified format based on the AS/NZS2107:2016 for adoption as a potential alternative to the operative DP rule.

3.4.2 Selwyn District Council

Vicki Barker provided information to assist with the plan change proposal, which included responses from KiwiRail and NZTA to questions she had asked previously. The information she shared included:

- Models for buffer distances NZTA applies to State Highways,
- background information that supports the increase in buffer distance from 80 meters to 100 meters from state highways and railways, and
- points of measurements for railways,
- Selwyn District Council's draft rule prior to its release, and
- Other rationales for the rule.

In summary, the meetings reinforced many of the findings on issues and did not raise additional ones. Table 2 details any particulars of the rule which have been changed/updated as a result of the meeting.

3.4.3 Planning Workshop with relevant Industry

10 attended the workshop which was was held at the Christchurch Council Civic Offices on 07.02.2020. Table 2 includes a complete list of attendees. Pre-workshop information containing background information and concepts of alternatives were circulated to the attendees for review before the workshop. The workshop lasted for approx. 2 hours and consisted of two tasks.

[1] NPSNU working group has representatives from Local Government NZ being Christchurch City, Water Services, Wellington Water; Transpower, Electricity Networks Association (ENA) being Vector, PowerCo and Aureroa; National Transport Agency, Kiwirail, First Gas, and Telecommunications Carrier Forum (TCF) being Spark and Chorus and independent Resource Management consultant Ainsley Mcleod.

3.4.4 The first task involved attendees listing any known issues with the Rule 6.1.7.2.1 on Post-It Notes and attaching these next to the part of the rule they relate to on an A1-sized poster containing the operative rule. The purpose of the exercise was to identify issues overlooked to date or validate already identified ones. This exercise included a round of discussions on specific issues such as methods and ventilation.

3.4.5 The exercise did not raise new significant issues. The discussions helped shed further light on specific issues, particularly in the areas of noise level calculation, distances from noise sources, methods, and ventilation.

3.4.6 The second task required attendees to provide suggestions on ways to improve upon the operative rule, and the concepts of the preferred option (having only the Internal Noise Levels Method) and one additional alternative (Façade Reduction Method – Only). The exercise sought to share the types of options available with the industry and gauge the level of support or opposition. From the ensuing discussion, it became clear that the workshop participants favoured the preferred option, with none in favour of the operative rule, or the second alternative.

Table 2: This table lists events part of the pre-notification engagement process with stakeholder any outcomes.

Date	Consultation method	Stakeholders	Resulting changes to the draft proposal
22.02.2020	Meeting (combined)	Rebecca Beals (KiwiRail) Richard Shaw (New Zealand Transport Agency)	Matters discussed in the meeting and subject to further analysis, resulted in changes to the rule including: 1. An increase from 80m setback to 100m for state highways and the railway network. 2. The term 'railway designations' being changed to 'railway network' to include private railway sidings. 3. It adopted a table format for activity groups and various spaces therein paired with commensurate internal noise levels. 4. Adoption of a 1.5m above floor level per storey approach. 5. More straightforward language explains the consideration of future traffic noise.
07.02.2020	Workshop	Patricia Harte (Davie Lovell-Smith Darran Humpheson (Tonkin + Taylor) Rachel Ducker (Harrison Grierson) Rebecca Beals (KiwiRail) Stephen Chiles Kelly Bombay (Stantec)	Matters discussed in the meeting and subject to further analysis, resulted in changes to the rule including: 1. Noise levels in sleeping and non-sleeping areas for sensitive activities in general rather than an activity by activity format. 2. The removal of redundant components as a consequence of the changes made under point 1. above. 3. Clarification that 1.5m above floor level applies to each storey of a building and not just the ground floor. 4. Removal of 'fences' from the list of exceptions because fences come in many forms and shapes which would be unsuitable to blocking noise. 5. Addition of ventilation requirements including the number of air changes per

		Richard Shaw (NZTA) Gareth Taylor (LPC)	hour, and controllable cooling and heating for temperatures between 18°C and 25°C. 6. An increase from an 80m setback from state highways to a 100m setback.
25.08.2020	Meeting	Greg Miller (Chaplin Crooks Architects) Councillor Tim Scandrett	After receiving written feedback from Mr Miller, a meeting was arranged to discuss the points raised further. Mr Miller argued that some collector roads have lower traffic volume and noise generation than some local roads. As a case study, he referred to Malcolm Avenue in Beckenham and Bridge Street in New Brighton. An increase in distance within which noise insulation would have to be applied or exemption obtained would create an additional, unnecessary step in the process. Additionally, to obtain an exemption, it is up to the applicant to verify noise levels below 57dB. This can typically only be undertaken by a suitably qualified person, which means an acoustic certificate was necessary at the associated cost to "confirm the obvious".
31.08.2020	Meeting	Mark Lewthwaite (Powel Fenwick)	Mr Lewthwaite is an acoustic expert at Powell Fenwick who provided feedback on the proposed revised version of Rule 6.1.7.2.1. In particular on matters relating to an increase in distances to collector roads within which noise insulation must be provided (unless exempt) and the proposed combined ventilation/cooling/heating requirements. 1. Similar to Greg Miller's comment on some collector roads, Mark believed that buildings further back are blocked by other buildings and are highly likely to qualify for an exemption (in his experience). Although it is acknowledged that there will be scenarios on busy collector roads with higher speed limits where sensitive activities outside the 20metres distance experience higher than expected noise levels, these will be outliers and not the norm. 2. Mark raised concerns in relation to the interpretation of the wording in the proposed rule, which meant that external noise level measurements are required from the most exposed part of the proposed façade, which implies that this should be used on other facades that are subject to lower levels of noise. The measurements should be taken from all facades. 3. The last point of discussion was the operative and proposed rule's ventilation requirements. Mark was of the opinion that the ventilation requirements were too onerous and should be simplified to use the Building Code G4, and if

			the Building Code's requirements are a concern that the Building Act would better address it.

Statutory Partners

3.4.7 Clause 3 of Schedule 1 of the Resource Management Act requires the Council to consult with relevant statutory bodies.

3.4.8 The statutory bodies consulted with included the Department of Prime Minister and Cabinet, the Ministry of Transport, the Ministry for the Environment, the Ministry for Housing and Urban Development, the New Zealand Transport Agency, Heritage New Zealand, Kainga Ora, Otakaro Ltd., Environment Canterbury, Selwyn District Council, and Waimakariri District Council. This consultation was part of a pre-notification engagement process on a concept version of a potential rule which the below table relates to.

3.4.9 The statutory bodies responses are listed in the table below.

Statutory Body	Response – Name/Date/Time	Meeting	Comment	Actions arising
Ministry for the Environment	No response	n/a	n/a	n/a
Ministry of Transport	Dana Danilova; 27/02/2020, 14:47	n/a	Email 27/02/2020, 14:47: Thank you for getting in touch with the Ministry of Transport. It sounds like you were advised by DPMC to liaise with us. I believe this might be due to a little-used reference in the RMA about consultation requirements. Since the plan change issues are at an operational level, it is more appropriate for Christchurch City Council to engage with the NZTA rather than us. Generally, the Ministry of Transport does not get involved in plan changes, and we would usually defer to NZTA anyway.	The Ministry of Transport defers operational level matters to the New Zealand Transport Agency and consequently did not provide any further comment on the subject. No further actions required.
Ministry for Housing and Urban Development	n/a	n/a	n/a	n/a
Department of the Prime Minister and Cabinet	Andrew Hammond;	n/a	Email 24.02.2020, 14:59: I have reviewed your email and the possible amendment. I can advise that the DPMC does not have any concerns or interest in the possible amendment to the Christchurch District Plan of Rule 6.1.7.2.1 - Sensitive Activities near Roads and Railways. I would also suggest that under clause 3(1) of Schedule 1 of the Resource Management Act 1991 that the Christchurch City Council also considers consulting with the Ministry of Housing and Urban Development, the Ministry	The Department of the Prime Minister and Cabinet did not have any further concerns or interest in the subject. No further actions required.

			of Transport, the New Zealand Transport Agency, Ōtākaro Ltd and Kiwi Rail.	
New Zealand Transport Agency	Richard Shaw No response	n/a	n/a	The NZTA has been engaged with from early on in the process of developing this plan change. NZTA has been engaged with in the form of meetings and the workshop held on 07.02.2020. No further actions are arising.
Kaingaora	Gurv Singh	04.03.2020, 14:00	Written feedback provided, dated 14th April 2020 and 28th August 2020.	Kainga Ora has been met with. The meeting with Mr Singh indicated an objection to this proposal. The grounds include that it may affect the costs of developing housing – Kainga Ora's mandate. Besides, Mr Singh alluded to discussions with NZTA for a standardised rule nation-wide.
Regenerate Christchurch (Ōtākaro)	Donna Sibley, Peter Mathews;	03.03.2020, 10:00; Otakaro Offices	Email: In summary, Ōtākaro has no comment or objection to the proposed change.	Ōtākaro has been met with and briefed on the proposal and its intentions.
Heritage NZ	Jon Trewin	n/a	Email 02.03.2020, 16:55: I have had a look at the proposed plan change. I think from our perspective; the main issue would be whether any enhanced requirement for acoustic insulation and noise mitigation would be a burden for those seeking to restore and repurpose heritage buildings. From my initial glance, the distances have been increased from road/rail boundaries, so the 'catchment' of the rule has increased. The	Heritage NZ responded via email and was met with subsequently. In Heritage NZ's email response, the idea was put forward of an exemption for heritage buildings/ or matter of discretion that enables further consideration of the appropriateness of insulation in heritage buildings, and the effects on heritage values of requiring it.

			maximum average decibel limit has also been changed and appears to have been reduced for sleeping spaces – am I reading that right? What is the scope of an alteration or addition, and how is this defined as a trigger for the rule? (these are defined in relation to heritage buildings in the district plan but only relates to the heritage chapter rules). It could be worth considering having a matter of discretion relating to the feasibility of meeting the noise standards and heritage matters. This relates to Rule 6.1.8, which would be triggered where the permitted standards could not be met in the preceding rule 6.1.7. Suggested alteration is below. *X) Additional criteria where sound insulation is required by the rules:* *A. The extent to which a reduced level of acoustic insulation may be acceptable due to mitigation of adverse noise impacts through other means, e.g. screening by other structures or distance from noise sources.* *B.The ability to meet the appropriate levels of acoustic insulation through alternative technologies or materials.* *C. The provision of a report from an acoustic specialist which provides evidence that the level of acoustic insulation is appropriate to ensure the amenity of present and future residents of the site.* *D In the Central City, the impact of any residential accommodation or education activity that does not provide the required noise insulation on the ability to exist or future permitted business activities to operate or establish without undue constraint.*	

			E In Central City, the location of any nearby business activities and the degree to which the amenities of the sensitive activities may be adversely affected. *F Outside the Central City, the appropriateness of a legal instrument to be registered against the title that is binding on the owner and the owner's successors in title, containing a 'no complaint' clause relating to the noise of aircraft using Christchurch International Airport.* *G The extent to which a reduced level of acoustic insulation may be acceptable due to the heritage values of the building.*	
Mahanui Kurataiao		18/03/2020, 11:00; MKT Offices, 226 Antigua Street	In this meeting, we followed-up with MKT on the proposal and addressed any questions.	Provision of a map of the relevant road network map to MKT. MKT advised of properties affected by the change. It was determined as inappropriate to require cultural facilities to be subject to the rule, reflecting a number of factors including different uses that are generally not noise sensitive. Notwithstanding this, the use of buildings for residential activity would be subject to the rule and iwi are therefore impacted, particularly where papakāinga housing is within the prescribed distance of road corridors.
Waimakariri District Council	No response	n/a	n/a	n/a
Selwyn District Council	Jesse Burgess		Email 24.02.2020, 12:38: Thank you for your email. Selwyn District Council won't be submitting this proposed change to the Christchurch District Plan.	Selwyn District Council chose not to provide feedback on the subject. Also, the chapter leader for Selwyn District Plan's chapter on noise has been engaged with as part of this process.

Environment Canterbury	Joanne Stapleton;	25.02.2020, 14:30; Civic Offices	No further comments or additions	Environment Canterbury was met with and did not have any further comments to add to the proposal.

4 Scale and significance evaluation

4.1 The degree of shift in the provisions

4.1.1 The level of detail of the evaluation of the proposal has been determined by the degree of shift of the proposed provisions from the status quo and the scale of effects anticipated from the proposal.

4.1.2 The following table outlines the degree of shift in the provisions from the status quo.

Degree of Shift	Addressing an existing or new resource management issue	The proposed changes seek to optimise a rule which addresses an already existing resource management issue which is the management of adverse effects of traffic noise on sensitive activities near roads and railways. The changes are considered a 'low' shift because the changes address an existing resource management issue.
	Proposing a new management regime/minor or significant change in rule framework	The proposed changes would result in some changes to the rule, including the removal of the external to internal noise reduction method as well as other amendments that are deemed to be of moderate significance. The proposed changes represent a 'medium' shift from the status quo because there is a shift in how the rule is applied.
	Extent and scale of regulatory impact	The extent and scale of the regulatory impact is medium with an increase in the distances from the roads that acoustic insulation is required. There are also changes in the methodologies that affect the way noise effects are managed.
	Degree of 'packaging' with other plan changes or other interventions	Staff have considered rules using similar methods, mostly found in the commercial and industrial chapter. The conclusion is not to amend these rules at this point. The degree of shift is considered 'low'.
	Discrete provisions, or broader suite of existing provisions	The change affects only one provision. The degree of shift is considered 'low'.
	Changing existing plan objectives, and to what degree	There are no changes to the plan's objectives as a consequence of the proposal. The degree of shift is considered 'low'.
	On balance, the degree of the shift from the status quo as a result of the proposed change is: **Low – Medium** The proposal's main objective is to optimise the existing rule, so it is more effective and efficient at managing the effects of road noise on sensitive activities and better align it with the strategic direction and noise objective and policies.	

4.2 Scale and significance of effects

4.2.1 The scale and significance of the likely effects anticipated from the implementation of the proposal have also been evaluated. This evaluation considers whether the proposal:

a. Removes uncertainty from the current provisions;
b. Enables consistent implementation of the Plan provisions across the district;
c. Gives a better effect to the Plan's objectives and policies, and higher-order documents, by seeking appropriate health and amenity outcomes within the district;
d. Is of city-wide significance and may have a localised impact on individual sites and buildings thereon within defined distances from roads and railways;
e. Affects a large number of property owners and has a moderate impact on private properties;
f. Contributes to the City's recovery;
g. Reduces adverse effects on people's health and safety;
h. has positive/negative/irreversible effects on property owners and the wider community, including impacts on social, cultural and economic wellbeing, and limits options for future generations to remedy effects and the probability of these effects;
i. Will impose high costs on individuals or communities; and
j. Represents a well-tested approach.

4.2.2 The considerations in determining the scale and significance of the plan change are as follows:

<table>
<tr><td>1. Reasons for the change</td><td>The reasons for the change proposed is to ensure the noise reduction options in the District Plan adequately protect sleep, health and amenity values for residential and other sensitive activities, avoid unnecessary costs, and to improve the clarity of the rule</td></tr>
<tr><td>2. Degree of the shift from the status quo (status quo defined as the current approach)</td><td>The degree of the shift from the status quo is to amend discrete parts of the existing rule to a low to moderate degree. The proposal does not change the existing outcome sought in the District Plan to insulate sensitive activities from inappropriate noise levels from roads and railways.</td></tr>
<tr><td>3. Who and how many are likely affected?</td><td>The proposal affects approx—2,832 additional rating units near roads and railways.<table><tr><td>The operative rule affects the following number of rating units by road type at 08/07/2020:

Railway and State Highways (80m) – 4,572 and 8,577 (13,149 total).</td><td>The proposed distances (at 08/07/2020) would increase the number of affected rating units marginally:

Railway and State Highways (100m) – 5,579 and 10,401 (15,981 total)</td></tr></table></td></tr>
<tr><td>4. Degree of impact on, or interest from iwi/Maori</td><td>Early engagement with MKT revealed the existing cultural activities located within the operative and proposed distances from roads and railways. It was determined as inappropriate to require cultural facilities to be subject to the rule, reflecting a number of factors including different uses that are generally not noise sensitive. Notwithstanding this, the use of buildings for residential activity would be subject to the rule and iwi are therefore impacted, particularly where papakāinga housing is within the prescribed distance of road corridors.</td></tr>
<tr><td>5. When will effects occur?</td><td>The effects occur whenever new development, or additions to an existing building, for sensitive activities occur within defined distances from a specific road type or railway line.</td></tr>
</table>

6. The geographic scale of impacts	The changes are confined to specific properties that are within the distances from relevant road types and railways.
7. Type of effect	• removes one of the permitted methods to achieve appropriate noise outcomes; • requires a low to moderate increase in financial expenditure in some circumstances and a decrease in other circumstances; • increase distances from State Highways and railway lines within which noise reduction will be required; • clarifies the rule; • Increase certainty of achieving appropriate noise levels for residential activities and other sensitive activities; • Requires mechanical ventilation in all cases where internal noise levels will not otherwise be achieved with an open window; • Limits noise reduction to only certain additions, • increases requirements for future noise calculations.
8. Degree of policy risk, implementation risk, or uncertainty	Sufficient amount of information is available to achieve appropriate health and amenity outcomes, but it is uncertainty as to the cost implications for development. This information lowers the costs and risks to Council, ratepayers and the wider community. There is a low impact on the Council's capacity to update and carry out its role and functions.

5 Evaluation of the proposal

5.1 Statutory evaluation

5.1.3 This statutory evaluation is in accordance with sections 74 and 75 of the Act to assist the territorial authority to carry out its functions, as described in s31, to achieve the purpose of the Act. This analysis aims to determine the extent to which the proposed plan change meets the applicable statutory requirements, including the District Plan strategic directions, and chapter-relevant objectives and policies as outlined in Table 4 in section 3.2. The relevant higher-order documents and their directions are outlined in section 2.1 of this report.

5.2 Evaluation of the purpose of the proposal

5.2.3 The existing objectives of the operative Christchurch District Plan are not proposed to be amended or added to by this Plan Change. This section of the report, therefore, evaluates the extent to which the purpose of the Plan Change (s32(6)(b)) is the most appropriate way to achieve the purpose of the Act (s32(1)(a)). The Plan Change also does not propose to change the existing policies of the District Plan.

5.2.2 The evaluation, therefore, examines whether:

a. the purpose of the plan change (s32(6)(b)) is the most appropriate way to achieve the purpose of the Act (s32(1)(a)) taking appropriate account of the Act requirements to consider relevant higher-order documents;

b. the provisions in the proposal are the most appropriate way to achieve the purpose of the plan change;

c. the provisions in the proposal are the most appropriate way to implement the unaltered objectives of the District Plan; and

d. the provisions in the proposal are the most appropriate way to implement the unaltered policies of the District Plan.

Table 5 Evaluation of the purpose of the proposal

Purpose of the proposal	Summary of Evaluation
Purpose of the Plan Change as proposed is to ensure that the rule a. better ensure that appropriate noise-related health and amenity outcomes for sensitive activities near-certain road types and railways are achieved across the district, b. Supports future enhancement of the district; c. Contributes to the enhancement of centres and residential areas and makes these attractive to occupants and visitors, d. To ensure that rule is applied efficiently by *i.* being understandable and user-friendly; *ii.* minimising resource consents and costs where not justified by the better outcomes achieved;	*a. The Plan Change intends to increase the certainty that noise insulation is applied appropriately across the district to achieve appropriate health and amenity outcomes while reducing unnecessary transaction costs. This is consistent with the purpose of the Act, the relevant outcomes (4, 5, and 6) sought by the Land Use Recovery Plan, and the vision the Greater Christchurch Urban Development Strategy and Our Space documents. The proposal also uses metrics which are consistent with the National Planning Standards.* *b. Concerning the strategic directions and chapter-relevant objectives and policies of the District Plan, the purpose of this plan change is aligned with the following:* *i. Strategic Directions (SD) Objective 3.3.1. seeks the expedited recovery and future enhancement of the city in a way that meets the community's immediate and longer-term needs for housing, transport, and social and cultural wellbeing, and to reduce uncertainty. Through noise insulation of residential developments and sensitive activities, provision is made for the immediate and future needs of residents and their health and amenity. At the same time, ensuring quality housing assists with creating an internationally competitive city. In terms of an expedited recovery, the amendments that impose stricter requirements on development may require resource consents or increased costs for development.* *ii. SD 3.3.7 seeks that the form and design of the development are well-integrated, consolidated, and of high quality. In addition, obj. 14.2.4 and 14.2.7 and policies 14.2.4.1, 14.2.4.8, and 14.2.7.1 seek to produce high quality, sustainable, residential neighbourhoods, which are well designed and have a high level of amenity. This is in part achieved by increasing individual on-site amenity through the minimisation of noise effects from traffic and rail, which benefits occupants' health.* *iii. In addition to the above strategic directions, other chapter relevant objectives and policies seeking to achieve improved health and amenity outcomes, and protect quality of sleep at night, include Obj. 6.1.2.1 and Policies 6.1.2.1.1 and 6.1.2.1.2, by managing the adverse effects of noise on sensitive activities. The plan change will better achieve this by ensuring that residential and other sensitive activities that are exposed to inappropriate noise levels will be better protected, particularly as a result of the increase in areas near roads that the rule applies to and through the proposed application of the internal noise level method of compliance.*

	iv. SD 3.3.2 seeks to minimise unnecessary transaction costs and reliance on resource consents. The proposed change reduces unnecessary transaction costs by not requiring noise insulation for most additions/alterations, simplifying the compliance process, and reducing the need for resource consents where unreasonable. It also improves rule clarity (SD 3.3.1). *v. The consolidated form of urban growth means there will be a greater number of people living near the transportation network. As a consequence, the risk of exposure to the adverse effects of noise from the transport network increases. The proposed change amends the rule to achieve more appropriate noise insulation.* *vi. The proximity to traffic noise sources may have adverse effects on health and amenity of inhabitants and the wider receiving environment. To keep local centres a focal point for communities and support their recovery, residential components must be maintained, and enhanced, in line with local centres. Appropriate noise insulation is one of the many factors that will have a positive impact in this regard.* *In summary, the above points a. and b. will be achieved by:* - Removing the external to the internal noise reduction method of compliance with the rule; - Increasing the distances from State Highways and railway lines within which buildings need to comply with the noise reduction requirements; - Reducing the range of alterations and additions to existing buildings that need to comply with the noise reduction requirements; - Simplifying the compliance and certification process by reducing it from a two-tiered approach to one; - Specifying exemptions from the rule by listing the spaces within a building used for a sensitive activity which does not require noise insulation; - Updating ventilation specifications to ensure where alternative forms of ventilation are required that it complies with the Building Code G4; - Providing greater specificity on how to noise measurements should be determined, and which parts of a building would have to be considered as part of the assessment.
Alternative – No changes to provisions	*The status quo does not increase the certainty that noise insulation is applied appropriately across the district to achieve appropriate health and amenity outcomes while also not reducing unnecessary transactions costs. This is inconsistent with the purpose of the Act, the relevant outcomes (4, 5, and 6) sought by the Land Use Recovery Plan, and the vision the Greater Christchurch Urban Development Strategy and Our Space documents. The status quo also does not use metrics which are consistent with the National Planning Standards.* *With regard to the strategic directions and chapter-relevant objectives and policies of the District Plan, the status quo is not aligned with the following:* *i. SD 3.3.1. seeks the expedited recovery and future enhancement of the city in a way that meets the community's immediate and*

		longer-term needs for housing, transport, and social and cultural wellbeing, and to reduce uncertainty. Through noise insulation of residential developments and sensitive activities, provision is made for the immediate and future needs of residents and their health and amenity. At the same time, ensuring quality housing assists with creating an internationally competitive city. *The status quo does not achieve that in its entirety. There is evidence that areas subject to high noise levels from roads and rails are not subject to the rule, and as a result, do not have adequate noise insulation. This does not enable communities to provide for their immediate and long term needs. Furthermore, the façade reduction method in the operative rule may not achieve the outcome sought, having regard to the anticipated levels of noise i.e. insulation required by the rule may be inadequate to provide suitable internal noise levels.*
	ii.	*To achieve an expedited recovery, 3.3.4 directs the delivery of approx. fifty-six thousand dwellings in a combination of greenfield and brownfield through intensification between 2018-2048. At the same time, 3.3.7 seeks that the form and design of development is well-integrated, consolidated, and of high quality. The resulting environment shall be attractive to residents, businesses and visitors alike, and be of special character and amenity.* *The status quo is not effectively providing noise insulation to all residential and sensitive activities and it may not be sufficient to mitigate the levels of noise anticipated. This may result in exposure to high noise levels from roads and rails and may therefore not achieve the objective of high quality development. As a consequence, there may not be the demand for developments/ intensification near roads/ rail corridors subject to higher levels of noise.*
	iii.	*All this has to be achieved while ensuring that housing supply meets the diverse needs of the community in the immediate recovery and longer-term and to assist in improving housing affordability (Obj. 14.2.1). In conjunction, obj. 14.2.4 and 14.2.7 and policies 14.2.4.1, 14.2.4.8, and 14.2.7.1 seek to produce high quality, sustainable, residential neighbourhoods, which are well designed and have a high level of amenity. This is in part achieved by increasing individual, on-site amenity through the minimisation of noise effects from traffic and rail, which benefits occupants' health. The status quo does not achieve the necessary on-site amenity because it does not cover residential and sensitive activities to the required extent (both in terms of distance and the adequacy of insulation in high noise environments).*
	iv.	*Chapter relevant objectives and policies seek to achieve improved health and amenity outcomes, and protect quality of sleep at night including Obj. 6.1.2.1 and Policies 6.1.2.1.1 6.1.2.1.2, by managing the adverse effects of noise on sensitive activities. As noted above, the status quo may not provide the outcome anticipated in circumstances where a property is not subject to the rule (not within the defined distances that the*

	rule applies to) and/ or the level of insulation is not sufficient to mitigate the effects of noise. *v. Objective 3.3.1 seeks to reduce uncertainty, which is closely aligned with SD 3.3.2 which seeks to minimise unnecessary transaction costs, over-reliance on resource consents, the degree of prescriptiveness of development controls and design standards to encourage innovation and choice. SD 3.3.2 seeks the use of clear and concise language that is easy to understand and use. The status quo is unclear in application, particularly to additions and alterations, and in requiring a two-tiered compliance verification process. This results in unnecessary costs of interpretation an compliance.*
Summary of evaluation: *In summary, the purpose of the proposed plan change better achieves the direction in the higher-order documents and district plan objectives and policies.* *In particular, the plan change ensures appropriate internal noise environments for sensitive activities near roads and railways, in a way that more efficiently and effectively implements the objectives and policies and higher-order documents.*	

5.2.3 The above analysis indicates that the purpose of the Plan Change is consistent with/implements the Plan objectives and policies and higher-order directions better. By comparison, the alternative of retaining the status quo would not resolve the issues outlined earlier, would not as efficiently and effectively implement the relevant objectives and policies, the relevant higher-order directions, and the purpose of the Act.

5.2.4 It is, therefore, considered that the purpose of the Plan Change is the most appropriate way to achieve the purpose of the Act.

5.2.5 In establishing the most appropriate provisions for the proposal to achieve the purpose of the plan change, reasonably practicable options for provisions were identified and evaluated.

5.3 Reasonably practicable options for provisions

5.3.1 In considering reasonably practicable alternatives for achieving the objectives and policies of the Plan and the relevant higher-order directions, the following options have been identified. The options take into account the environmental, economic, social and cultural effects; the identified options were assessed in terms of their benefits, and costs and degree of effectiveness.

5.3.2 The tables below **summarise** the assessment of costs and benefits for each option based on their anticipated environmental, economic, social, and cultural effects. Technical reports and consultation events further informed the assessments.

5.3.3 The table below evaluates the costs and benefits and the degree of efficiency and effectiveness of the options for dealing with the issues, including the status quo.

5.3.4 Secondary issues

Issue	Options Evaluation			
	Status Quo (Costs / Benefits)	Option 1 (Costs / Benefits)	Option 2 (Costs / Benefits)	Option 3 (Costs / Benefits)
1. Sub-clauses a.i.A and B are two different options for reducing indoor noise levels for bedrooms and habitable spaces to comply with the rule, in respect of rail or road noise. A. requires an external to internal noise reduction (attenuation) of 30dB, and B. requires specified indoor noise levels to be achieved. There is a risk that the noise reduction required in A. may not achieve the internal noise levels specified in B., which are what is deemed healthy/safe for occupation, in all circumstances. This is because the external noise levels in some environments may be so high, that providing the standard noise reduction required in A. will still result in internal noise levels above the maximum levels prescribed in B.	This option would continue to require acoustic insulation by affected property owners and would provide two different options for complying with the rule, the façade reduction method and internal noise levels method. **Benefits**: - There is a general sense of familiarity with the existing rule amongst professionals. In particular, the façade reduction option of the rule pre-dates the current iteration of 2017. - The rule provides options for the methods of compliance. - Including the option for compliance in A, of external to internal noise reduction, potentially reduces practical difficulties, construction costs, consultant costs and time compared with B. - Having both methods in the rule may achieve a suitable indoor noise	**Internal Noise Level Method (only)** **Benefits**: - The option ensures that internal noise levels are achieved that are appropriate for the external noise environment. - Requires that where internal noise levels are not achieved with an open window, alternative ventilation needs to be provided, which achieves better health and amenity outcomes consistent with that sought by the objectives and policies. **Costs**: - In noisy environments, where this option may require higher levels of insulation, and associated costs, than if the façade reduction option in A. were also available, particularly compared to the specified design option available under the façade reduction method in Appendix 6.11.4. There is a risk that	**External to internal noise reduction method only.** **Benefits:** - Potentially enables reduced design and construction costs, compared to the internal noise level method, particularly with the specified design option available under the façade reduction method in Appendix 6.11.4. - The absence of a requirement for an alternative source of ventilation can result in cost savings. (refer to the evaluation of Issue 9 below on Alternative ventilation) **Costs:** - The resulting noise insulation may be more than is required and increases the costs of development, where external noise levels are low. - Where external noise levels are high, the resulting noise insulation may be less than required and not achieve appropriate amenity and health outcomes. - As internal to external noise reduction methods result in	

Issue	Options Evaluation			
	Status Quo (Costs / Benefits)	Option 1 (Costs / Benefits)	Option 2 (Costs / Benefits)	Option 3 (Costs / Benefits)
	level in some circumstances. - Saves time and costs it takes to change a rule in the plan **Costs**: - Inappropriate noise effects on sleep and amenity are likely to occur in some cases where the external to internal noise reduction method is used, as the resulting internal noise levels can still exceed acceptable levels in noisy environments. - Appropriate health and amenity outcomes may not always be achieved due to no requirement for alternative ventilation for the external to internal reduction method when opening windows. Open windows would result in excessive internal noise levels, or keeping them closed would result in inappropriate temperatures and airflow. (refer to the	development is less feasible or would require resource consent for a lesser reduction in noise. Unlike the façade reduction option, which places an upper limit on the noise attenuation required, the internal noise levels option could act as a constraint to development. - Where internal noise levels cannot be achieved with an open window, alternative ventilation needs to be provided, which can also be considered a disadvantage due to the additional costs.	different internal noise levels, depending on the level of external noise in the locality, it is not possible to set a trigger point at which alternative forms of ventilation are required. This affects the amenity and health outcomes (refer to the evaluation of Issue 9 below on Alternative ventilation). - There is reduced choice and flexibility with the absence of a façade reduction method.	

Issue	Options Evaluation			
	Status Quo (Costs / Benefits)	Option 1 (Costs / Benefits)	Option 2 (Costs / Benefits)	Option 3 (Costs / Benefits)
	evaluation of Issue 9 below on Alternative ventilation) - The external to internal noise reduction method may not necessarily be the most cost-efficient option in all situations because it can result in additional costs to development from 'over-engineering' where external noise levels are low. However, people are not required to choose this option.			
	Effectiveness and Efficiency **Status Quo:** The external to internal noise reduction component of the status quo is less effective in achieving appropriate health and amenity outcomes and in helping residents to provide for their immediate and longer-term needs for social and cultural wellbeing, nor does it foster investment certainty as the method cannot guarantee the mitigation is sufficiently appropriate for the local conditions. On the other hand, removing the method in itself reduces choice (obj. 3.3.2), and may in some instances adversely affected the affordability of a development (obj. 3.3.4, 14.2.1). The poorer amenity and health outcomes from the external to internal noise reduction method is not the most appropriate way to achieve the high-quality, sustainable, well-designed, healthy, urban environments sought by the District Plan(obj. 3.3.7, 14.2.4, 6.1.2.1, policies 14.2.4.1, 14.2.4.8, 14.2.7.1, 6.1.2.1.1). The potential disruption to sleep and other activities from the external to internal noise reduction method, particularly the health implications, is considered to outweigh the cost savings of retaining that method. So retaining that method of compliance is considered to be less efficient than only including the internal noise level method. **Option 1:** The internal noise level method on its own is more effective at achieving the above-mentioned objectives and policies. However, in high noise environments, the method may lead to higher costs in development in order to achieve the desired amenity and health outcomes (obj. 3.3.1, 14.2.1). This can make some developments less feasible.			

Issue	Options Evaluation			
	Status Quo (Costs / Benefits)	Option 1 (Costs / Benefits)	Option 2 (Costs / Benefits)	Option 3 (Costs / Benefits)
	Option 2: For the same reasons as already referred to in the Status Quo, the external to internal noise reduction method is less effective at achieving the Plan's objectives and policies.			
2. Whether complying with Appendix 6.11.4.1 (Noise Attenuation Construction Requirements to achieve 30dB) should be retained as an option, should the façade reduction method be retained. It can result in future plan changes to keep the construction specifications up to date with industry practices since parts are out of date and the products prescribed are no longer available, and similar issues in the future are likely to reoccur.	**Status quo:** **Benefits:** - Provides some level of guidance of what would be required, even if it is no longer feasible to comply with. However, it effectively results in the applicant having to seek and pay for acoustic advice to develop a design option to achieve the required noise reduction, as per the existing alternative option under the façade reduction method. **Costs:** - Requires the use of products that are no longer available. This causes additional administrative costs because staff have to clarify and agree on alternatives.	**Option 1: Update the construction specifications in appendices 6.11.4.1 in the District Plan. (Note: This is an option if using the façade reduction method. Costs and benefits should be viewed within the wider context of whether that method should be retained, as covered in the first issue evaluated in this table).** **Benefits:** - The public has a specific design option that is an accepted means of complying with the rule requirements. - Developers will not be required to seek out independent acoustic advice or rely on designs that are no longer feasible. - Staff and the public have an agreed complying option, thereby keeping costs lower. **Costs:**	**Option 2: Remove the option of compliance with a design specified in an appendix in the District Plan** **Benefits**: - Reduced costs to the community, because the need to update the specifications via plan changes is avoided. **Costs:** - Developers will no longer find a 'ready-made' solution in the District Plan and will have to seek out, and pay for, acoustic advice.	

Issue	Options Evaluation			
	Status Quo (Costs / Benefits)	Option 1 (Costs / Benefits)	Option 2 (Costs / Benefits)	Option 3 (Costs / Benefits)
		- Cost of keeping the appendices updated.		
	Effectiveness and Efficiency Status quo: The only advantage of retaining the existing appendix construction specifications is limited to its potential to be used as a guide by applicants to fulfil the requirements posed by the façade reduction method. This is because the construction specifications contain material choices that are no longer available. This incurs costs for the public and staff in having to clarify what could comply. It effectively results in the applicant having to seek, and pay for, acoustic advice to develop a design option to achieve the required noise reduction, as per the existing alternative option under the façade reduction method. Retaining the existing appendix just creates unnecessary confusion. It is inefficient compared to the other options. Option 1: Updating the relevant appendix will provide greater certainty and fewer costs for applicants. However, it will require continual updating through plan changes when products become unavailable. Considering the number of properties potentially affected by the rule, those cost savings are likely to exceed those for undertaking a plan change. As such, it is likely to be more efficient than the status quo. If it is kept up-to-date, it is also likely to be more efficient than the proposed option, as it will be cheaper to use a pre-approved design than to require a bespoke design from an acoustic consultant. However, note the evaluation in Issue 1 of this table, relating to whether any façade reduction method is appropriate because they are likely to be less effective. Option 2: If the façade reduction method is retained, having no approved design specified in an appendix is likely to be less efficient than having an updated appendix, due to the increased costs for applicants from having to use acoustic consultants.			
3. Under the status quo, there is some ambiguity which parts of buildings are subject to the rules. Two interpretations are possible. Interpretation A is that the rule only applies to parts (habitable spaces) of the building that fall within the specified distance from the road or railway.	**Status quo:** **Benefits**: - Potentially provides increased amenity protection for people in parts of the building further away from the road or railway then the specified distances. **Costs**:	**Option 1: Interpretation A** P **Benefits**: - Only requires noise insulation design elements for those parts of buildings which would not otherwise achieve appropriate sleep, health and amenity outcomes. - Improves certainty, so people know exactly where	**Option 2: Interpretation B** **Benefits**: - Provides increased amenity protection for people in parts of the building that are further away from the road or railway then the specified distances. **Costs**: - Additional costs of development for limited additional benefit	**n/a**

Issue	Options Evaluation			
	Status Quo (Costs / Benefits)	Option 1 (Costs / Benefits)	Option 2 (Costs / Benefits)	Option 3 (Costs / Benefits)
Interpretation B is that the rule applies to all of the habitable parts of the building, even to parts of the building, alteration or addition that falls outside of the specified distance.	- Reduces certainty because people cannot be certain how the rule may affect the property, and this may increase costs. - Likely to result in unnecessarily increased development costs if the rule is interpreted to require parts of the building beyond the distances specified to meet the standards, which is not necessary to achieve appropriate sleep, health and amenity outcomes.	and how the rule affects the property. - Reduces potentially unreasonable transaction costs for unnecessary resource consents where noise reduction is not proposed for areas of the building beyond the specified distances. - Reduces development costs, where noise insulation is not necessary. - Reduces plan complexity **Costs**: - N/a		
	Effectiveness & Efficiency: **Status quo:** The status quo is effective in achieving the health and amenity outcomes sought by the District Plan objectives and policies. The efficiency of the status quo in achieving the intended District Plan objectives and policies is reduced because it is unclear how to apply the rule and may result in additional costs that are not necessary to achieve appropriate internal noise levels. This adversely affects the recovery of the city (Obj. 3.3.1) by limiting potential development opportunities which affect housing capacity and choice, because potential investors may consider the additional costs of insulating parts of a building not subject to high levels of road and rail noise, to be too high. This interpretation would go beyond what Obj. 14.2.4 and Policy 14.2.4.8, as well as Obj. 6.1.2.1 and Policies 6.1.2.1.1 & 6.1.2.1.2 intend in regards to managing noise and achieving appropriate levels of amenity, and healthy outcomes. **Option 1:** Option 1 is effective in achieving the District Plan objectives and policies. Option 1, which targets only the parts of a structure and that also meet the activity-specific criteria (e.g. habitable spaces), is most efficient at achieving the aforementioned objectives and policies. This strikes a balance between costs and benefits by only requiring			

Issue	Options Evaluation			
	Status Quo (Costs / Benefits)	Option 1 (Costs / Benefits)	Option 2 (Costs / Benefits)	Option 3 (Costs / Benefits)
	noise reduction were necessary to achieve appropriate internal noise levels and would remove any costs arising from uncertainty about the requirements of the rule. **Option 2:** Option 2 is effective in achieving the District Plan objectives and policies. Option 2 is less efficient than Option 1 as it unnecessarily increases development costs. It could, however, be more efficient than the status quo by avoiding the costs of the uncertainty in the existing rule. On balance, the most effective option is Option 1 as it achieves the District Plan's intentions, whilst not increasing the burden on developers beyond what is necessary to achieve those outcomes.			
4. Increase in distance within which the rule is triggered for State Highways and railways from 80 to 100 metres. According to the latest understanding of noise and evidence obtained from NZTA, distances from State Highways and railways within which noise insulation needs to be provided needs to increase to protect all occupants from inappropriate levels of noise.	<u>Status quo:</u> **Benefits**: - No additional plan change costs - No additional costs of construction for parts of buildings beyond the existing area affected by the rule **Costs**: - Inappropriate amenity, sleep, and health outcomes for uninsulated buildings subject to higher than recommended internal noise levels	<u>Option 1: Increase in Distances</u> Increase the distance from roads and railways within which the rule is triggered **Benefits**: - Improved amenity, sleep and health outcomes for more people who would otherwise be inappropriately affected - It improved cross-agency administrative alignment with New Zealand Transport Agency / Waka Kotahi and KiwiRail guidelines. **Costs**: - Additional costs of administration - There is an additional cost of construction for buildings previously not captured by	<u>Option 2: The roading authority, including noise reduction measures in the road corridor.</u> **Benefits:** - Reduced costs of development because the relevant roading authority (NZTA for Highways) and Council for major and minor arterials and KiwiRail (railways) would carry some of the costs. - Reduced reliance on resource consents because noise levels might be sufficiently reduced through mitigation measures put in place by the relevant authorities.Reduced cost. **Costs:** - The Council is investing significantly in initiatives that help reduce traffic such as	<u>Option 3: Requiring new subdivisions to include noise reduction measures within the subdivision.</u> **Benefits:** - Costs of mitigation measures can be spread over a greater number of developments which helps reduce costs on individuals. - May help reduce the cost of the building because less noise-insulating mass would be required in a building if an external mitigation system was already in place. **Costs:** - Depending on the scale and associated costs of

Issue	Options Evaluation			
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		the rule. Based on a research report produced by BECA (Dec. 2013), the cost of noise mitigation is highest within 20m of a road and decreases with distance. Within 20m, the additional acoustic cost for a single and double-storey building is 9% and 8%. At a distance of 60m, the additional cost is 5% and 4%, and at 90m the cost is 3% and 2%. The increase in distances will apply an additional cost to construction between these figures.[2] - The increase in construction costs may result in less housing being built within the affected areas, resulting in less housing availability, less consolidation of housing and less affordable housing.	public and active transport infrastructure upgrades. - In many situations, road corridors are already well established and leave little room for physical structures. These would also create urban design and amenity issues and would be considered inappropriate in an urban setting. - Providing financial incentives to help with the acoustic upgrades of new buildings would be unfair towards non-eligible property owners. - NZTA or KiwiRail are not required by law to provide for such structures on existing roads and has no incentive to provide these.	mitigation required, some developments may not go ahead. - This adds prescriptiveness to the rule.
	Effectiveness and Efficiency: **Status quo:** The District Plan intends to achieve healthy internal spaces with good amenity (Obj. 6.1.2.1.1 and Policy 6.1.2.1.1), however, the current distances within which buildings for sensitive activities require noise insulation have been assessed as not being sufficient to capture all buildings where inappropriate internal noise levels are likely to arise. NZTA modelling suggests an increase in this distance from 80 metres to 100 metres for State Highways and railways.[3]			

[2] New Zealand Transport Agency Building Acoustic Mitigation Case Study (9 December 2013), BECA
[3] NZTA Modelling evidence [Guide to the management of effects on noise sensitive land use near to the state highway network (Sept. 2015, V 1.0)]

Issue	Options Evaluation			
	Status Quo (Costs / Benefits)	Option 1 (Costs / Benefits)	Option 2 (Costs / Benefits)	Option 3 (Costs / Benefits)
	The status quo, therefore, less appropriately achieves the intentions of the District Plan's objectives and policies compared to increasing the distance as proposed in Option 1, particularly in achieving some of the communities immediate and long term needs (health and amenity), increased confidence in investment (certainty of healthy homes & amenity), which enhance property value, and enhancement of the city (Obj. 3.3.1). Not increasing these distance is less likely to achieve a high quality, sustainable, residential urban environment (Obj. 3.3.7, 14.2.4, Policy 14.2.4.1, 14.2.4.8). The status quo will not increase costs for developments within the increased area proposed to be covered by the rule, but those increased costs are small at those distances. For these reasons, the status quo is not considered to be either the most effective or the most efficient option. **Option 1:** As indicated above, the advice provided by NZTA indicated that the current distances are not sufficient in capturing all the affected households and sensitive activities. This option will be more effective in achieving appropriate health and amenity outcomes. The increase in the specified distances is likely to add costs to developments not previously subject to noise mitigation controls. The potentially higher costs may adversely affect housing supply, density, and affordability in some circumstances (Obj. 14.2.1. & Policy 14.2.1.1.). However, these costs reduce with distance naturally and are further affected by other structures that provide noise blockage. Given the significant public investments in promoting more sustainable transport modes, it is considered reasonable that private developers also contribute small amounts to achieving the objectives and policies of the District Plan. In Summary, increasing the distances, as indicated under the Status quo, would be more effective, then the status quo, in implementation of the District Plan's objectives and policies. It also has relatively small cost implications. Option 1 is, therefore considered the most effective and efficient option for achieving the above-mentioned objectives and policies of the district plan. **Options 2** is considered less efficient and effective because, in the case of most existing roads, there is little room for physical noise barriers, which themselves can create adverse amenity effects. However, some of the costs will also have to be carried out by the private sector because mitigation on existing corridors is not possible. Option 2 is considered less effective and efficient in achieving the objectives and policies of the District Plan than Option 1. **Option 3** is a valid approach that is already being implemented in some recent greenfield development projects that involve new roads. The costs of mitigation can be spread across a greater number of developments and more readily absorbed, including by those that might not be directly affected by traffic noise but form part of the same development. Depending on the noise exposure on the ground, this added requirement may make some developers rethink progressing a development. It is more effective and efficient to plan this at the subdivision consent/design stage of the process for new roads, rather than applying it to existing urban areas and existing roads.			
5. Requiring noise insulation for all additions or alterations may result in	**Status Quo:**	**Option 1: Removal of alterations and additions from**	**Option 2: Thresholds**	**Option 3: Removal of additions and alterations**

Issue	Options Evaluation			
	Status Quo (Costs / Benefits)	Option 1 (Costs / Benefits)	Option 2 (Costs / Benefits)	Option 3 (Costs / Benefits)
high costs of development, disproportionate to the scale of what is being proposed with little or no benefit in terms of health and amenity.	The current rule uses the terms additions and alterations. There is no further differentiation as to what degree of change has to occur before acoustic insulation is required. **Benefits:** - Captures any form/scale of building work that may affect the noise environment of a habitable space - It achieves overall appropriate amenity and health outcomes because it requires insulation for any scale of development on a property (small alterations to large additions) **Costs:** - May make alterations economically unviable and deter investment. - May require additional costs without achieving the internal noise outcomes where noise can still enter a habitable room through parts of	**the rule, other than additions of a whole room.** **Benefits**: - Captures substantial additions where compliance with the rule is most likely to achieve the internal noise outcomes sought, - does not impose additional costs on other additions and alterations that are less likely to achieve the internal noise outcomes sought - Reduced reliance on resource consents where it would be impractical to require or achieve the internal noise levels sought for the part of the building being altered. - Easier plan administration - Reduced plan complexity - Increased design flexibility **Costs**: - There is a small chance that alterations which previously would have improved noise outcomes through noise insulation will no longer require it and may not achieve the same health	Use of thresholds or design scenarios for when acoustic insulation applies. Thresholds may be tied to the ratio between the proposed addition/alteration and existing space. **Benefits:** - Smaller additions/alterations are exempt from the rule which reduces costs of development - May capture more additions and alterations, compared to Option 1, which may achieve improved noise outcomes. **Costs:** - This additional layer makes the rule more complex and challenging to administer, which increases transaction costs. - It could result in multiple, small additions/alterations over time to avoid the insulation requirement, which is considered in total would have required noise insulation. - It is likely to be difficult to select thresholds that would be appropriate in all circumstances, making them	**Benefits:** - Reduced costs of development from not having to noise-insulate any additions or alterations - The DP rule would be easier to administer and understand - Transaction costs would be reduced **Costs:** - Developments which are otherwise likely to achieve beneficial noise reduction would no longer be required to do so, thereby reducing the achievement of the amenity and health benefits intended compared to the other options.

Issue	Options Evaluation			
	Status Quo (Costs / Benefits)	Option 1 (Costs / Benefits)	Option 2 (Costs / Benefits)	Option 3 (Costs / Benefits)
	the room that are not being altered. - Requires resource consents where if noise insulation is not to be provided, even where it would be impractical or where it would have little or no benefit in terms of internal noise levels for the part of the building being altered. - Increases plan complexity	and amenity outcomes anymore.	somewhat arbitrary and potentially still require insulation in circumstances where appropriate internal noise levels could not practically be achieved.	
	Effectiveness and Efficiency: **Status quo:** The current blanket approach captures any addition/alteration, even minor ones. The status quo is therefore effective in achieving the health and amenity outcomes. However, in some scenarios, the alteration may only be part of internal space and not the entirety. Where the unaltered parts of the room or building do not have the required noise insulation, the added insulation for the alteration may have little or no benefit in achieving appropriate internal noise levels. In such circumstances, the rule adds unnecessary construction and transaction costs and regulatory complexity. That is inefficient. **Option 1:** Proposes the removal of the alterations and additions from the rule, other than additions of a whole room. This makes the rule more efficient as it does not require insulation for small scale changes to an existing structure which would otherwise result in disproportionately higher costs when compared to what the alteration is trying to achieve and where including insulation in the alteration may achieve little or no health and amenity benefit because other. Unaltered parts within the same room are not insulated. As there is a small chance that alterations which currently require noise insulation may not achieve the same health and amenity outcomes anymore, this option is potentially slightly less effective. **Option 2:** Proposes the introduction of thresholds for additions and alterations. The difficulty with this approach is that the thresholds set are likely to be somewhat arbitrary. It may potentially capture more alterations where requiring noise insulation will achieve appropriate internal noise levels than Option 1, making it more effective. However, it may also require noise insulation for more alterations where appropriate internal noise levels will not be achieved than Option 1, making it less effective.			

Issue	Options Evaluation			
	Status Quo (Costs / Benefits)	Option 1 (Costs / Benefits)	Option 2 (Costs / Benefits)	Option 3 (Costs / Benefits)
	Option 3: The final option removes all additions and alterations from this rule. This proposal is considered the least effective option to achieve the objectives and policies of the District Plan. This is primarily because the addition of whole rooms would not be required to noise-insulate, whereas such additions are most likely to be able to achieve the internal noise environments intended. This option would not achieve the anticipated level of amenity and healthy interiors expected of sensitive activities in these areas by Obj. 6.1.2.1, 14.2.4 and Policies 6.1.2.1.1, 14.2.4.8 to the same degree as the other options. Option 1, which removes alterations and lesser additions than a whole room, is considered to be the most appropriate way of achieving the District Plan's objectives and policies. In particular, it better supports the recovery and enhancement of the district by ensuring homeowners can meet their immediate and longer-term needs without unnecessary costs and is more efficient (Obj. 3.3.1., 3.3.2.) while the adverse effects of noise from roads and rails would still be managed appropriately in circumstances where noise reduction is most likely to be effective (Obj. 6.1.2.1 and Policy 6.1.2.1.1.).			
6. The rule requires verification of compliance. For the façade reduction method, this involves both providing a design report before construction and a design certificate before the occupation. The issue is whether it is necessary to require two checks when that method is used. There is also an issue in that it is not clear what has to be certified before construction. It could be that the certificate is issued after an acoustics specialist has verified that the required noise reduction has	**<u>Status Quo:</u>** The status quo - when the facade reduction method is used, both a design report has been provided (prior construction) and a design certificate (before occupation). **Benefits**: - Supports the achievement of better health and amenity outcomes by requiring both a design report and confirmation that the building has been constructed as per the design. **Costs:**	**<u>Option 1: Single-tiered compliance framework</u>** This option will only require the provision of a design report prior to construction by a suitably qualified person. **Benefits**: - Reduces cost for the developer and administratively - It makes it clear what is required and at what point in the process **Costs**: - No certainty that the building constructed has achieved the noise insulation outcomes intended. This is because no	n/a	n/a

Issue	Options Evaluation			
	Status Quo (Costs / Benefits)	Option 1 (Costs / Benefits)	Option 2 (Costs / Benefits)	Option 3 (Costs / Benefits)
been achieved. Alternatively, it could be a certification that what has been constructed complies with the design report previously submitted. These issues are only relevant if the façade reduction method is retained.	- Certification requires an additional level of regulation by requiring confirmation of compliance. This adds to transaction costs and results in additional administration on the part of the Council.	post-construction testing would be undertaken.		
	Effectiveness & Efficiency: **Status quo:** The two-staged certification approach of reporting prior to construction and certifying prior to occupation is theoretically more effective at achieving Objective 6.1.2.1 and Policy 6.1.2.1.1 than option 1. But this increased effectiveness is compromised due to a lack of clarity regarding what is actually required in the certification process prior to occupation. If what is required is simply confirmation the what has been constructed is as per the design report submitted prior to construction, such confirmation would be checked as part of the building consent inspections. If the second step is to verify that the noise reduction has actually been achieved, then that would ensure compliance. However, it would be unreasonable, and potentially impractical, to make changes to a building where the levels were not achieved once it has been constructed. The design report prior to construction by a suitably qualified acoustic expert should be sufficient in itself to ensure compliance, along with the plans being verified as part of the building consent and inspection phases. The building consenting process ensures there still a chance to make meaningful changes to development. **Option 1:** This option is possibly less effective than the status quo, but only if an acoustic consultant were to provide a report on a design that would not, in fact, meet the rule requirements. However, it will be more efficient than the status quo, in terms of Objective 3.3.2, by reducing costs for all developments using the façade reduction method. Overall, Option 1 is considered to be the most appropriate way to achieve the objectives and policies of the District Plan.			
7. Additional clarification on determining noise levels There has been some degree of variability between how acoustic experts determine external	**<u>Status quo:</u>** **Benefits**: - No plan change costs **Costs**:	**<u>Option 1: Clarifying the specifications for determining noise levels:</u>** **Benefits:** - Improves rule clarity by providing a baseline for how	n/a	n/a

Issue	Options Evaluation			
	Status Quo (Costs / Benefits)	Option 1 (Costs / Benefits)	Option 2 (Costs / Benefits)	Option 3 (Costs / Benefits)
and internal noise levels for the internal noise level method. In order to provide for a more consistent and appropriate approach, additional specifications are necessary to form the basis for assessments. These include the location from where to measure noise, any structural elements which are to form part of the assessment, and ventilation requirements with closed windows.	- Increased uncertainty from incoherent rule structure - Increased transaction and administration costs due to uncertainty around what the correct approach is in terms of the structural elements of a building that are to be included in an acoustic assessment and where to measure noise from. - Increased difficulty in administering the rule because of differences in approaches to measuring noise - May not achieve the most appropriate health and amenity outcomes because some experts have left out key structural elements such as pitched roofs in their assessments.	to conduct noise measurements. - Reduced transaction and administration costs because of the required approach is clarified. - Greater certainty that developments achieve internal sound outcomes as intended **Costs**: - Plan change costs		
	Effectiveness & Efficiency: **Status Quo:** Overall, the current approach is not efficient in all situations at achieving Objective 3.3.2 in the Strategic Directions because it reduces plan clarity, and increases uncertainty and may result in reliance on resource consents. It may also add costs where existing noise levels are incorrectly established, such as a loss in amenity and health outcomes. It is also not effective as it may result in construction solutions that do not result in the level of health and amenity outcomes intended.			

Issue	Options Evaluation			
	Status Quo (Costs / Benefits)	Option 1 (Costs / Benefits)	Option 2 (Costs / Benefits)	Option 3 (Costs / Benefits)
	Option 1: This option would better achieve the Objectives 3.3.2 and, 6.1.2.1) and policies (6.1.2.1.1). The rule is clearer and more effective at ensuring that the intended health and amenity outcomes are achieved. This helps improve certainty and reduce costs. Option 1 is considered to be the preferred option.			
8. Where the internal noise level method of compliance is used, a design report is required that takes into account future increases in the use of roads and railways either by the addition of 2dB to existing noise levels in design reports or by forecasting traffic levels in 20 years time. Current information indicates that to properly take into account future increases in noise, an addition of 3dB to existing noise levels is more appropriate than 2dB.	**Status quo** **Benefits**: - Provides some future-proofing to take into account increasing noise levels **Costs**: - The addition of 2dB is estimated to have been too conservative and is not providing a sufficiently adequate buffer to ensure the intended amenity and health outcomes are achieved in the future.	**Option 1:** Increasing the addition of future noise levels from 2 to 3dB **Benefits**: - Better provides for the intended amenity and health outcomes into the future. **Costs**: - Addition of 1 extra dB is likely to result in a small increase in constructions cost in some instances.	n/a	n/a
	Effectiveness & Efficiency: **Status quo:** The status quo does provide a degree of effectiveness in achieving amenity and healthy habitable spaces. However, it is not as effective as Option 1 for achieving the District Plan's Objective 6.1.2.1 and Policy 6.1.2.1.1 for the future. It improves efficiency, slightly. **Option 1:** The increase in decimals by 1 is more effective at meeting people's longer-term needs and wellbeing (Obj. 3.3.1.) and achieve amenity outcomes and healthy environments (Obj. 6.1.2.1 and Policies 6.1.2.1.1 and 6.1.2.1.2.). It is slightly less efficient because of increased costs in some cases. Option 1 is considered to be the most appropriate way of achieving the objectives and policies of the District Plan because of its increased effectiveness for a limited increase in costs.			

Issue	Options Evaluation			
	Status Quo (Costs / Benefits)	Option 1 (Costs / Benefits)	Option 2 (Costs / Benefits)	Option 3 (Costs / Benefits)
9. Alternative forms of ventilation are not required for the façade reduction method of compliance where internal sound levels cannot be achieved with opened windows. Currently, the rule requires consideration of opening a window in designing to meet noise outcomes only for the internal noise level method of compliance. Lack of alternative ventilation can either result in having to open windows for ventilation and temperature control, which could result in inappropriate internal noise levels. Alternatively, it would result in windows being kept closed, which causes a lack of ventilation and excessive internal temperatures. This issue is only relevant if the façade reduction method is retained.	**Status Quo:** No alternative ventilation required for the façade reduction method of compliance. **Benefits**: - Reduced costs due to no ventilation being required **Costs**: - Inappropriate internal noise levels if windows have to be opened to circulate air and control temperature. Lack of ventilation and excessive internal temperatures if windows have to be kept closed to achieve appropriate internal noise levels. - More expensive if need to retrofit ventilation later to achieve appropriate health and amenity outcomes.	**Option 1:** Alternative ventilation to be provided in all cases, under both methods of compliance, where internal sound levels cannot be achieved with opened windows. The alternative form of ventilation is to achieve Building Code provisions (G4 – NZS4303). **Benefits**: - There are improved effects on health and well-being, better achieving the intended District Plan outcomes. - Potentially positive effects on property value - Future proofs developments **Costs**: - Initially increased costs of development, although likely to be cheaper than having to retrofit ventilation later to achieve appropriate health and amenity outcomes.		**n/a**
	Effectiveness & Efficiency : **Status quo:** The lack of a requirement for alternative forms of ventilation under the façade reduction method of compliance, where internal sound levels cannot be achieved with opened windows, will lead to inappropriate health and amenity outcomes. It is less			

Issue	Options Evaluation			
	Status Quo (Costs / Benefits)	Option 1 (Costs / Benefits)	Option 2 (Costs / Benefits)	Option 3 (Costs / Benefits)
	effective than Option 1 at achieving Objective 6.1.2.1 and Policy 6.1.2.1.1, due to the lack of provision of ventilation systems in those circumstances. However, as the status quo does not require alternative ventilation under the façade reduction method, it has reduced costs compared to Option 1. **Option 1:** Requiring ventilation in any scenario where healthy noise levels cannot be achieved with an open window more effectively achieves the intended amenity and health outcomes (Objective 6.1.2.1 and Policy 6.1.2.1.1). This does come at a cost, although it is cheaper than having to retrofit ventilation at some later time when the poor health and amenity outcomes become apparent. Considering the uncertain cost savings of the status quo, Option 1 is considered to be more effective and efficient than the status quo and the most appropriate way to achieve the objectives and policies of the District Plan.			
10. Adoption of the term 'Railway' to replace 'Railway Designation'. The issue is that the existing reference to "railway designation" is too narrow to include rail sidings on private property. Railway designation only applies to the part of the railway network that is operated by KiwiRail. It is important to include private rail sidings are subject to different noises such as loading and unloading of goods.	**Status quo:** The operative rule uses the term Railway designation which is limited to only KiwiRail operated parts of the wider rail network. **Benefits:** - The major components of the greater railway network are covered by railway designation **Costs:** - The current term's limited range of inclusion of integral parts of the wider railway network increases these parts' vulnerability to the effects of reverse	**Option 1: Replacement of the term 'railway designation' with 'Railway', and include the term railway sidings to address rails in use on private land.** **Benefits:** - The term includes all aspects of the wider railway network and reduces the likelihood of effects of reverse sensitivity to affect existing private rail sidings. This helps future-proofing the efficient and effective operation of private sidings. - Its inclusion helps minimise additional costs for operators of railway sidings that are a result of reverse sensitivity and reduces reliance on resource consents. - There are only a small number of existing rail sidings in Christchurch which limits the spatial extent of the effects of noise. However, additional railway sidings may be installed in the future. In addition, these sidings are found in industrial zones where sensitive activities are rare. However, many of the boundaries of industrial zones adjoin residential and other zones where sensitive activities more commonly occur. **Costs:**	n/a

Issue	Options Evaluation			
	Status Quo (Costs / Benefits)	Option 1 (Costs / Benefits)	Option 2 (Costs / Benefits)	Option 3 (Costs / Benefits)
	sensitivity. Private rail sidings are just as important to the railway network's function as the parts currently protected by railway designation. - May increase costs of operation of existing and new railway sidings. - Increases reliance on resource consents	- Sensitive activities that locate near existing and new rail sidings in the future may require increased noise insulation to avoid situations of reverse sensitivity. However, given that such sidings are generally placed in industrial and heavy industrial zones, very few sensitive activities will be affected by the proposal. - The boundaries of rail designations can be relatively easily identified from the planning maps in the District Plan. The boundaries of the "railway" land containing railway infrastructure can be much more difficult to define. In the case of sidings on private land, it would be difficult to determine where the boundary of that part of the railway network is. On a large industrial site, for example, there may be a siding only along one property boundary. But it would not be clear where the starting point for the specified distance in the rule is for determining whether properties adjoining other boundaries of the site need to comply with the rule.		
	Effectiveness and Efficiency The status quo does not effectively and efficiently provide rail sidings, an integral part of the wider railway network, with adequate protection from the effects of reverse sensitivity. This leaves the efficient operation of parts of the railway network vulnerable and potentially hinder recovery (Obj. 3.3.1) and increase reliance on resource consents (Obj. 3.3.2). Higher noise levels can be expected near existing rail sidings and applying the rule to these situations more effectively achieves the anticipated outcomes for sensitive activities in such an environment (Obj. 6.1.2.1). Option 1, the replacement of the term railway designation with the railway as defined by the Railway Act 2005, is considered to be the more effective and efficient option to achieving the objectives and policies of the District Plan.			
11. The rule requirements apply to "habitable spaces", but this term only relates to residential and guest accommodation activities, despite the rule applying to other activities. This means that where the activity is sensitive but not	**Benefits:** - Higher amenity in non-habitable spaces of a sensitive activity **Costs:** - Less cost-effective to require the entirety of a	Ensure the same exemptions that apply to residential and guest accommodation also apply to other sensitive activities. **Benefits:** - Noise insulation has to be applied to only those spaces		

Issue	Options Evaluation			
	Status Quo (Costs / Benefits)	Option 1 (Costs / Benefits)	Option 2 (Costs / Benefits)	Option 3 (Costs / Benefits)
residential or guest accommodation, noise insulation would have to be applied to the entirety of that activity and not just its habitable spaces. This is because sensitive activities do not exempt certain parts of a building in a similar manner as the definition of 'habitable spaces' does.	sensitive activity to be noise insulated rather than only those spaces that are considered habitable. - Reduced clarity of the rule because it is ambiguous that non-habitable spaces require noise insulation. This potentially also increases the need for resource consent.	in a sensitive activity that are considered habitable. This is considerably more cost-effective than having to insulate the whole activity. - Improves clarity of the rule because it removes ambiguity around which spaces require insulation and which ones do not. - The reduction of ambiguity may also reduce the need for resource consents. **Costs:** - Potential reduction in amenity in non-habitable spaces of sensitive activity		
	Effectiveness and Efficiency The status quo does not effectively and efficiently provide for appropriate and consistent levels of noise insulation across all sensitive activities. It increases costs of development for some sensitive activities and potentially increases transaction costs and reliance on resource consents (Obj 3.3.2), which affects recovery adversely (Obj. 3.3.1). Option 1 directly addresses these shortcomings, although with a minimal loss in amenity in spaces that would commonly not be seen as habitable, and is considered the more effective and efficient option of the two.			

5.4 The proposed rule

5.4.3 Based on the preceding evaluations, the new rule for managing the adverse effects of noise from roads and railways on sensitive activities is as follows:

6.1.7.2.1 – Sensitive activities near roads and railways

i. Any addition of a whole room to an existing building or any part of a new building, intended for a Sensitive Activity, within the distances specified from a road or a railway network shall be designed and constructed so that noise from road or railway sources will not exceed internal sound design levels specified in the table below:

Internal sound design levels near roads and railways

Measurement point for road or railway	Distance (metres)	Internal design sound levels (i)	
		Bedrooms	Other habitable spaces and spaces used for other Sensitive activities:
Centre of the railway track including railway sidings on private property	100	35dB L_{Aeq}(1h)	40dB L_{Aeq}(1h)
Boundary of any State Highway	100	40dB L_{Aeq}(24h)	
Marked traffic lane of any Major or Minor Arterial	40		
Marked traffic lane of any Main Distributor or Local Distributor Road			
Marked traffic lane of any Collector Road	20		

Except where:

a. the space is one of the following - storage spaces, stairwells, bathrooms, laundry rooms, toilets, pantries, walk-in wardrobes, corridors, clothes drying rooms, or entrance areas; or

b. the sound incident on the most exposed part of the proposed façade of the affected space is less than 55 dB L_{Aeq}(1h) for rail noise or 57 dB L_{Aeq}(24h) for road traffic noise.

c. the nearest façade of the building is at least 50 metres from all state highway, railway, and rail siding, and there is a solid building, fence, wall or landform that blocks the line-of-sight from all parts of all windows and doors to all parts of any state highway road surface or all points 3.8 metres above railway tracks

ii. Compliance with this rule shall be demonstrated by providing the Council with a design report before construction, which is prepared by a suitably qualified acoustics specialist, stating that the design proposed is capable of meeting the required internal noise levels.

iii. Determination of the internal design sound levels, including any calculations, shall be based on the following considerations:
   a. Railway noise shall be deemed:
      1. to be 70 L_{Aeq}(1h) at a distance of 12 metres from the edge of the track or centre of the track where it is a rail siding; and
      2. to reduce at a rate of 3 dB per doubling of distance up to 40 metres and 6 dB per doubling of distance beyond 40 metres;
   b. Road noise is to be based on measured or predicted noise levels plus 3 dB added to predicted sound levels or based on forecast traffic in 20 years' time.
   c. Where no traffic lane is marked, the distances shall be measured from 2 metres on the road-ward side of the formed kerb. The classification of roads is shown in Appendix 7.5.12 Road Classification System.
   d. Any external noise levels shall be assessed at the location of the most exposed part of the proposed façade of the affected space(s).
   e. Any calculations of noise for the purpose of determining internal noise levels shall take into account all of the relevant external elements of a habitable space at the same time, including roof areas and walls.
   f. Internal design sound levels shall be achieved in conjunction with the ventilation requirements of the New Zealand Building Code. If windows are required to be closed to achieve the internal design sound levels, then a ventilation system is required.

iv. Ventilation systems shall meet the following specifications:
   a. Mechanical ventilation must satisfy clause G4 of the New Zealand Building Code; and
   b. Achieve a minimum of 7.5 litres of air per second per person; and
   c. 35 dB L_{Aeq}(30s) at night time in bedrooms when measured 1 metre away from any grille or diffuse; and
   d. 40 dB L_{Aeq}(30s) in any other space when measured 1 metre away from any grille or diffuser.

6.1.8 Rules – Matters of discretion

…

xii. The extent to which achieving the standard may give rise to adverse effects on the heritage values associated with a building listed in Appendix 9.3.7.2 (Schedule of Significant Historic Heritage) that outweigh the benefits of noise insulation.

Advice note: Specialist heritage advice may help determine the appropriateness of any building solutions to manage the adverse effects of noise from roads and railways.

6 Conclusions

6.1 An evaluation of the efficiency and effectiveness of the proposed rule with the existing provisions indicates that the preferred option is the most appropriate way to achieve the objectives of the District Plan and the relevant Plan objectives/ directions of the higher-order documents.

APPENDIX 1 -

APPENDIX 1

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Report Number: AC19118 – 02 – R2

Review of District Plan Rule 6.1.7.2.1 – Sensitive Activities near Roads and Railways Stage 1

Acoustic review

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1.0 BACKGROUND

The Christchurch District Plan review introduced Rule 6.1.7.2.1 *Sensitive Activities near Roads and Railways* ('the Rule') as follows:

a. *The following activity standards apply to new buildings, or alterations or additions to existing buildings, intended for a sensitive activity:*

i. *External sound insulation - Any new building intended for a sensitive activity, and any alteration or addition to an existing building intended for a sensitive activity, located within 80 metres of the boundary of any state highway or railway designation, or within 20 metres of the edge of the nearest marked traffic lane of a collector road, or within 40 metres of the edge of the nearest marked traffic lane of a Main Distributor, Local Distributor or arterial road, shall either:*

A. *be designed and constructed to achieve a minimum external to internal noise reduction of 30 dB $D_{tr,2m,nT,w} + C_{tr}$ to any habitable space; or*

B. *be designed and constructed to meet with the following indoor design sound levels:*

I. *Rail noise inside bedrooms between 2200 hours and 0700 hours – 35 dB $L_{Aeq(1h)}$;*

II. *Rail noise inside habitable spaces excluding bedrooms – 40 dB $L_{Aeq(1h)}$;*

III. *Road traffic noise inside all habitable spaces – 40 dB $L_{Aeq(24h)}$*

IV. *Rail and road traffic noise within any other building intended for a sensitive activity – maximum value recommended in AS/NZS2107:2000.*

except where either:

V. *the sound incident on the most exposed part of the outside of the building is less than 55 dB $L_{Aeq\ (1h)}$ for rail noise or 57 dB $L_{Aeq\ (24h)}$ for road traffic noise; or*

VI. *the nearest façade of the building is at least 50 metres from all state highway and railway designations and there is a solid building, fence, wall or landform that blocks the line-of-sight from all parts of all windows and doors to all parts of any state highway road surface or all points 3.8 metres above railway tracks.*

ii. *Compliance with Rule 6.1.7.2.1 can be achieved by either:*

A. *providing the Council with a design report (prior to construction) and a design certificate (prior to occupation) prepared by a suitably qualified acoustics specialist stating the design proposed is capable of meeting activity standard a.i.; and/or*

B. *conforming to the acceptable solutions listed in Appendix 6.11.4 Noise Attenuation Construction Requirements.*

iii. *For the purposes of ventilation systems, compliance with Rule 6.1.7.2.1 shall be confirmed by providing the product specifications; or a design certification (prior to occupation) prepared by a suitably qualified acoustics specialist, stating the design proposed is capable of meeting the activity standards.*

iv. *Rail noise shall be deemed to be 70 dB $L_{Aeq\ (1h)}$ at a distance of 12 metres from the edge of the track, and shall be deemed to reduce at a rate of 3 dB per doubling of distance up to 40 metres and 6 dB per doubling of distance beyond 40 metres;*

v. *Compliance with Rule 6.1.7.2.1 a.i.B. shall be confirmed by providing the Council with a design report prepared by a qualified acoustic engineer demonstrating compliance, prior to any sensitive activity or alteration occurring. The design shall take into account future permitted use of the collector roads and arterial roads, and railway and state highway designations outside the Central City, either by the addition of 2 dB to predicted sound levels or based on forecast traffic in 20 years' time.*

vi. *The indoor design sound levels in Rule 6.1.7.2.1 a.i.B shall be achieved at the same time as the ventilation requirements of the New Zealand Building Code. If windows are required to be*

closed to achieve the indoor design sound levels then an alternative means of ventilation shall be required within bedrooms.

vii. *Where no traffic lane is marked, the distances shall be measured from 2 metres on the roadward side of the formed kerb. The classification of roads is shown in Appendix 7.5.12 Road Classification System.*

viii. *Ventilation systems where installed shall:*

a. *generate noise levels not exceeding*

i. *35 dB $L_{Aeq\ (30s)}$ at night time in bedrooms; and*

ii. *40 dB $L_{Aeq\ (30s)}$ in any other habitable space (excluding bedrooms) when measured 1 metre away from any grille or diffuser; and*

b. *provide an adjustable airflow rate of up to at least 6 air changes per hour.*

We understand that since the Rule has become operative the Christchurch City Council has received a disproportionate level of feedback regarding the unsuitability of the rule, from both internal and external parties.

Acoustic Engineering Services (AES) has been engaged to review how the Rule is currently being applied and provide comment on how it could be improved. In order for us to complete this review the Christchurch City Council (CCC) have provided us with a sample of 48 building projects which required Resource or Building Consent and interacted with the Rule.

2.0 THE SAMPLE

The majority of the buildings in the sample were in suburban locations, with a limited number of examples in Commercial zones (2), Industrial zones (1) and the Central City (3). 35 examples were stand-alone residential dwellings, 9 were multi-unit residential, 2 were preschools, and 3 were hotels or short-term accommodation.

The building materials varied widely within the sample. Cladding materials included:

- Lightweight / aerated concrete panels
- Plaster over polystyrene
- Timber and fibre cement weatherboards
- Fibre cement sheet
- Brick
- Steel sheet
- Concrete panel

We have undertaken some basic analysis of the sample, to provide some insight into the types of projects which interact with the rule, and how this process typically unfolds. The outcomes of this preliminary analysis are as follows:

- 43 (90 %) of the projects involved noise from road traffic – with the remaining 5 (10 %) involving noise from railways.
- For 23 (48 %) of the projects, an acoustic engineer was engaged as per the option in part a.ii.A of the Rule. For 7 (15 %) of the projects, the acceptable solutions listed in Appendix 6.11.4 of the District Plan were used, as per the option in part a.ii.B of the Rule. For the remaining 18 (38 %) solutions were accepted by the Council which did not comply with the Rule, via a Resource Consent process.

For the projects which involved noise from roads:

- The roads included State Highways (5 examples – 10 %), Main Distributor, Local Distributor or Arterial roads (26 examples – 54 %) and Collector Roads (17 examples – 35 %).
- In the vast majority of instances, the speed limit of the relevant road was 50 km/hr. The examples where a higher speed limit was involved were typically the State Highways, with speed limits of 60 to 100 km/hr.
- The Annual Average Daily Traffic (AADT) data for the roads indicates traffic volumes ranging between 640 and 32,000. From a noise perspective, all other things remaining equal, the noise generation between these two AADT scenarios would vary by 17 dB.
- The setback distance between the nearside carriageway of the road and the noise sensitive building ranged between 5 and 80 metres. From a noise perspective, all other things remaining equal, the noise received between these two setback scenarios would vary by 12 dB.

Based on the above, and where sufficient information was available, we have calculated the worst-case noise levels incident on the closest façade of the proposed building in each case (including a + 2 dB allowance for future growth, as per part a.v of the Rule). The approximate distribution of projects which fall into broad external noise level ranges (which we will use later in this report) are shown in figure 2.1 below.

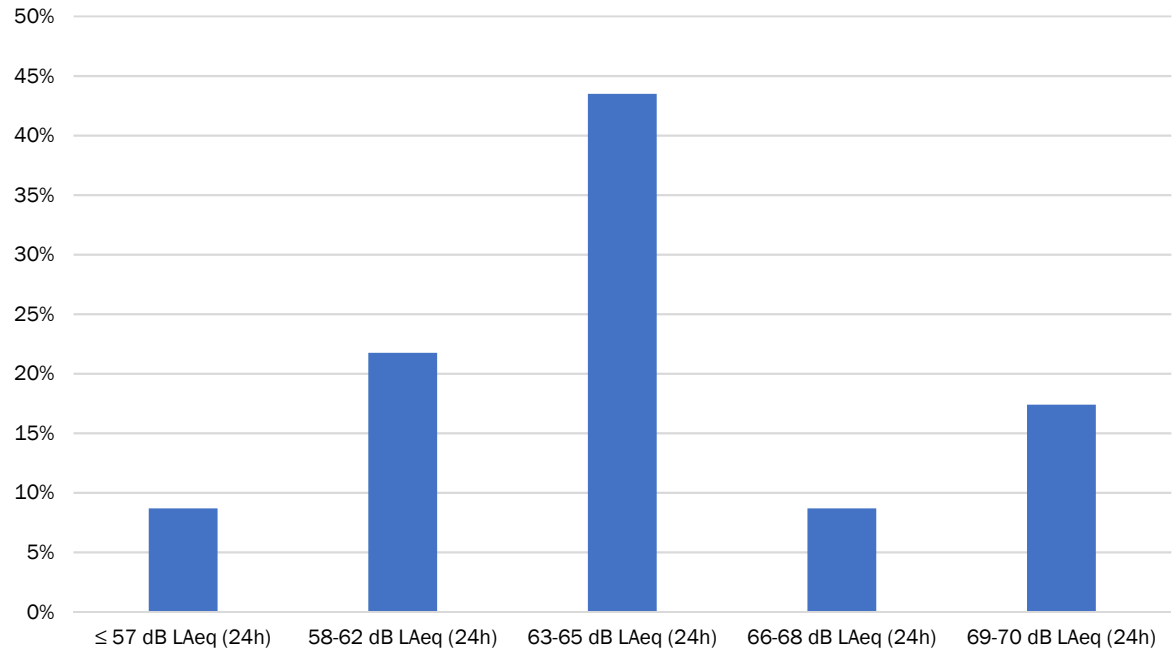

Figure 2.1 – Typical external noise level experienced at the closest façade of noise sensitive buildings

The Rule requires consideration of noise incident on all facades of a noise sensitive building – not just the most exposed façade. We have therefore reviewed an additional 10 AES projects involving residential buildings in close proximity to a road, where we had already undertaken computational SoundPlan modelling which allowed the difference between the noise level received at the closest façade to the road, and other facades, to be examined. A number of examples of this computational modelling are shown in figure 2.2 below.

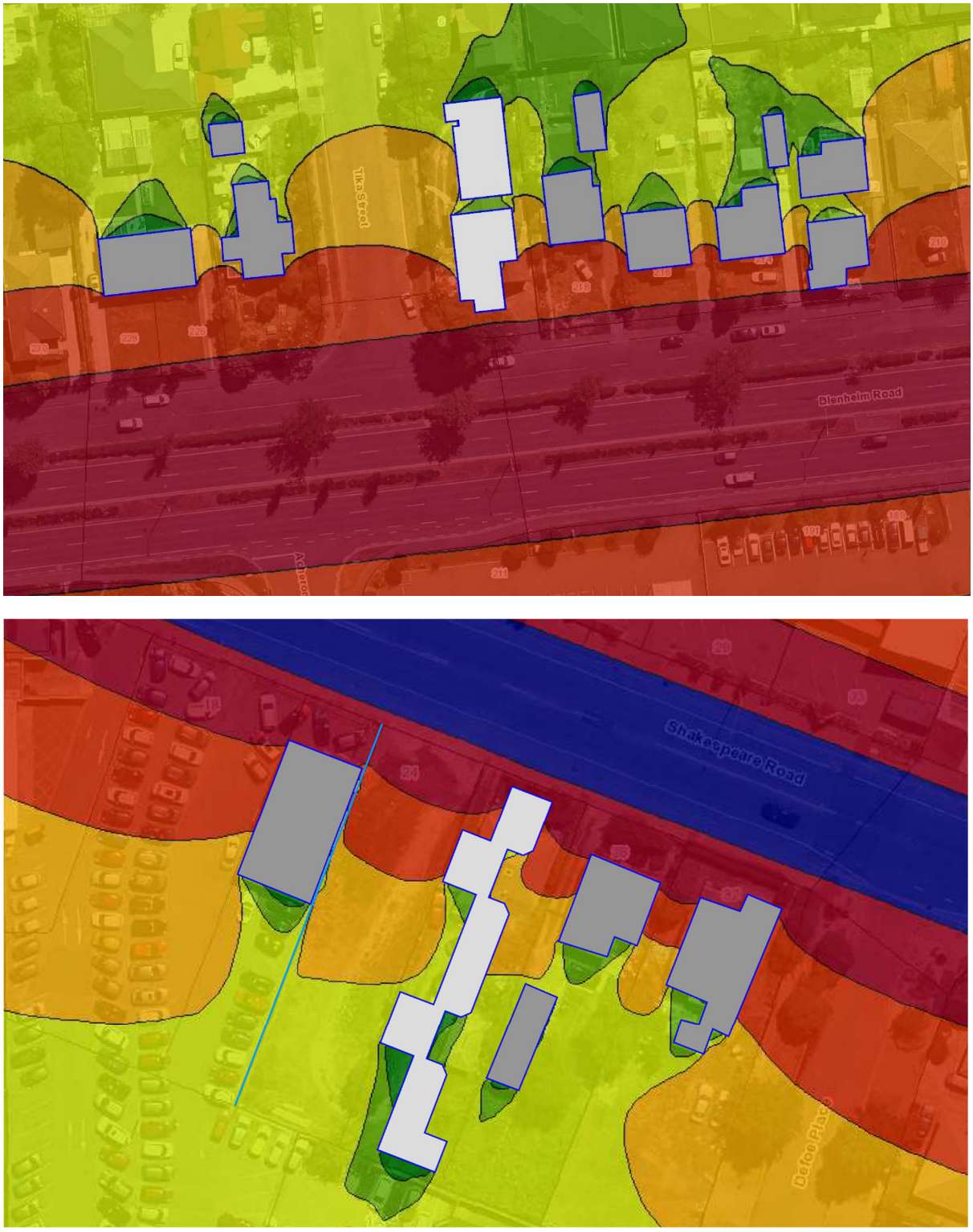

Figure 2.2 – Examples of computational modelling used to examine noise levels received on different facades of buildings

The findings of this analysis were:

- For facades perpendicular to the road, the expected noise level is at least 3 dB lower than the most exposed façade. Sometimes the difference was much greater.

- For the rear façade (on the side of building away from the road), the expected noise level is at least 15 dB lower than the most exposed façade.

When combined with the information in figure 2.1, this analysis has allowed us to develop a reasonable understanding of the external traffic noise circumstances which each project in the sample was likely to have experienced.

The majority of the sample projects related to road traffic noise, incident on stand-alone or duplex residential houses or units. There were however a number of other situations, such as:

- Rail noise incident on stand-alone residential units.

- Road traffic noise incident on hotels and preschools.

In the following analysis we have not focused on these more uncommon situations, instead focusing on the issue of whether the Rule is fit for purpose for the situations where it is most commonly applied. How any changes to the Rule impact these less common situations should however be revisited in due course.

3.0 CURRENT RULE FUNCTION

When the Rule was drafted, it appears that there were three general ways in which it was envisaged people would navigate through the process:

- By engaging an acoustic engineer to advise them how to comply with the Rule via part a.i.A and/or part a.i.B
- By using the acceptable solutions in Appendix 6.11.4
- By adopting an alternative approach which resulted in a non-compliance, and seeking a Resource Consent

The Council has provided us with additional information regarding the types of developments within the Resource Consent category. The percentages of the various categories (such as type of development, zone, trigger road etc,) have been concluded to be representative of the total number of Resource Consent applications that interact with this Rule. There is not sufficient information for this to be determined for the remaining two approaches.

We have discussed each of these approaches below.

3.1 Projects where an acoustic engineer was engaged

As outlined above, there are two options that an acoustic engineer can use to assess the development under the Rule – part a.i.A or a.i.B.

We consider that part a.i.B of the Rule provides the most appropriate outcome from an acoustic perspective. This is due to the fact that adverse effects associated with noise ultimately depend on the noise level experienced, and that is something that part a.i.B of the Rule seeks to control directly. We agree that the indoor design sound levels outlined in part a.i.B are appropriate. We also understand that the 'correct' interpretation of the Rule with regard to mechanical ventilation (as per the CCC Practice Note) means that where the stated levels cannot be met with windows open, a mechanical ventilation system must be provided. This is appropriate. Therefore, for examples where an acoustic engineer has been involved and part a.i.B of the rule has been used, we consider the outcome to be most likely to be the 'correct' one in terms of protection of residents from noise.

By comparison, part a.i.A of the Rule is a compromise. Whether a façade reduction of 30 dB $D_{tr,2m,nTw}+C_{tr}$ is adequate to achieve an appropriate internal noise level depends on the external noise levels. As the previous section demonstrates, the external noise levels for typical buildings captured by the Rule can vary significantly – both in terms of the type and proximity of the road traffic noise source, and then between the most exposed façade, and other facades of a building. In some cases the façade reduction may ensure appropriate internal levels, in others internal noise levels may be too high, or money may be invested upgrading structures where noise levels were already satisfactory. To add to the complication, currently we understand that due to ambiguous drafting, the 'correct' interpretation of the Rule with regard to mechanical ventilation (as per the Council Practice Note) means that where part a.i.A is used no mechanical ventilation is required. This means that (i) people will have to choose between appropriate internal noise levels and fresh air ventilation and so are likely to be exposed to higher than ideal noise levels more often, and (ii) part a.i.A may therefore be seen as a more cost effective option by some developers who are not concerned about the acoustic outcome, but rather the cheapest way to navigate through the rule. This may have skewed the popularity of part a.i.A.

That is not to say a façade reduction rule such as part a.i.A is obviously inappropriate. There are a number of situations where it may be a reasonable approach, such as:

- In situations where some of the basic variables are fixed, it simplifies the analysis while not compromising the ultimate outcomes. This argument may have been more relevant when a similar rule was first introduced in the Christchurch City Plan – as it was restricted to specific zones where

the type and arrangement of likely development, and noise sources were not as varied as those which the current Rule encounters.

- Where it is suspected that external noise levels are so high that the part a.i.B approach would lead to excessive or impractical constructions, and essentially prohibit development on some sites. Effectively 'capping' the level of upgrades required by having a façade reduction option still enables development on these sites. However, assuming it is accepted that the internal noise levels in a.i.B are appropriate, such an arrangement would knowingly enable developments to be completed where people would be exposed to potentially harmful noise levels. In this case, given the maximum façade noise level within the sample was 70 dB L_{Aeq}, it appears that this would not be a common occurrence.

- Where it is considered that there will be a high level of non-conformance or community dissatisfaction unless the rule is perceived as being 'simple' and avoiding the need for people to engage the services on an acoustic engineer – in which case a blanket 'façade reduction' rule could be adopted as it is 'better than nothing'.

It is likely that it was for reasons such as these that a rule similar to part a.i.A was originally introduced in the previous Christchurch City Plan – first only in the Central City Edge zone, and then in Living 3 and Living 4 zones. In both of those instances, the form of likely development and incident noise levels were much better understood. For example, in the Living 3 and 4 zones, new noise sensitive development was expected to be primarily medium density residential (for which site constraints and optimisation often dictate a predictable physical form), and modelling was done of all of the relevant noise generating roads – reproduced in figure 3.1.

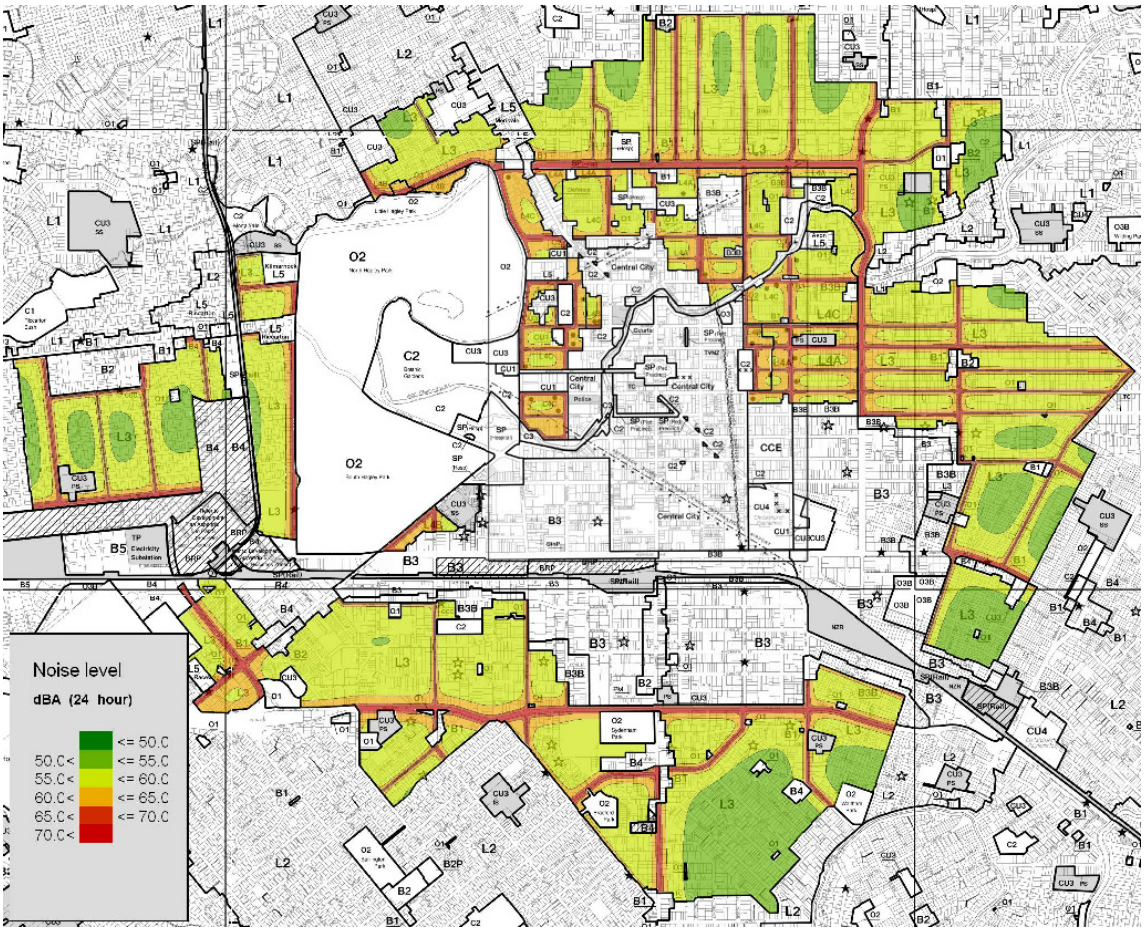

Figure 3.1 – Traffic noise level modelling completed during Living 3 and Living 4 sound insulation rule Plan Change

In regards to the Rule and its application within the sample, we anticipated that part a.i.A would be primarily used in situations where high external noise levels meant that the upgrades required were less than those required to comply with part a.i.B (which means that the internal noise levels would have been higher than appropriate), or as above, the issues with the Rule drafting mean a.i.A may have been used on balance to avoid installation of mechanical ventilation. Again, this outcome is suboptimal from an acoustic perspective. This is discussed further in section 4.2.

We also expected the analysis of the portion of the sample where an acoustic engineer had been involved to reveal the extent to which there are technical differences between how acoustic engineers undertake the analysis. This may be evident, for example, where in two largely identical situations very different recommendations have been made. The analysis is relatively straight-forward, and so we did not expect this to be an important variable. One potential source of variation was expected to be the sound transmission loss information used in the analysis. Such data when supplied by manufacturers (for example, for double glazed window systems) can vary significantly. Where no test data is available and modelling is used, again there can be significant differences between the predictions of different software packages, and even for a same software package, depending on how the modelling is completed. Our findings with regard to this issue are discussed in section 4.2.

3.2 Projects using the acceptable solutions in Appendix 6.11.4

The acceptable solutions in Appendix 6.11.4 have generally been formulated to ensure the composite outside to inside noise reduction will achieve 30 dB $D_{tr,2m,nTw}+C_{tr}$, even in a worst case scenario with regard to the sizes of the weakest façade elements. The Appendix requirements are therefore conservative. In general terms, noise levels at the most exposed façade of a building would need to exceed 70 dB L_{Aeq} for the Appendix solution to be the same as that which would be required under part a.i.B of the rule (i.e. to ensure appropriate internal noise levels). The analysis in section 2.0 confirms that in very few instances in the sample are the expected noise levels at the most exposed façade likely to be 70 dB L_{Aeq} or over, and even if this was the case the levels at other facades will be lower. We therefore expected the sample to reveal that where the Appendix solutions had been used, a higher level of protection was provided than is justifiable from an acoustics perspective, in almost all instances. Our findings with regard to this issue are discussed in section 5.1 below.

There is however the complication as above that if the Appendix is used, the current Rule wording means that mechanical ventilation is not necessary. This may be seen as a cost saving, which offsets the cost of the building upgrades and makes the Appendix approach desirable. As above this outcome is suboptimal from an acoustic point of view, as where windows are open for ventilation the upgraded façade is of no benefit.

We are also aware that some people prefer to spend money on something physical which is arguably a ‘benefit’ to end users, rather than on analysis and reports by engineers. For those people, the Appendix is an attractive option. However, that logic presumably only holds if the additional cost of the Appendix solutions is comparable to the cost of engaging an acoustic engineer (who may have been able to tell you that no upgrades were necessary).

We also understand that the Appendix solutions themselves are not necessarily consistent with common current building methods, refer to products which are no longer available, and are in places ambiguous (for example, as to whether the wall mass requirement is an average over the surface area of the wall, if the wall is composed of a number of different constructions).

3.3 Projects which resulted in a Resource Consent

When dealing with noise levels, the decibel scale is logarithmic and so there is no perceptible difference between a noise level of 40 and 41 dB. However, the difference required in a wall or glazing system to achieve a 1 dB improvement may be significant (generally a doubling of the mass of a system is required to produce a 3 dB improvement in sound insulation). It was always therefore very likely that there would be numerous instances where a Resource Consent was sought for minor non-compliances with the Rule. In some situations the cost of engaging in that process would be minimal, compared with the cost of doing the

additional building works required to comply with the Rule. This is similarly the case with any of the specific parameters stated in the Rule – the setback distances, or the thickness or mass of materials in the Appendix. It will always be able to be argued that a small non-conformance with one of those requirements will have a negligible effect on noise levels.

It is also not possible to foresee every eventuality when drafting a rule, and it was similarly also always likely that situations would emerge where complying with the Rule would be of no benefit in reality – for example, where a minor alteration is being made to a habitable space, the facades of which otherwise provide a very low level of sound insulation.

For these reasons, we expected the sample to include a number of instances where Resource Consent was granted for minor non-compliances – and that it would not have been able to be avoided through the rule drafting (aside from perhaps minimising the number of specific parameters mentioned in the Rule and Appendix). Our findings with regard to this issue are discussed in section 6.0.

4.0 ANALYSIS OF PROJECTS WHERE AN ACOUSTIC ENGINEER WAS ENGAGED

As described above, for 48 % of the projects in the sample an acoustic engineer was engaged. These projects therefore represent the most statistically-significant group in the sample, and as described in the previous section, the examples where a.i.B was used are most likely to have provided the 'correct' outcome in terms of appropriate construction upgrades and internal noise levels.

16 of the projects related to residential buildings subjected to road traffic noise. We have discussed these projects in further detail in this section. Other projects where acoustic engineers were involved included hotels and a preschool subjected to road traffic noise, and four residential dwellings subjected to rail noise. We have discussed these less common scenarios in section 7.1.

4.1 Summary of acoustic treatment

The residential sample included buildings which were to be subjected to a range of external noise levels. As expected, the upgrades recommended also varied considerably. Table 4.1 summarises the outcomes, sorted by external level on the most exposed façade (which we have calculated for each building as described in section 2.0 – as this information was not stated in all of the acoustic engineers reports and/or had not necessarily been calculated consistently as discussed further below).

Table 4.1 – Upgrades recommended in acoustic engineer reports, with projects sorted by external noise level

External noise level	Number of examples in sample	Comments regarding upgrades
≤ 57 dB $L_{Aeq\ (24h)}$	One, receiving a maximum noise level of 57 dB L_{Aeq}	Internal noise levels calculated (a.i.B). No upgrades required.
58 – 62 dB $L_{Aeq\ (24h)}$	Two	Internal noise levels calculated (a.i.B). No upgrades required but one bedroom required a mechanical ventilation system.
63 – 65 dB $L_{Aeq\ (24h)}$	Eight	Internal noise levels calculated (a.i.B) for seven of the examples. Mechanical ventilation systems were required within bedrooms facing the road. Some spaces also required upgrades to the glazing with a traffic noise reduction in the order of 27 – 29 dB. One example used the facade reduction method (a.i.A) as it was in a Commercial Core zone and required glazing, ceiling and wall upgrades.
66 – 68 dB $L_{Aeq\ (24h)}$	Two	Internal noise levels calculated (a.i.B). Mechanical ventilation systems were required within bedrooms facing the road. Habitable spaces required upgrades to glazing with a traffic noise reduction in the order of 29 – 32 dB. Double plasterboard internal linings were required to facades exposed to the highest external noise levels.
69 – 70 dB $L_{Aeq\ (24h)}$	Three	Two examples calculated internal noise levels (a.i.B). Ceiling and/or wall upgrades, glazing upgrades and mechanical ventilation to bedrooms were required. The other example used the façade reduction method (a.i.A). This resulted in upgraded glazing to a system with a traffic noise reduction in the order of 26 dB and no mechanical ventilation. The internal noise levels would not have therefore met the part a.i.B requirements with both windows closed and open.

In general terms, the findings show a logical progression in the extent of upgrades required as the external noise level increases. Other general observations from table 4.1 are:

- Out of the 16 projects considered, two of them only considered the facade reduction method (some other reports discussed both methods and we assumed the final constructions selected were those resulting from the internal noise level method). In one case that resulted in a disproportionate number of upgrades compared to other examples exposed to similar external levels. In the other case, minimal upgrades were required compared to other examples exposed to similar noise levels.

- The maximum calculated external noise level for this sample was 70 dB L_{Aeq}. At this external noise level there were examples where both the façade reduction (a.i.A), and internal noise level (a.i.B) methods were used. The outcomes varied considerably both in terms of cost to the developer (a.i.B method required non-standard glazing, additional linings and a mechanical ventilation system), and

the environment provided for building occupants (a.i.B resulted in appropriate noise levels, a.i.A resulted in elevated noise levels).

- While not entirely consistent, the requirement for mechanical ventilation begins to feature for those examples with an external noise level of 58 dB L_{Aeq} or above. As open windows typically provide a sound reduction in the order of 17 dB, this is a logical outcome where the objective is to limit internal noise levels to 40 dB L_{Aeq}.

  This is likely to be why the 57 dB L_{Aeq} external noise level exception appears in part a.i.B.V of the Rule, as it is the external level that you could have windows cracked for ventilation, whilst still achieving an internal noise level of 40 dB L_{Aeq}. This is appropriate.

- The examples are consistent in that no construction upgrades are required where the external noise levels were calculated to be 62 dB L_{Aeq} or less, apart from mechanical ventilation being required to bedrooms in some cases.

Based on the above, we have considered what this portion of the sample suggests about the function of the Rule.

4.2 Findings

The overall finding of this section is that when applied by an acoustic engineer, the Rule appears to typically lead to relatively consistent and reasonable outcomes – and fulfil its intended role of protecting people from undesirably high levels of traffic noise within dwellings. A number of more minor findings and their possible implications in terms of modifications to the Rule are discussed below.

4.2.1 External noise level calculation

As outlined above, we carried out our own calculations to determine the external noise levels in a standardised way. This included the additional 2 dB for future use as required by the Rule. During this process it became apparent that even while this is a relatively basic calculation process, there was some variation between acoustic engineers in terms of these calculated external noise levels (hence the need to recalculate all of these levels for the sample, in a standardised way).

This appears to be potentially due to the traffic count data that the acoustic engineers have sourced / chosen to use and if or how they have adjusted any out of date data to the current year. The most common deviation from the predicted external noise level using our standardised method was an underestimate by the acoustic engineers of 1 – 3 dB – although there was one example where the acoustic engineer used an external noise level of 63 dB L_{Aeq}, where we calculated an external noise level of 70 dB L_{Aeq} using the standardised method. When then applying a.i.B approach, these variations (and in particular, underestimates) of the external noise level would have resulted in less construction upgrades and higher internal noise levels.

In all but one situation the external noise levels were calculated in some way based on traffic count data and knowledge of the speed limit and site layout. In the remaining example the external noise levels were based on short-term measurements undertaken on site and then adjusted for a comparative 24-hour average, and the future traffic. No details were provided as to how these adjustments were made; however, the report concluded that noise levels were less than 57 dB L_{Aeq} at the worst-case façade and therefore no upgrades would be required. Our standardised method predicted noise levels 3 dB higher than those outlined in the report. However, the noise level would still be 57 dB L_{Aeq} and therefore the outcome would be the same. Generally, the risk with basing average 24 hour noise levels 20 years in the future (which is what the Rule currently requires be considered) on short-term measurements is that the degree to which the short-term measurements are representative is unknown, and this may introduce significant errors.

Overall, it is concluded that further discussion is appropriate as to whether the Rule should include more guidance or direction to ensure external noise levels are established in a consistent manner. This will be considered as part of Stage 2 of this process.

4.2.2 Break-in noise calculation

Once the external noise level has been established, it appears that the calculations the acoustic engineers have used to establish the expected internal noise level are very similar. As this is a relatively simple calculation process this is to be expected. Two sources of variation have however been identified, as follows:

Sound Transmission Loss data

The detail provided in the various reports often did not allow us to fully understand what sound insulation performance has been assumed for the various façade elements. As discussed above, this can be an unavoidable source of variation as data supplied by manufacturers for nominally identical systems can vary significantly, as can predictions provided by modelling software. Generally, no significant and unreasonable assumptions regarding Sound Transmission Loss were evident in the sample – the biggest discrepancy appeared to be a situation where a double glazed system comprising of [5 mm float glass / 14 mm air space / 4 mm float glass] appeared to be used in a situation which suggested its Sound Transmission Loss performance was similar to [10 mm float glass / 12 mm air space / 4 mm float glass] – which is not the case.

Overall, it is not obvious how the Rule could be modified to reduce this source of variability in a way which did not add excessive complication (for example, adding a table of the Sound Transmission Loss performance to be assumed in calculations for various double glazing systems).

Calculation approach

One acoustic engineer consistently omits the noise transmission path via the roof / ceiling in their calculations. No discussion is provided as to why this is not included. In our experience, due to the large area of the ceiling, particularly with a pitched roof directly facing the road, the ceiling can contribute to the expected noise level within the space, and we would expect upgrades to be required when the external noise levels are high. It is unclear how this situation could be improved – other than perhaps adding this issue to a checklist of simple matters for Council staff to check when receiving an acoustic report.

Similarly, one acoustic engineer when using the façade method considers each façade in isolation, rather than the overall composite façade reduction between the outside and inside of the space as required in part a.i.B. Again, it is unclear how this could be improved, as we do not consider the current Rule wording to be ambiguous in this regard.

4.2.3 Requirement for mechanical ventilation

As discussed above, there is a fault in the wording of the Rule regarding the need for mechanical ventilation in the situation where part a.i.A, or the Appendix solutions are used. As a result, a Practice Note was developed by the Council which states:

> *If utilising option a.i.B and indoor levels of bedrooms can only meet specific levels with windows closed, then mechanical ventilation needs to be provided in these rooms. This does not apply to a.i.A.*

From the sample it was clear that some consultants were not aware of this Practice Note and had their own varying interpretations of this aspect of the Rule, or chose to provide recommendations regarding mechanical ventilation which were consistent with good practice, and not necessarily in strict accordance with the current Rule wording.

Out of the sample of acoustic engineer reports considered above, two used part a.i.B, but provided no mention of mechanical ventilation, and two used part a.i.A and therefore no mechanical ventilation was required. These situations involved dwellings that received maximum noise levels of 70 dB L_{Aeq} at the facades. If we consider the standard reduction of 17 dB with windows cracked for ventilation, for these two dwellings the internal noise levels within the bedrooms could be 53 dB L_{Aeq} – significantly above a level which is appropriate for residential living. The remaining two projects where there was no discussion of mechanical ventilation had calculated external noise levels of 61 and 64 dB L_{Aeq}. Elevated internal noise levels would

also be expected within these spaces when the windows are open for ventilation. For these four buildings the occupants will therefore have to make a choice between having adequate ventilation to their bedrooms, or having elevated internal noise levels.

From an acoustic point of view the mechanical ventilation requirement clearly should apply in all situations where the stated requirement (be it an internal noise level, or a façade reduction) cannot be achieved with windows open for ventilation. The Rule should be amended accordingly. This would also remove some of the perverse incentive which currently exists to use part a.i.A as a cost saving measure, when the acoustic outcome is likely to be poor.

4.2.4 Role of the façade reduction option

As expected, the sample included a situation where the façade reduction method (part a.i.A) appeared to have been used only used to avoid 'excessive' upgrades which part a.i.B would have required, because the external noise levels were high. As discussed above, this results in a suboptimal acoustic outcome, as even if the mechanical ventilation requirement was corrected, occupants would be exposed to higher than desirable internal noise levels. Further discussion is appropriate as to whether the continued inclusion of the façade method in the Rule is appropriate if it is only ever used for that reason.

However, one unexpected use of the façade method was in a situation where these was an 'overlapping' requirement with another part of the Plan. Whatever amendments are made to the Rule, it will continue to be the case that there are other zones and rules in the City which use façade reduction. For sites which are subjected to this sort of rule overlap, the continued existence of a façade reduction option in the Rule may considerably simplify an otherwise complex situation. Even if the façade reduction method is deleted from the Rule it may be unlikely that the other rules in the Christchurch District Plan will follow, as there are other situations where the façade reduction method plays a more logical role – for example where the external level which is to be protected against is generated by a source which is not easily defined or quantified, such as people in an outdoor public space in the Central City.

Overall, the instances where the façade reduction method (part a.i.A) is used are limited because it only potentially represents a saving where external noise levels exceed 70 dB L_{Aeq}, or where it simplifies the approach due to overlap with other rules. As per figure 1.1, external traffic noise levels only exceed 70 dB L_{Aeq} in a very small proportion of situations throughout the City. The deletion or retention of the façade reduction option may therefore have very little impact in reality.

5.0 ANALYSIS OF PROJECTS WHERE APPENDIX 6.11.4 WAS USED

As described above, for 15 % of the projects in the sample the acceptable solutions listed in Appendix 6.11.4 of the District Plan were used.

5.1 Summary of acoustic treatment

The residential sample included developments with a range of external noise levels, and required upgrades, as summarised in table 5.1.

Table 5.1 - Upgrades adopted on projects where Appendix 6.11.4 was used, with projects sorted by external noise level

External noise level	Number of examples in sample	Comments regarding upgrades
≤ 57 dB $L_{Aeq\ (24h)}$	One	This development reduced the glazing size to be less than 35 % of the floor area, included 10 mm float glass / 12 mm air space / 6 mm float glass (traffic reduction of 32 dB) glazing, a solid RAB layer, and 0.55 mm steel roofing.
58 – 62 dB $L_{Aeq\ (24h)}$	Three	These designs generally had higher mass cladding or solid RAB installed, included either of the glazing examples outlined in the Appendix, or 6 mm float glass / 12 mm airspace / 6.76 mm PMMA laminated glass (traffic reduction of 34 dB).
63 – 65 dB $L_{Aeq\ (24h)}$	Two	Both of these developments included constructions in line with the Appendix; however, for one of them the EHO allowed a lower specification of glazing - 6 mm float glass / 12 mm air space / 6 mm float glass (traffic reduction of 26 dB), due to the shielded location of the dwelling.
66 – 68 dB $L_{Aeq\ (24h)}$	None	-
69 – 70 dB $L_{Aeq\ (24h)}$	One	Glazing, roof / ceiling, and wall upgrades were all in line with the Appendix.

As discussed above, not unexpectedly the results show no logical changes in acoustic treatment with external level, as a fixed level of treatment is required by the Appendix. General observations from table 5.1 are:

- The maximum external noise level for a project in this group was 69 dB L_{Aeq}. As discussed above, with this external noise level the noise reduction provided by the Appendix solutions would be expected to be of approximately the right order. Appropriate noise levels would therefore have been achieved within this building when windows were closed, with no significant façade overdesign. However, as mechanical ventilation is not required currently under the Rule, the upgrades would be of minimal benefit and internal noise levels would be inappropriately high when windows were open for ventilation.

- The examples where the external noise levels were 58 – 65 dB L_{Aeq} had overdesigned facades, and lesser constructions would have also resulted in acceptable internal noise levels. Again, at this external level, mechanical ventilation should also have been required.

- One example had an expected external noise level of less than 55 dB L_{Aeq}. No upgrades would have been required to provide appropriate internal noise levels. However, they complied with the constructions outlined in the Appendix (including reducing the amount of glazing proposed).

Based on the above, we have considered what this portion of the sample suggests about the function of the Rule.

5.2 Findings

As external noise levels only approach 70 dB L_{Aeq} in the minority of situations in the sample, use of the Appendix leads to upgrades to buildings which provide no acoustic benefit. The inappropriateness of the outcomes resulting from the use of the Appendix is compounded by the fact that mechanical ventilation is not required, so even in the few situations where the construction upgrades are of the right order, windows open for ventilation mean limited benefit is likely to be achieved.

Based on the above, further discussion is warranted as to whether it is appropriate to retain the Appendix within the Rule. As above, the only argument we are aware of for the provision of an option like the Appendix is that this enables people who are inclined to avoid spending money on analysis and reports by engineers, and rather spend money on something physical which is arguably a 'benefit' to end users.

If the Appendix is to be retained in some form, refinements could include:

- Update to ensure the Appendix solutions are consistent with common current building methods and refer to products which are available.
- Update to remove ambiguity – for example regarding whether the wall mass requirement is an average.

Discussion as to whether a refined version of the Appendix could be developed which more accurately responds to the individual circumstances of a project may also be appropriate. An example is provided in table 5.2 of the type of framework which would be required to accomplish this.

Table 5.2 – Concept for an evolution of the Appendix

Most exposed façade level	Most exposed façade upgrades	Side façade upgrades	Rear façade upgrades
≤ 57 dB $L_{Aeq\ (24h)}$	Nothing	Nothing	Nothing
58 – 62 dB $L_{Aeq\ (24h)}$	Mechanical ventilation to bedrooms which rely upon opening windows in this façade for NZBC G.04 compliance.	Mechanical ventilation to bedrooms which rely upon opening windows in this façade for NZBC G.04 compliance.	Nothing
63 – 65 dB $L_{Aeq\ (24h)}$	Glazing upgrade (state acceptable types) and mechanical ventilation to bedrooms which rely upon opening windows in this façade for NZBC G.04 compliance.	Mechanical ventilation to bedrooms which rely upon opening windows in this façade for NZBC G.04 compliance.	Nothing
66 – 68 dB $L_{Aeq\ (24h)}$	Glazing upgrade (state acceptable types), double line walls / ceiling (state acceptable build-ups), and mechanical ventilation to bedrooms which rely upon opening windows in this façade for NZBC G.04 compliance.	Glazing upgrade (state acceptable types) and mechanical ventilation to bedrooms which rely upon opening windows in this façade for NZBC G.04 compliance.	Nothing
69 – 72+ dB $L_{Aeq\ (24h)}$	Consult acoustic engineer		Nothing

However, this approach has a number of issues such as:

- It further complicates the Rule, and introduces additional grey areas (for example, the definition of “most exposed”, “side” and “rear” facades).
- Input from an acoustic engineer would be required to establish the expected noise level on the most exposed façade. Conceivably this could be avoided by instead providing a matrix of road traffic counts / speed limits / dwelling setbacks which allowed a layperson to approximate the external noise level. However, this adds another layer of complexity and possible source of error.

Considerable further effort would be required to develop and test this alternative Appendix approach.

6.0 RESOURCE CONSENTS

The remaining 38 % of the sample solutions were accepted by the Council but did not comply with the Rule, via a Resource Consent process. These situations were typically considered by an Environmental Health Officer (EHO) at the Council to determine the associated noise effects.

One of these related to rail noise, one was for a preschool, and one was for short term accommodation. As discussed above, we have confined our analysis to the more common examples. Any impact of possible changes to the Rule on these more uncommon situations should be considered in due course.

The noise effects arising from deviations from the Rule were concluded to have a less than minor effect for a variety of reasons. We have summarised some of the more common situations below.

6.1 Alterations / Extensions

Seven of the examples that went to the EHO were for alterations or extensions to existing houses. These were typically small in scale, ranging from changing one element, changing the use of spaces, or proposed new portions of the dwelling.

Key factors which the EHO appeared to take into account with these examples when determining the effects included the following:

- The sound insulation properties of the alteration compared to the rest of the house.
- When only one element is being changed, only that element is considered.
- Where the altered spaces are located within the building in relation to the road, and whether there is any additional shielding.
- Practical limitations on upgrades that can be implemented to an existing building, particularly when they are heritage designed.

Based on the above, it appears that a pragmatic approach was taken with these examples. The benefits of the upgrades were balanced against the practicalities of upgrading existing houses. We would generally agree with the conclusions of the EHO for these aspects.

We note that these examples were generally small alterations or additions to a building, and there were no examples where a significant extension was proposed (such as multiple new rooms). From an effects point of view, we would expect a significant extension to a building (particularly when building closer to a road) would need to comply with the Rule.

Overall, it may be appropriate to consider whether it is practical to include some limitations in the Rule relating to alternation or extensions – or whether this is best dealt with on a case by case basis as is currently the situation, to avoid unintended consequences.

6.2 Distance

In two examples non-compliances were allowed due to the relative distance between the habitable spaces and the nearest road. In one of these only a fraction of the building was within 20 metres of the road (including the corner of one living room and entrance), with the remainder of the building outside. It was determined that the effect of the building having a corner of the room within the 20-metre setback compared to it being 1 metre further away was minimal, and as such consent was granted.

For the other example, while the building was within 20 metres of the relevant road and so the rule was triggered, all habitable spaces within the building were outside of the 20-metre setback. In this case there appeared to be some confusion as to whether the rule applied or not; however, overall any associated effects were considered to be less than minor.

The rule itself states that any 'building' located within a certain distance requires the habitable spaces to be assessed. Therefore, changing the wording to any 'habitable space within a building' or similar may reduce the queries regarding this aspect. Otherwise, where the Rule specifies any specific distance or parameter there will always be situations where a slight deviation has a less than minor effect. No wording change to the Rule would be able to eliminate this.

6.3 Site specific / shielding

There were two examples where the EHO concluded that the overall effects would be less than minor due to the site-specific parameters. These were as follows:

- One example was for a dwelling which was located behind a garage, and at a lower elevation than the road. The EHO concluded that the internal noise levels would be acceptable, and therefore no upgrades would be required.

- One example was for a replacement dwelling on the same site. The EHO determined that the new dwelling would provide a greater level of sound insulation than the previous dwelling, and that the portion of the road which is adjacent was not busy (less than 2000 AADT).

If these proposals were assessed by an acoustic engineer it would be likely that they would fall under the category of less than 57 dB $L_{Aeq\ (24\ hours)}$ and would therefore meet the Rule with no additional upgrades required.

Part a.i.B.VI of the Rule provides a method for taking into account a solid structure that blocks the line-of-sight from all parts of all windows and doors to a State Highway or railway designation. This clause could be expanded to take into account a wider range of scenarios – however given the low frequency of occurrence of the 'shielding issue' identified above (and the unlikelihood of two discrete buildings fitting within 20 or 40 metres of a road) this additional complexity is unlikely to be justified. However, due to the small sample size this could be further investigated in a larger sample of Resource Consents.

6.4 Other examples

There were a range of other examples, for which it was determined that the development did not have to comply with the Rule. These were as follows:

- The design of the dwelling was lightweight for TC3 land and foundations, and the upgrades would require a complete redesign. The EHO determined in this situation that the internal noise effects would not be unacceptable.

- An acoustic engineer provided preliminary advice regarding the scale of non-compliances with the Rule. The EHO determined the minimum construction upgrades that they would accept as part of the Resource Consent, this included additional wall linings and mechanical ventilation system to the most exposed habitable space.

- One example was within 80 metres of the State Highway designation, but the NZTA was vesting the land to the CCC to become a local road. Once this was complete the location of the site would not trigger the Rule.

Overall, we consider it to be unlikely that a revision of the Rule would have avoided or improved these situations.

7.0 OTHER SITUATIONS

7.1 Other sensitive activities

As stated above, there are a number of other types of developments which would be defined as a 'sensitive activity' under the District Plan, but are not residential in use.

The activities which are included under this definition within the Christchurch District Plan are as follows:

- Care facilities
- Education activities and preschools
- Guest accommodation
- Health care facilities
- Hospitals
- Custodial and/or supervised living accommodation where the residents are detained on the site

For these types of developments, the same two methods apply. That is, the development can either achieve a façade reduction of 30 dB $D_{tr,2m,nT,w} + C_{tr}$, or meet an internal noise level requirement.

For method a.i.B, the internal noise level requirement for 'other buildings intended for a sensitive activity' is the maximum value recommended in AS/NZS2107:2000. Based on the recommended noise levels within this Standard, this would result in an indoor sound level of 40 dB L_{Aeq} for all the sleeping spaces (the same as for residential dwellings); however, for the other relevant spaces within the buildings (such as classrooms, play areas, or communal dining / living areas) the recommended noise level is higher – in the order of 45 dB L_{Aeq}.

Therefore, we would expect these types of buildings to interact in a similar manner with the Rule, with less upgrades required if the internal noise method was pursued.

We also note that AS/NZS2107:2000 has been superseded by a new version in 2016. If any update to this rule was being made it would be appropriate to reference the updated standard.

A key difference observed between these types of buildings and the residential dwellings in the sample was the scale of the buildings. The non-residential buildings were often larger, with more internal rooms, meaning noise sensitive spaces were likely have fewer external facades. As both the a.i.A and a.i.B methods are directly dependent on the area of external façade, this typically resulted in less upgrades being required to comply with either method.

Within this sample, there were two guest accommodation facilities, and two preschools. Three of these had an acoustic consultant assessment, and one was progressed via an RC process. Key factors with these projects were as follows:

- The preschool assessment which went through the RC process was an alteration, with the changes being mainly to internal spaces. The changes were considered to have no impact on the acoustic insulation properties of the building, compared to the consented activity.
- Two hotels had associated acoustic assessments. These had worst-case external noise levels of 72 dB L_{Aeq} and 69 dB L_{Aeq} respectively. Both of these developments selected to use the façade reduction method, which resulted in glazing, wall and ceiling lining upgrades, and one of these developments also included mechanical ventilation systems within all spaces.

- One preschool experienced noise levels of up to 58 dB L_{Aeq}. The preschool was also located within an industrial zone and therefore was required to achieve a façade reduction in sleeping areas of 30 dB $D_{tr,2m,nT,w} + C_{tr.}$ The acoustic consultant assessed all spaces using the façade reduction parameter. This resulted in wall and glazing upgrades, and no requirements for mechanical ventilation.

Overall, the non-residential sample appears to interact with the Rule in a similar manner as the residential sample. The discussions above regarding improvements to the Rule would therefore also be appropriate for the non-residential receivers. However, as outlined above this would need to be reviewed further in due course, and the drafting of any new Rule would need to also consider how it would be applied to these more uncommon situations.

7.2 Rail noise

The Rule is also triggered for any sensitive activity within 80 metres of a railway designation. In this situation, the development within this trigger distance shall either:

a.i.A be designed and constructed to achieve a minimum external to internal noise reduction of 30 dB $D_{tr,2m,nT,w} + C_{tr}$; or

a.i.B be designed and constructed to meet with the following indoor design sound levels:

I. Rail noise inside bedrooms between 2200 and 0700 hours – 35 dB $L_{Aeq(1h)}$;

II. Rail noise inside habitable spaces excluding bedrooms – 40 dB $L_{Aeq(1h)}$;

IV. Rail noise within any other building intended for a sensitive activity – maximum value recommended in AS/NZS2107:2000.

except where either:

V. the sound incident on the most exposed part of the outside of the building is less than 55 dB $L_{Aeq(1h)}$ for rail noise

VI. the nearest façade of the building is at least 50 metres from all state highway and railway designations and there is a solid building, fence, wall or landform that blocks the line-of-sight from all part of all windows and doors to all parts of any state highway road surface or all points 3.8 metres above railway tracks.

However, for noise from rail the Rule provides further guidance as to how the noise should be calculated within a.iv. as follows:

- Rail noise shall be deemed to be 70 dB $L_{Aeq\ (1h)}$ at a distance of 12 metres from the edge of the track, and shall be deemed to reduce at a rate of 3 dB per doubling of distance up to 40 metres and 6 dB per doubling of distance beyond 40 metres

Within the sample, there were five cases of residential activities near railway lines. Four of these had an acoustic consultant assessment, and one was progressed via an RC process. As there is a prescriptive method included within the Rule, there was less variability in the calculated external noise level within the sample.

Key factors with these projects were as follows:

- The assessment which went through the RC process was an extension. Line of sight from all windows was to be blocked by a solid building, and the extension was deemed to perform better than the existing structure.

- One of the dwellings was assessed via a.i.A and had a worst-case external noise level of 70 dB L_{Aeq}. This required solid RAB layers, additional internal wall linings, glazing upgrades, and ceiling lining upgrades. No mechanical ventilation system was required.

- Another development also received an external noise level of 70 dB L_{Aeq}, and was assessed using a.i.B. This dwelling required wall and ceiling upgrades to all spaces and glazing upgrades to one space. No comment was provided as to whether a mechanical ventilation system was required.

- One dwelling received external noise levels of 56 dB L_{Aeq}, and was assessed using a.i.B. This was due to the distance between the railway line and the dwelling, and shielding from fences. The only upgrade required to this dwelling was a mechanical ventilation system.

- One dwelling received external noise levels of 57 dB L_{Aeq}, and was assessed using a.i.B This dwelling was largely shielded by another property. No upgrades were required; however, a mechanical ventilation system was already proposed.

Overall, the portion of the sample which relates to noise from rail appears to interact with the Rule in a similar manner as those related to noise from roads. The discussions above regarding improvements to the Rule would therefore also be appropriate for the noise from rail. However, as outlined above this would need to be reviewed further in due course, and the drafting of any new Rule would need to also consider how it would be applied to this more uncommon situation.

8.0 RECOMMENDATIONS

8.1 Issues identified in this report

The above analysis has identified a number of areas where the Rule could potentially be improved. We have grouped these into 'firm recommendations' where we feel the appropriate way forward is clear, and have classified the remaining issues as either 'major' or 'minor' issues for further discussion.

Firm recommendations

- The mechanical ventilation requirement should apply in all situations where the desired acoustic outcome (be it an internal noise level, or a façade reduction) cannot be achieved with windows open, for the level of ventilation required under Clause G.04 of the New Zealand Building Code.

- The reference to any 'building' located within a certain distance of a noise source should be changed to any 'habitable space within a building' or similar.

Major issues for further discussion

- Whether the continued inclusion of the façade method (part a.i.A) in the Rule is appropriate. Our preliminary view is that it would be appropriate to remove the façade method, unless this creates consistency issues with other part of the Plan which will continue to use that method.

- Whether it is appropriate to retain reference to Appendix 6.11.4 within the Rule. If the Appendix is to be retained in some form, refinements should include updates to ensure the Appendix solutions are consistent with common current building methods and refer to products which are available, and updates to remove ambiguity. Alternatively, a refined version of Appendix 6.11.4 could be developed which more accurately responds to the individual circumstances of a project. However, this would become complex. Our preliminary view is that from an acoustics perspective it would be appropriate to remove reference to the Appendix.

Minor issues for further discussion

- Whether the Rule should include more guidance or direction to ensure external noise levels are established in a consistent manner when using part a.i.B.

- Whether it is practical to include some limitations in the Rule relating to alterations or extensions.

All of these recommendations possible amendments will have implications in terms of the time and cost involved to administer the Rule from a Council perspective, how the Rule is read and perceived by the public, the cost to developers in terms of obtaining expert advice and building upgrades, and for the acoustic environment experienced by occupants of future buildings. Input from, and analysis of any changes, from experts other than acoustics will therefore be appropriate.

As discussed above, while the majority of the sample related to road traffic noise incident on residential developments, there were several more uncommon situations, these included rail noise incident on stand-alone residential units and road traffic noise incident on hotels and preschools. The drafting of any new Rule would therefore need to also consider how it would be applied to these more uncommon situations.

8.2 Other key questions identified by the Council

Within the scope of works from the CCC a number of questions were identified that have not been directly addressed in this report. Our recommendations on these specific issues, are as follows:

Is it justifiable that all Collector roads are covered?

The examples adjacent to Collector Roads within the sample experienced external traffic noise levels ranging from 55 dB L_{Aeq} up to 69 dB L_{Aeq}. The maximum noise level expected on any façade from any type of road within this sample was 70 dB L_{Aeq}; therefore, from an acoustic perspective Collector Roads are just as likely to generate traffic noise at levels of concern as other 'higher' road types, and there is no reason to exclude them. We accept there may be non-acoustic reasons to be considered which may justify a reduction in the overall 'catchment' of the Rule.

Is it appropriate to use road classifications and distances to trigger the rule or are there additional triggers required?

The vast majority of projects in the sample (96 %) related to situations where the external traffic noise levels were high enough to warrant intervention. Therefore, in general terms, the road classification / distance triggers appear to be working well as a filter to identify situations where further analysis is appropriate.

2 (4 %) of the sample involved dwellings potentially exposed to noise levels of less than 57 dB $L_{Aeq\,(24h)}$, where no upgrades are required. This indicates that the 'outer limit' of the catchment (20 / 40 / 80 metres depending on road classification) should not be retracted – as buildings where noise levels are very low are not frequently being caught by the Rule. To the contrary, as discussed above, a number of the Collector Roads were demonstrated to generate noise levels considerably exceeding 57 dB $L_{Aeq\,(24h)}$ at and beyond 20 metres, suggesting the Rule was not catching some projects which should be assessed from an acoustic point of view. Approximately 60 % of the examples in the sample involved Collector Roads where noise levels remained above 60 dB $L_{Aeq\,(24h)}$ at 20 metres from the road. Therefore, from an acoustic perspective, simplifying the Rule by extending the threshold for Collector Roads to also be 40 metres would be appropriate.