

Porirua's Proposed District Plan 2020

Submission on Porirua's Proposed District Plan

To - Environment and City Planning Team

Date received 20/11/2020

Submission Reference Number #59

Wishes to be heard? Yes

Is willing to present a joint case? Yes

Could gain an advantage in trade competition in making this submission? No

Directly affected by an effect of the subject matter of the submission? Yes

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Submission points

Point 59.1

Support / Support in part / Oppose

Amend

Section: Planning Maps

Sub-section: General

Provision

General

Submission

The **Ohariu Fault Hazard Zone** through the **Kenepuru Landing Site** needs to be amended to reflect the amended Fault Avoidance Zone shown on the Coffey Reports submitted as part of the Kenepuru Landing Project work and agreed with PCC. Refer the Coffey reports submitted by KLP and in PCC records for the information relating to this request.

The **Overland Flow Paths** shown on the **Kenepuru Landing** site in the PDP Planning Maps are based on predevelopment information. KLP and Wellington Water have done significant stormwater modelling work to determine 100 year flood levels and overland flow paths for the project. The Maps need to be amended to reflect the post development information.

The **Stream flooding Overlay** in Lot 1509 DP 533884 on the Kenepuru Landing site needs to be removed. It is not a Stream and will become a stormwater attenuation area for PCC and the project. It is and will remain part of a green reserve area.

Relief sought

Amend the Planning Maps as noted in the Submission

Point 59.2

Support / Support in part / Oppose

Amend

Section: MRZ - Medium Density Residential Zone

Sub-section: Objective

Provision

MRZ-O2 Character and amenity values of the Medium Density Residential Zone

The scale, form and density of use and development in the Medium Density Residential Zone is characterised by:

1. A built form of predominantly two and three-storey buildings, surrounded by open space;
2. A greater intensity of buildings than anticipated in the General Residential Zone;
3. Good quality on-site residential amenity;

4. Good quality amenity for adjoining sites; and
5. An urban environment that is visually attractive, safe, easy to navigate and convenient to access.

Submission

MRZ-O2 1. Change to "A built form between 1 and 4 storeys, but predominantly 2-3 storeys with each buildings private open space integrated into the surrounding public spaces.

Also Point 1 can be interpreted as too narrow in terms of the provision of open space.

Relief Sought:

1. A built form of predominantly two and three-storey buildings, with the provision of/or use of close accessible quality surrounded by open space;

Comment: The Objective needs to be increased density but this can be achieved with well designed single storey houses as well as more storeys. I don't think these areas should be restricted to three storeys. The key is "integrated design".

KLP would like the Eastern part of the Kenepuru Landing site to have an overlay that allows increased height that would accord with the NPS UD for areas near train stations.

This area of Kenepuru Landing could be added to the Precinct 02 rules and Standards.

Relief sought

Amend the Objective as stated in the Submission

1. A built form of 1-4 storeys but predominantly two and three-storey buildings, integrated into well designed public and private surrounded by open space;

Point 59.3

Support / Support in part / Oppose

Support in part

Section: MRZ - Medium Density Residential Zone

Sub-section: Policies

Provision

MRZ-P5 Multi-unit housing

Provide for multi-unit housing where it can be demonstrated that it:

1. Contributes positively to the anticipated built environment through high-quality urban design; and
2. Is consistent with the Multi-Unit Housing Design Guide contained in APP3-Multi-Unit Housing Design Guide.

Submission

Comment: I think this policy and the Multi-Unit Design Guide seem to contemplate multi-unit housing on single fee-simple Titles. The PDP needs to be reviewed to generally remove the distinctions generated because of the form of ownership. It is possible to have well designed medium density housing that has houses all on their own Fee Simple Titles as well as multiple dwellings on one Title. In general there will not be significant differences in the design standards for both these ownership models.

Relief sought

Review Policy and design Guide to remove distinction between multi units on one fee simple title and medium density housing on individual Titles. The design standards and principles should be the same regardless on the form of land ownership. This may mean an amendment to the definition of Multi-Unit. The Multi Unit Design Guide needs to be applicable to the entire Medium Density Zone and accross multiple lots - not just multi units on a single lot. Integrated design accross multi -lots that don't comply with the Standards for lotsizes and bulk and location in the MDZ should be able to reference the Guide as a means of compliance under Restricted Discretionary Activity.

Point 59.4

Support / Support in part / Oppose

Amend

Section: MRZ - Medium Density Residential Zone

Sub-section: Standards

Provision

MRZ-S2 Height in relation to boundary

1. All buildings and structures must be contained beneath a line of:

- a. 55° measured into the site from any point 3m vertically above ground level along northern boundaries; and
- b. 45° measured into the site from any point 3m vertically above ground level along any other site boundaries; or
- c. Within the Eastern Porirua Residential Precinct only:
 - i. 60° measured from a point 8m vertically above ground level along the first 20m of the side boundary as measured from the road frontage, and that part of any site boundary that adjoins the Open Space Zone or Sport and Active Recreation Zone; and
 - ii. 45° measured from a point 3m vertically above ground level at:
 - a. Any rear boundary except as identified in c.i. above;
 - b. The side boundary further than 20m from the road frontage; and
 - c. Any common boundary where the lot adjoins the Medium Density Residential Zone.

See MRZ-Figure 2 below for defining the northern boundary.

See MRZ-Figure 3 below which demonstrate how the height in relation to boundary is to be measured.

See MRZ-Figure 4 below for the alternative height in relation to boundary standard in the Eastern Porirua Residential Intensification Precinct.

Except that:

- Where adjacent to a shared access in excess of 2.5m in width, the measurement shall be taken from the furthest side.
- For multi-unit housing residential units and retirement villages, the height in relation to boundary standard only applies at the external boundary of the site.
- For two or more residential units connected horizontally and/or vertically by a common wall or common floor, the height in relation to boundary standard only applies at the external boundary of the site. The height in relation to boundary standard requirement does not apply:
 - a. On any horizontal or vertical boundary between connected residential units; and
 - b. Any offset between the residential units that project not more than 2m beyond the common wall or common floor.

This standard does not apply to:

- A boundary with a road;
- Solar water heating components provided these do not exceed the height in relation to boundary by more than 500mm;
- Chimney structures not exceeding 1.1m in width on any elevation and provided these do not exceed the height in relation to boundary by more than 1m;
- Antennas, aerials, satellite dishes (less than 1m in diameter), flues, and architectural features (e.g. finials, spires) provided these do not exceed the height in relation to boundary by more than 3m measured vertically;
- Boundaries adjoining the City Centre Zone, Local Centre Zone, Hospital Zone, Neighbourhood Centre Zone, Mixed Use Zone, Large Format Retail Zone, General Industrial Zone and General Rural Zone; and

Matters of discretion are restricted to:

1. Visual dominance, shading and loss of privacy for adjacent residential sites;
2. Whether topographical or other site constraints make compliance with the standard impractical; and
3. Whether an increase in height in relation to boundary results from a response to natural hazard mitigation.

- A gable end, dormer or roof where that portion beyond the height in relation to boundary is no greater than 1.5m² in area and no greater than 1m in height.

Submission

The height to boundary standard should not apply to the boundary of a private road - same as for a public road. The shading effect relates to the neighbouring houses on the opposite side of a private road.

Relief sought

Amend Point 1 to add the words "or private road" after "road"

Point 59.5

Support / Support in part / Oppose

Amend

Section: MRZ - Medium Density Residential Zone

Sub-section: Standards

Provision

MRZ-S3 Building coverage

1. The maximum building coverage must not exceed 45% of net site area.

Matters of discretion are restricted to:

1. The visual dominance of the building on the street from the scale of the new building;
2. The visual dominance impact on adjacent residential sites; and
3. Whether topographical or other site constraints make compliance with the standard impractical.

This standard does not apply to:

- Pergola structures that are not covered by a roof;
- Uncovered decks no more than 300mm in height above ground level;
- Uncovered outdoor swimming pools;
- Buildings and structures that are no more than 2m² in floor area and 2m in height above ground level; or
- Eaves up to a maximum of 600mm in width and external gutters or downpipes (including their brackets) up to an additional width of 150mm.

Submission

Amend site coverage to allow up to 50% in MDZ.

The outdoor open space, yards and sunlight access standards are the key factors in amenity for medium density areas. If these standards are met, what is the point of a site coverage standard. 45% is quite low for medium density.

Relief sought

Amend 45% to 50% or remove requirement completely and allow other Standards to take care of this issue.

Point 59.6

Support / Support in part / Oppose

Amend

Section: SUB - Subdivision

Sub-section: Policies

Provision

SUB-P4 Functioning of the transport network

Provide for subdivision where it maintains the safe and efficient functioning of the transport network by:

1. Ensuring roads and any vehicle access to sites meet minimum design standards to allow for safe and efficient traffic movements and can safely accommodate the intended number of users;
2. Where opportunities exist, including transport network connections within and between communities;

3. Where consistent with the zone, providing for a variety of travel modes that reflect the purpose, character and amenity values of the zone, including walking, cycling and access to public transport; and
4. Achieving safe and efficient access onto and from state highways.

Submission

The requirement of meeting minimum design standards means that should there be a situation that this cannot be met the proposal could be contrary to this policy. The wording should allow for more flexibility and designs that are fit for purpose while still safe for specific environments.

Relief sought

Ensuring roads and any vehicle access to sites meet minimum design standards or any appropriate alternative that ~~to~~-allow for safe and efficient traffic movements and can safely accommodate the intended number of users;

Point 59.7

Support / Support in part / Oppose

Amend

Section: SUB - Subdivision

Sub-section: Policies

Provision

SUB-P5 Integration with infrastructure

Require infrastructure to be provided in an integrated and comprehensive manner by:

1. Ensuring infrastructure meets Council standards and has the capacity to accommodate the development or anticipated future development in accordance with the purpose of the zone, and is in place at the time of allotment creation;
2. Ensuring that subdivisions in Urban Zones, Settlement Zone and Māori Purpose Zone (Hongoeka) are hydraulically neutral;
3. Requiring reticulated wastewater, reticulated water and stormwater management systems in all Urban Zones to meet the performance criteria of the Wellington Water's Regional Water Standard May 2019;
4. Where reticulated services are not available, ensuring allotments are of a sufficient size and shape with appropriate soil conditions to accommodate on-site wastewater, stormwater and water supply infrastructure, and that there is sufficient water supply capacity for firefighting purposes; and
5. Ensuring telecommunications and power supply is provided to all allotments.

Submission

The requirement of meeting Council standards means that should there be a situation that this cannot be met the proposal could be contrary to this policy. The wording should allow for more flexibility and designs that are fit for purpose for the environments.

Relief sought

Ensuring infrastructure meets Council standards or any appropriate alternative design and has the capacity to accommodate the development or anticipated future development in accordance with the purpose of the zone, and is in place at the time of allotment creation;

Point 59.8

Support / Support in part / Oppose

Support in part

Section: SUB - Subdivision

Sub-section: Rules

Provision

SUB-R8 **Subdivision that creates building platforms for Potentially-Hazard-Sensitive Activities within the Low, Medium or High Hazard Areas of the Natural Hazard Overlay or Coastal Hazard Overlay**

All zones

1. Activity status: **Restricted discretionary**

Where:

- a. The building platform is entirely located within an identified Low Hazard Area of either the Natural Hazards Overlay or the Coastal Hazard Overlay.

Matters of discretion are restricted to:

1. For allotments in a Natural Hazard Overlay, the matters in NH-P3; and
2. For allotments in a Coastal Hazard Overlay the matters in CE-P12.

Note: This rule applies in addition to SUB-R1 to SUB-R5.

All zones

2. Activity status: **Discretionary**

Where

- a. All subdivisions where the building platform would be located within an identified Medium Hazard Area of either the Natural Hazard Overlay or the Coastal Hazard Overlay.

All zones

3. Activity status: **Non-complying**

Where

- a. All subdivisions where the building platform would be located within an identified High Hazard Area of either the Natural Hazard Overlay or the Coastal Hazard Overlay.

Submission

The Use of Non- Complying Activity in this Rule is a very blunt instrument - especially in relation to the Natural Hazard Overlay.

I think these risks can be managed within the Discretionary Status.

Relief sought

Remove the Non-Complying Activity Status in this Rule

Point 59.9

Support / Support in part / Oppose

Support in part

Section: SUB - Subdivision

Sub-section: Rules

Provision

SUB-R9 Subdivision that creates building platforms for Hazard-Sensitive Activities within the Low, Medium or High Hazard Areas of the Natural Hazard Overlay or Coastal Hazard Overlay

All zones

1. Activity status: **Restricted discretionary**

Where:

- a. The building platform is entirely located within an identified Low Hazard Area of either the Natural Hazards Overlay or the Coastal Hazard Overlay.

Matters of discretion are restricted to:

1. For allotments in a Natural Hazard Overlay, the matters in NH-P3; and
2. For allotments in a Coastal Hazard Overlay, the matters in CE-P12.

Note:

This rule applies in addition to SUB-R1 to SUB-R5.

All zones

2. Activity status: **Discretionary**

Where

- a. All subdivisions where the building platform would be located within an identified Medium Hazard Area of either the Natural Hazard Overlay or the Coastal Hazard Overlay.

All zones

3. Activity status: **Non-complying**

Where:

- a. All subdivisions where the building platform would be located within an identified High Hazard Area of either the Natural Hazard Overlay or the Coastal Hazard Overlay.

Submission

The Non-Complying Activity Status in the Rule is a very blunt instrument particularly in relation to the Natural Hazards Overlay

Relief sought

Remove the Non-Complying Activity component in the Rule

Point 59.10

Support / Support in part / Oppose

Amend

Section: SUB - Subdivision

Sub-section: All Zones Standards

Provision

SUB-S1	Minimum allotment size and shape	
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|------------------|---|---|
| All zones | 1. All allotments created must comply with the minimum allotment size and allotment shape set out in SUB-Table 1. | There are no matters of discretion for this standard. |
|------------------|---|---|

Submission

Some of the Standards for the MDZ zone are to not very conducive to good medium density design. I'm not sure there is a need for a minimum lot size for the MDZ. The requirement could be that the lots need to be big enough to accommodate dwellings that meet the Standards for dwellings within the zone. 300m2 is too high for MDZ.

Further the 9x14 metre rectangle is too large for MDZ. Many houses in MDZ are now long and narrow so 9m wide rectangle means an 11m wide Lot. The min Rectangle could be amended to 7x15

Relief sought

Remove min lot size in MDZ or reduce min area to 250m2. Amend minimum rectangle to 15x7m.

Point 59.11

Support / Support in part / Oppose

Amend

Section: INF - Infrastructure

Sub-section: Policies

Provision

INF-P13	Upgrading and development of the transport network
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Provide for the upgrade and development of the transport network where, as far as is practicable, it:

1. Integrates with the existing transport network and any other planned network upgrades or development;
2. Does not compromise the safe, efficient and effective functioning of the transport network;
3. Responds to site and topographical constraints including opportunities to reduce the effects of earthworks on landscape and ecological values;
4. Provides for high levels of connectivity within and between transport modes;
5. Provides for pedestrian and cycling safety and connectivity including access to and usability of public open spaces; and

6. Provides roads which:

- a. Allocate adequate space in the road corridor for walking, cycling, infrastructure, streetlighting and street trees as well as vehicles and on-street parking;
- b. Avoid permanent no-exit streets unless there is no practicable alternative due to site and topographical constraints; and
- c. Include street trees that are suitable for their specific locations in the road reserve, where these:
 - i. Are a species appropriate to the site's growing conditions including soil, slope, aspect, wind, drought and salt tolerance;
 - ii. Contribute to high quality public amenity through species diversity, habitat and food source value and appearance (mature height, stem girth and form);
 - iii. Have low maintenance requirements and high tolerance to pruning;
 - iv. Are sited to avoid compromising traffic safety sightlines in respect of traffic lights, signs, intersections, bus stops, pedestrian crossings and vehicle crossings; and
 - v. Are sited and planted to avoid compromising buildings, structures or infrastructure.

Submission

1. Does not compromise the safe, efficient and effective functioning of the transport network; This clause as written is absolute. This will make it difficult for any development to occur where the transport network is under some pressure. Maybe it would be a good idea to allow some minor impacts on the existing network perhaps by adding "unreasonably" into the clause.
2. *No-exit streets* have a place and function in neighbourhoods, using the terms "avoid" is too strong a word to use. We are of the opinion that the term "minimise" will be more appropriate. Also, there should be recognition that no exit streets could/should still allow for pedestrian and cycle thoroughfare. This should be recognised in the policy.
3. The way the Policies, Rules and Standards are written they strongly imply that all the functions within the road corridor must strictly have their own corridor within the overall corridor. There is no mention of the concept of "Shared Space". This leads to unreasonably wide legal road Standards and the way this policy is written is an impediment to alternative designs. The Policy needs only to require that the various functions required for the particular landuse that the road supports are designed for. To do this requires the removal of the words "adequate space"

Relief sought

1. Does not unreasonably compromise the safe, efficient and effective functioning of the transport network
- 2.

Relief Sought

1. Provides roads which:
 1. ~~Allocate adequate space~~ Allow in the road corridor for walking, cycling, infrastructure, streetlighting and street trees as well as vehicles and on-street parking appropriate for the zone;
 2. ~~Avoid~~ Minimise permanent no-exit streets unless there is no practicable alternative due to site and topographical constraints; and
 3. Where no exit streets are proposed ensure connectivity and permeability in design for pedestrians and cyclists.
 4. Include street trees that are suitable for their specific locations in the road reserve, where these:
 1. Are a species appropriate to the site's growing conditions including soil, slope, aspect, wind, drought and salt tolerance;
 2. Contribute to high quality public amenity through species diversity, habitat and food source value and appearance (mature height, stem girth and form);
 3. Have low maintenance requirements and high tolerance to pruning;
 4. Are sited to avoid compromising traffic safety sightlines in respect of traffic lights, signs, intersections, bus stops, pedestrian crossings and vehicle crossings; and
 5. Are sited and planted to avoid compromising buildings, structures or infrastructure.

Point 59.12**Support / Support in part / Oppose**

Amend

Section: INF - Infrastructure

Sub-section: Policies

Provision

INF-P23 Upgrades to and new infrastructure in Natural Hazard Overlays and Coastal Hazard Overlays

Only allow for upgrades to existing and new infrastructure in Natural Hazard Overlays and Coastal Hazard Overlays where the infrastructure:

1. Does not increase the risk from the natural hazard to people, or other property or infrastructure;
2. Has a functional need or operational need that means the infrastructure's location cannot be avoided and there are no reasonable alternatives;
3. Is not vulnerable to the natural hazard;
4. Does not result in a reduction in the ability of people and communities to recover from a natural hazard event; and
5. Is designed to maintain reasonable and safe operation during and in the immediate period after a natural hazard event.

Submission

The words "not vulnerable" is difficult to interpret. The concept of "resilience is much better understood by engineers.

Relief sought

1. Is ~~not vulnerable~~ designed to be resilient to the natural hazard;

Point 59.13

Support / Support in part / Oppose

Amend

Section: INF - Infrastructure

Sub-section: Rules

Provision

INF-R27 New roads and upgrading of roads outside of any Overlay

All zones

1. Activity status: **Controlled**

Where:

- a. The road is a new road that provides access for a subdivision that creates vacant allotments under SUB-R3; and
- b. The road is classified as a Collector Road or Access Road in INF-S22; and
- c. Compliance is achieved with:
 - i. INF-S14;
 - ii. INF-S15;
 - iii. INF-S23;
 - iv. INF-S24; and
 - v. INF-S25.

Matters of control are reserved to:

1. The matters in INF-P13.

Section 88 information requirements for applications:

1. Applications under this rule must provide, in addition to the standard information requirements, a road safety audit in accordance with NZTA's Road Safety Audit Procedures for Projects - Guidelines, Transfund New Zealand Manual No. TFM9 2013.

All zones

2. Activity status: **Controlled**

Where:

- a. The road is an upgrade to an existing road that does not result in the road being classified as a higher order road under INF-S22; and
- b. The road is classified as a Collector Road or Access Road in INF-S22; and
- c. Compliance is achieved with:
 - i. INF-S14;
 - ii. INF-S15;
 - iii. INF-S23;
 - iv. INF-S24; and
 - v. INF-S25.

Matters of control are reserved to:

1. The matters in INF-P13.

Section 88 information requirements for applications:

1. Applications under this rule must provide, in addition to the standard information requirements, a road safety audit in accordance with NZTA's Road Safety Audit Procedures for Projects - Guidelines, Transfund New Zealand Manual No. TFM9 2013.

All zones

3. Activity status: **Restricted discretionary**

Where:

- a. The road is:
 - i. A new road other than a road that provides access for a subdivision that creates vacant allotments under SUB-R3; or
 - ii. An upgrade to an existing road that results in the road being classified as a higher order road;
- b. The road is classified as a Collector Road or Access Road in INF-S22; and
- c. Compliance is achieved with:
 - i. INF-S14;
 - ii. INF-S15;
 - iii. INF-S23;
 - iv. INF-S24; and
 - v. INF-S25.

Matters of discretion are restricted to:

1. The matters in INF-P8; and
2. The matters in INF-P13.

Section 88 information requirements for applications:

1. Applications under this rule must provide, in addition to the standard information requirements, a road safety audit in accordance with NZTA's Road Safety Audit Procedures for Projects - Guidelines, Transfund New Zealand Manual No. TFM9 2013.

All zones

4. Activity status: **Discretionary**

Where:

- a. The road is a National Road, Regional Road or Arterial Road; or
- b. Compliance is not achieved with INF-S14; INF-S15; INF-S23; INF-S24 or INF-S25.

Submission

This rule does not allow for any roads that are less than 21m wide. INF-S22 and S23 all refer to INF Table 1 that set out the standards for the road widths. This standard is overly conservative and does not take New Zealand geography into consideration. It also does not allow for any compliance with NZS 4404:2010 that allows for a more realistic approach to access road options and design. This means any road that is less than 21m wide will be a non-complying activity. This is not good practice and very limiting and is not facilitating good urban design outcomes for most of the urban areas.

This is not aligned with the policy INF P13.3 which states:

Responds to site and topographical constraints including opportunities to reduce the effects of earthworks on landscape and ecological values;

Relief sought

Update INF Table -1 to incorporate all the road layout and width options as set out in NZS 4404:2010.

Or adopt any other such relief, including additions, deletions or consequential amendments necessary as a result of the matters raised in this submission, as necessary to give effect to this submission.

Point 59.14

Support / Support in part / Oppose

Amend

Section: INF - Infrastructure

Sub-section: Rules

Provision

INF-R28 New roads and upgrading of roads within a Natural Hazard Overlay or Coastal Hazard Overlay

All zones

1. Activity status: **Controlled**

Where:

- a. The works are an upgrade to an existing road;
- b. The road is classified as a Collector Road or Access Road in INF-S22;
- c. The upgrade does not result in the road being classified as a higher order road;
- d. The upgrade does not result in a permanent change to the ground level or footprint of the road once the upgrade is completed; and
- e. Compliance is achieved with:
 - i. INF-S14;
 - ii. INF-S15;
 - iii. INF-S23;
 - iv. INF-S24; and
 - v. INF-S25.

Matters of control are reserved to:

- 1. The matters in INF-P13; and
- 2. The matters in INF-P23.

Section 88 information requirements for applications:

- 1. Applications under this rule must provide, in addition to the standard information requirements, a road safety audit in accordance with NZTA's Road Safety Audit Procedures for Projects - Guidelines, Transfund New Zealand Manual No. TFM9 2013.

All zones

2. Activity status: **Restricted discretionary**

Where:

- a. The road is a new road; or
- b. The works are an upgrade to an existing road that results in:
 - i. A permanent change to the ground level or footprint of the road; or
 - ii. The road being classified as a higher order road; and
- c. The road is classified as a Collector Road or Access Road in INF-S22; and
- d. Compliance is achieved with:
 - i. INF-S14;
 - ii. INF-S15;
 - iii. INF-S23;
 - iv. INF-S24; and
 - v. INF-S25.

Matters of discretion are restricted to:

- 1. The matters in INF-P13; and
- 2. The matters in INF-P23.

Section 88 information requirements for applications:

1. Applications under this rule must provide, in addition to the standard information requirements, a road safety audit in accordance with NZTA's Road Safety Audit Procedures for Projects - Guidelines, Transfund New Zealand Manual No. TFM9 2013.

All zones

3. Activity status: **Discretionary**

Where:

- a. The road is a National Road, Regional Road or Arterial Road; or
- b. Compliance is not achieved with INF-S14, INF-S15, INF-S23, INF-S24 or INF-S25.

Submission

See comments made for Rule 27

Relief sought

Same as Rule 27

Point 59.15

Support / Support in part / Oppose

Amend

Section: INF - Infrastructure

Sub-section: Standards

Provision

INF-S22	Classification of roads
All zones	<p>1. National, Regional and Arterial roads must be classified according to the Waka Kotahi New Zealand Transport Agency One Network Road Classification.</p> <p>2. Collector and Access Roads must be classified according to INF-Table 1 (Road design standards).</p>

There are no matters of discretion for this standard.

Submission

Clause 2 refers to INF Table 1. The Road design Standards in this Table are fundamentally flawed.

The distinction between Public Rds and Private Rds (Transport section) needs to be removed. All Roads need to be designed according to function and whether they are private or public does not matter.. They all need to be in the same Standard - not split between two parts of the DP.

NZS 4404:2010 is well recognised around NZ as suitable for local roads and caters for different land uses and all the infrastructure activities in the road corridor so I cannot follow PCC's reasoning for trying to reinvent different Standards.

The roading classification and design Rules and Standards and Tables in the PDP act against the idea of good urban design and make increased density almost impossible to achieve as a Controlled Activity and the Policies make it difficult for alternative designs under Discretionary Activity status difficult to achieve because they reference the same Standards.

This rule does not allow for any roads that are less than 21m wide. INF-S22 and S23 all refer to INF Table 1 that set out the standards for the road widths. This standard is overly conservative and does not take New Zealand geography into consideration. It also does not allow for any compliance with NZS 4404:2010 that allows for a more realistic approach to access road options and design. This means any road that is less than 21m wide will be a non-complying activity. This is not good practice and very limiting and is not facilitating good urban design outcomes for most of the urban areas.

This is not aligned with the policy INF P13.3 that state:*Responds to site and topographical constraints including opportunities to reduce the effects of earthworks on landscape and ecological values;*

Relief sought

Update INF Table -1 to incorporate all the road layout and width options as set out in NZS 4404:2010.

Or adopt any other such relief, including additions, deletions or consequential amendments necessary as a result of the matters raised in this submission, as necessary to give effect to this submission.

Point 59.16

Support / Support in part / Oppose

Amend

Section: INF - Infrastructure

Sub-section: Standards

Provision

INF-S23	Design of roads
All zones	<p>1. Access Roads must not be permanent no-exit roads.</p> <p>2. Roads must provide for two-way traffic in accordance with INF-Table 1 (Road design standards).</p> <p>3. Roads must be designed to achieve design speeds in accordance with INF-Table 1 (Road design standards).</p> <p>4. The width of any road must comply with the minimum widths in accordance with INF-Table 1 (Road design standards):</p> <ul style="list-style-type: none"> a. Minimum total, legal width; and b. Minimum width to provide for: <ul style="list-style-type: none"> i. Vehicles; ii. Parking; iii. Cycles; iv. Pedestrians; v. Infrastructure; and vi. Street trees. <p>5. Pedestrian walkways, cycleways and shared paths in a road must be designed in accordance with the Austroads Guide to Road Design Part 6A: Paths for Walking and Cycling (2017).</p> <p>6. The minimum design vehicle used for a road turning head must be a 4.91m x 1.87m vehicle (85th percentile vehicle).</p> <p>7. The maximum gradient of roads must be in accordance with INF-Table 1 (Road design standards).</p> <p>8. Curves in roads must meet the following minimum values:</p> <ul style="list-style-type: none"> a. K Values for crest vertical curves and sag vertical curves must be in accordance with INF-Table 3; and b. R Values for horizontal curves must be in accordance with INF-Table 3. <p>9. Retaining structures must not be constructed in roads.</p>

There are no matters of discretion for this standard.

10. Street trees must be provided in accordance with:
- a. The requirements of INF-Table 1 (Road design standards);
 - b. Street trees must not be planted in the infrastructure berm;
 - c. When street trees are required in accordance with INF-Table 1, they must be provided in accordance with the number of trees per size class at maturity set out in INF-Table 2;
 - d. Street tree planting must meet the requirements set out in INF-Table 2 for the following:
 - i. Horizontal setback distances from underground infrastructure;
 - ii. Horizontal setback distances from structures;
 - iii. Minimum berm width;
 - iv. Minimum topsoil depth;
 - v. Minimum soil volume; and
 - e. Planting of road gardens other than street trees, mown grass or stormwater management planting must occur only in the City Centre Zone, Local Centre Zone, Neighbourhood Centre Zone or Mixed Use Zone.
11. Streetlighting must be provided in accordance with the following:
- a. Streetlighting must be designed in accordance with NZ Transport Agency document M30 Specification and Guidelines for Road Lighting Design (2014);
 - b. Streetlighting bulbs must be on the NZ Transport Agency List of M30 Approved Luminaires (2020);
 - c. Streetlighting columns must be in accordance with the NZ Transport Agency M26:2012 and M26A:2017 Specification for Lighting Columns; and
 - d. Streetlighting columns in Access Roads and Collector Roads must be a minimum of 8m in height.

Submission

1. Remove the requirement that roads must not be No Exit Rds. Sometimes these are the only option because of the terrain. Can be replaced by the requirement that designers must consider connectivity for both vehicles and other transport modes and report on this in their design report.

2- 4, 6-7. INF Table 1 needs to be rewritten.

8. INF Table 3 is based in highway standards and not appropriate for local roads in residential areas - see attachment to this section.

e. We object to there being no road gardens in residential areas. Especially in medium density areas these can be an essential aspect of providing good urban amenity. While we understand that maintenance of street planting is an issue, this should not be at the expense of providing great places for people to live. Street gardens can provide excellent ways to treat and attenuate road stormwater runoff at source and must be allowed to be a tool in the designers toolkit.

Relief sought

Remove the prohibition of no exit roads and replace with a requirement that they are only allowed where it is not possible to provide alternatives and that in that case alternative mode connectivity is to be provided unless it is unreasonable to do so.

Rewrite Tables 1 and 3 to reflect NZS 4404:2010 or similar and include Lanes Private Rds that currently are in the Transport Section of the Plan

Point 59.17

Support / Support in part / Oppose

Amend

Section: INF - Infrastructure

Sub-section: Standards

Provision

INF-Table 1	Road design standards
-------------	-----------------------

Classification	Access Road		Collector Road		
Classification criteria (must meet all criteria)	Typical daily traffic (annual average daily traffic movements)	1-1,000	1,000-5,000		
	Heavy commercial vehicles (annual average daily traffic movements)	1-25	25-300		
	Buses (urban peak)	0	1-15 buses; or 1-750 people per hour		
Zone	Urban Zones	General Rural Zone, Rural Lifestyle Zone, Settlement Zone, Open Space Zone, Māori Purpose Zone (Hongoeka) and Special Purpose Zone (BRANZ)	All zones except General Rural Zone and Rural Lifestyle Zone	General Rural Zone and Rural Lifestyle Zone	
Design speed (km/h)	40	40	50	80	
Maximum gradient	10% or 12.5% for maximum 85m in any one length	10% or 12.5% for maximum 85m in any one length	10% or 12.5% for maximum 85m in any one length	10% or 12.5% for maximum 85m in any one length	
Minimum width (m)	Parking	1 x 2.5	-	2 x 2.5	2 x 2.5
	Traffic (must provide unhindered vehicle access)	2 x 3.0	2 x 3.0	2 x 3.0	2 x 3.0
	Cycles	2 x 1.5	2 x 1.5	2 x 1.5	1 x 3.0
	Footpath	2 x 1.5	2 x 1.5	2 x 2.0	-
	Infrastructure berm	1.0	1.0	1.0	1.0
	Street tree berm	3.0	-	3.0	-
	Legal width	21.0	21.0	23.0	23.0
Number of street trees	As per INF-Table 2	-	As per INF-Table 2	-	

Submission

This rule does not allow for any roads that are less than 21m wide. INF-S22 and S23 all refer to INF Table 1 that set out the standards for the road widths. This standard is overly conservative and does not take New Zealand geography into consideration. It also does not allow for any compliance with NZS 4404:2010 that allows for a more realistic approach to access road options and design. This means any road that is less than 21m wide will be a non-complying activity. This is not good practice and very limiting and is not facilitating good urban design outcomes for most of the urban areas.

This is not aligned with the policy INF P13.3 that state: *Responds to site and topographical constraints including opportunities to reduce the effects of earthworks on landscape and ecological values;*

Relief sought

This rule does not allow for any roads that are less than 21m wide. INF-S22 and S23 all refer to INF Table 1 that set out the standards for the road widths. This standard is overly conservative and does not take New Zealand geography into consideration. It also does not allow for any compliance with NZS 4404:2010 that allows for a more realistic approach to access road options and design. This means any road that is less than 21m wide will be a non-complying activity. This is not good practice and very limiting and is not facilitating good urban design outcomes for most of the urban areas.

This is not aligned with the policy INF P13.3 that state: *Responds to site and topographical constraints including opportunities to reduce the effects of earthworks on landscape and ecological values;*

Relief sought:

Update INF Table -1 to incorporate all the road layout and width options as set out in NZS 4404:2010.

Or adopt any other such relief, including additions, deletions or consequential amendments necessary as a result of the matters raised in this submission, as necessary to give effect to this submission.

INF-S22 – Design of roads

Problem:

Access roads have a place and a function, and the plan is not giving sufficient recognition for this. This is set out in more detail in the assessment of objectives and policies.

Relief sought:

1. Access Roads must where possible not be permanent no-exit roads. Where no exit streets are proposed connectivity and permeability in design for pedestrians and cyclists should be provided.

Problem:

This standard does not allow for any roads that are less than 21m wide. INF Table 1 that set out the standards for the road widths. This standard is overly conservative and does not take New Zealand geography into consideration. It also does not allow for any compliance with NZS 4404:2010 that allows for a more realistic approach to access road options and design. This means any road that is less than 21m wide will be a non-complying activity. This is not good practice and very limiting and is not facilitating good urban design outcomes for most of the urban areas.

This is not aligned with the policy INF P13.3 which states:

Responds to site and topographical constraints including opportunities to reduce the effects of earthworks on landscape and ecological values;

Relief sought:

Update INF Table -1 to incorporate all the road layout and width options as set out in NZS 4404:2010.

This will result in points 2 to 4 to be reviewed.

Problem:

Point 9: This is a bit too vague and some retaining structures are directly related to the construction of the road. These structures should be included in the road.

Relief sought:

9. Retaining structures not directly related to the construction of the road must not be constructed in roads .

Or adopt any other such relief, including additions, deletions or consequential amendments necessary as a result of the matters raised in this submission, as necessary to give effect to this submission.

Point 59.18

Support / Support in part / Oppose

Amend

Section: INF - Infrastructure

Sub-section: Standards

Provision

INF-Table 3 Road vertical curves and horizontal curves			
Operating speed (km/h)	Minimum K value for crest vertical curves	Minimum K value for sag vertical curves	Minimum R value for horizontal curves
<20	15	3	20
21-30	17	3	30
31-40	20	3	40
41-50	33	4	50
51-60	50	6	Specific design
61-70	71	8	Specific design
71-80	100	10	Specific design

Submission

This Table is based on ideal highway scenarios for sight distances and comfort. They are not appropriate for low speed residential areas with street lights.

Relief sought

Replace factors and radius in the table with more appropriate values. These are in a different part of Austroads. - see attached doc.

Attachments

Calibre Comments on K and R factors in PCC PDP.docx

Point 59.19

Support / Support in part / Oppose

Amend

Section: TR - Transport

Sub-section: General

Provision

General

Submission

There is a hard line distinction between Vehicle Access and Legal Roads. I assume Vehicle Access includes Private Roads (ROW, Access Lots) as well as accesses that only serve on lot. I think there should be single classification for both legal and private roads. The form of legal ownership is not relevant. Why not use NZS 4404:2010? That was well researched a reputable and broad range of experts.

Consider developing one Standards for all roads and Lanes that are referred to by both INF and TR sections of the plan

Relief sought

See specific provisions

Point 59.20

Support / Support in part / Oppose

Amend

Section: TR - Transport

Sub-section: Standards

Provision

TR-S3	Design of vehicle access
-------	--------------------------

All zones

1. The vehicle access must be designed to achieve the design speeds, minimum widths, maximum gradients and seal requirements in TR-Table 2.
2. The vehicle access must be designed to comply with the minimum K Values for crest vertical curves and sag vertical curves, and R Value for horizontal curves, in TR-Table 3.
3. A Vehicle Access Level 4 must include streetlighting provided in accordance with the following:
 - a. Streetlighting must be designed in accordance with NZ Transport Agency document M30 Specification and Guidelines for Road Lighting Design (2014);
 - b. Streetlighting bulbs must be on the Waka Kotahi NZ Transport Agency List of M30 Approved Luminaires.
 - c. Streetlighting columns must comply with the Waka Kotahi NZ Transport Agency M26:2012 and M26A:2017 Specification for Lighting Columns.
 - d. Streetlighting columns in Private Ways Level 4 must be a minimum of 8m in height.
4. Pedestrian walkways, cycleways and shared paths in vehicle access areas must comply with the Austroads Guide to Road Design Part 6A: Paths for Walking and Cycling (2017).

Matters of discretion are restricted to:

1. The safe, efficient and effective functioning of the vehicle access, including the safety of pedestrians and cyclists;
2. Site and topographical constraints; and
3. The suitability of any alternative design options.

Submission

Tables 2 and 3 need to be amended or removed and incorporated into the INF S23

Relief sought

Replace references to Tables 2 and 3 with reference to amended Tables in the INF section

Point 59.21

Support / Support in part / Oppose

Amend

Section: TR - Transport

Sub-section: Standards

Provision

TR-Table 2 Vehicle access design standards

Classification	Vehicle Access Level 1	Vehicle Access Level 2	Vehicle Access Level 3	Vehicle Access Level 4
Zones	All zones	All zones	All zones	Urban Zones Rural Zone, Rural Lifestyle Zone, Settlement Zone, Open Space Zone, Māori Purpose Zone (Hongoeka), Special Purpose

					Zone (BRANZ)
Design speed (km/h)	20	20	20	40	40
Maximum gradient	20%	20%	16%	10% or 12.5% for maximum 85m in any one length	10% or 12.5% for maximum 85m in any one length
Parking	-	-	1 x 2.5	1 x 2.5	-
Traffic (must provide unhindered vehicle access)	2m transition area for changes in grade >12.5%	2m transition area for changes in grade >12.5%	2m transition area for changes in grade >12.5%		
Minimum width (m)	1 x 2.75	1 x 3.0	2 x 3.0	2 x 3.0	2 x 3.0
Cycles	-	-	-	2 x 1.5	2 x 1.5
Footpath	-	-	1 x 1.5	2 x 1.5	2 x 1.5
Infrastructure berm	-	-	-	1.0	1.0
Legal width	4.0	6.0	10.0	21.0	21.0
Seal	Where the gradient exceeds 1 in 10 (10%) the vehicle access must be sealed				

Submission

TR-Table 2. Legal widths are too wide. Level 1 should be a min of 3m – not 4. Level 2 should be 4.5m. Level 3 should be 6. Level 4 – should be 9m (2x2.7m moving lanes, 1x2.2m parking, 1m and 0.3m berms). This Standard takes no account of the concept of shared space ie. Pedestrians, cycles and cars sharing the same space. A maximum gradient 1:8 is normal for a road so should also be appropriate for accesses. 21m legal width is excessive. MDZ developments will utilise these access rd Standards the excessive widths in this Table defeat the purpose of the zone for increased density.

Relief sought

Use NZS 4404:2010 as the basis for these roads, accesses or lanes. remove distinction between private and public roads for design purposes. Include all roads in one design Standard and refer to that table from both INF and TR sections of the Plan

Point 59.22

Support / Support in part / Oppose

Amend

Section: TR - Transport

Sub-section: Standards

Provision

TR-Table 3 Vehicle access vertical curves and horizontal curves

Operating speed (km/h)	Minimum K value for crest vertical curves	Minimum K value for sag vertical curves	Minimum R value for horizontal curves
≤20	15	3	20
21-30	17	3	30
31-40	20	3	40
41-50	33	4	50

Submission

TR-S3. K Values in this table are too conservative. For Crest Curves the published values are based on Austroads “Appearance” considerations which don’t really apply to local roads. They should be based on Sight Distance and Comfort Criteria. For Sag Curves the published values have not used the low speed Austroad Tables – but extrapolated from high speed Austroad tables. See attached suggestions from Calibre.

The Radius for Horizontal curves also seem to inappropriate tables from Austroads including where superelevation is used in design. The tables used are for high speed roads and are not used in residential local road environments and this has lead to very conservative values. These need to change.

Relief sought

Amend as attached

Point 59.23

Support / Support in part / Oppose

Amend

Section: TR - Transport

Sub-section: Standards

Provision

TR-S5	Design of on-site car parking spaces	
All zones	<p>1. Where provided on a site, car parking spaces must:</p> <ul style="list-style-type: none"> a. Be designed to accommodate a 4.91m x 1.87m vehicle (85th percentile vehicle) as the minimum design vehicle; b. Comply with the minimum dimensions of TR-Table 4; c. Have a maximum gradient of 6.25% (1 vertical to 16 horizontal); and d. Have a minimum height clearance of 2.2m. <p>Note: Where parking is provided, the New Zealand Building Code D1/AS1 New Zealand Standard for Design for Access and Mobility – Buildings and Associated Facilities (NZS: 4121-2001) sets out requirements for parking spaces for people with disabilities and accessible routes from the parking spaces to the associated activity or road.</p>	<p>Matters of discretion are restricted to:</p> <ul style="list-style-type: none"> 1. The safe, resilient, efficient and effective functioning of the transport network; and 2. The safety and movement of pedestrians, cyclists, public transport and general traffic. 3. Accessibility of the site by active transport and public transport; 4. Public health and safety; 5. The safety and usability of the parking spaces; and 6. Site limitations, configuration of buildings and activities.

Submission

TR – S5. Carpark gradients. 1:16 is too flat. Could be that this is a desirable gradient, but it's quite normal for cars to park on driveways that have a gradient of 1:10.

Relief sought

Amend as noted above

Point 59.24

Support / Support in part / Oppose

Amend

Section: THWT - Three Waters

Sub-section: Policies

Provision

THWT-P2	Integration with the Three Waters Network
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Require all new residential and non-residential buildings in Urban Zones and the areas of the Settlement Zone and Māori Purpose Zone (Hongoeka) serviced by the Three Waters Network to:

1. Be serviced by reticulated water supply, reticulated wastewater and stormwater management networks that:
 - a. Meet the Council standards;
 - b. Have the capacity to accommodate the development or anticipated future development of the site in accordance with the anticipated purpose of the zone; and
 - c. Is in place at the time of building construction; and:
2. Be connected to a water metering device when connecting to the reticulated water network, unless it can be demonstrated that:
 - a. There are physical constraints that prevent a meter to be provided; or
 - b. The water demand generated is so low that a meter is not warranted.

Submission

1. Clause 1a. Meet the Council standards;

This clause is circular. If the detail design under the Rules and Policies for cannot meet the Standards then one is referred back to this Policy that references those same Standards. Makes alternative designs or Innovation difficult from a planning sense.

Relief sought

Amend Clause 1a. as follows: Meet the Council standards *or appropriate alternative design standards*;

Point 59.25

Support / Support in part / Oppose

Amend

Section: EW - Earthworks

Sub-section: Objective

Provision

EW-01 Earthworks

Earthworks are undertaken in a manner that:

1. Is consistent with the anticipated scale and form of development for the zone;
2. Minimises adverse effects on visual amenity values, including changes to natural landforms;
3. Minimises erosion and sediment effects beyond the site and assists to protect receiving environments, including Te Awarua-o-Porirua Harbour;
4. Protects the safety of people and property; and
5. Minimises adverse effects on the National Grid and the Gas Transmission Pipeline.

Submission

1. Minimises adverse effects on visual amenity values, including changes to natural landforms;

It is not clear what "including changes to natural landforms" means.

This clause need rewording.

Relief sought

Amend Clause to read

1. Minimises adverse effects on visual amenity values *and take into consideration the natural landform* including changes to natural landforms;

Point 59.26

Support / Support in part / Oppose

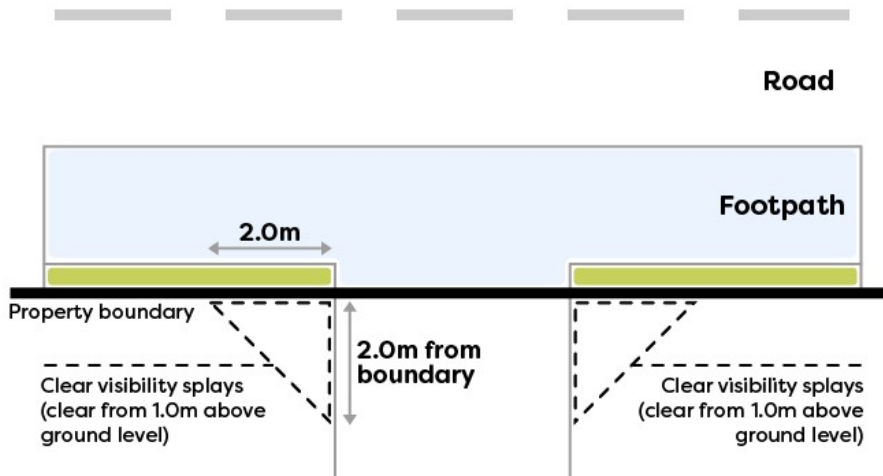
Amend

Section: INF - Infrastructure

Sub-section: Standards

Provision

INF-Figure 5 Clear visibility splays for pedestrian safety





Submission

The 2.0 metre set back needs to be from the footpath - not the boundary. The purpose of this standard is to protect pedestrians and that relates to the footpath location - not the boundary

Relief sought

Change word in figure from "Boundary" to "Footpath" and amend the arrow in the diag. to match.

Point 59.27

Support / Support in part / Oppose

Amend

Section: INF - Infrastructure

Sub-section: Rules

Provision

INF-R27 New roads and upgrading of roads outside of any Overlay

All zones

1. Activity status: **Controlled**

Where:

- a. The road is a new road that provides access for a subdivision that creates vacant allotments under SUB-R3; and
- b. The road is classified as a Collector Road or Access Road in INF-S22; and
- c. Compliance is achieved with:
 - i. INF-S14;
 - ii. INF-S15;
 - iii. INF-S23;
 - iv. INF-S24; and
 - v. INF-S25.

Matters of control are reserved to:

- 1. The matters in INF-P13.

Section 88 information requirements for applications:

- 1. Applications under this rule must provide, in addition to the standard information requirements, a road safety audit in accordance with NZTA's Road Safety Audit Procedures for Projects - Guidelines, Transfund New Zealand Manual No. TFM9 2013.

All zones

2. Activity status: **Controlled**

Where:

- a. The road is an upgrade to an existing road that does not result in the road being classified as a higher order road

- under INF-S22; and
- b. The road is classified as a Collector Road or Access Road in INF-S22; and
- c. Compliance is achieved with:
 - i. INF-S14;
 - ii. INF-S15;
 - iii. INF-S23;
 - iv. INF-S24; and
 - v. INF-S25.

Matters of control are reserved to:

1. The matters in INF-P13.

Section 88 information requirements for applications:

1. Applications under this rule must provide, in addition to the standard information requirements, a road safety audit in accordance with NZTA's Road Safety Audit Procedures for Projects - Guidelines, Transfund New Zealand Manual No. TFM9 2013.

All zones

3. Activity status: **Restricted discretionary**

Where:

- a. The road is:
 - i. A new road other than a road that provides access for a subdivision that creates vacant allotments under SUB-R3; or
 - ii. An upgrade to an existing road that results in the road being classified as a higher order road;
- b. The road is classified as a Collector Road or Access Road in INF-S22; and
- c. Compliance is achieved with:
 - i. INF-S14;
 - ii. INF-S15;
 - iii. INF-S23;
 - iv. INF-S24; and
 - v. INF-S25.

Matters of discretion are restricted to:

1. The matters in INF-P8; and
2. The matters in INF-P13.

Section 88 information requirements for applications:

1. Applications under this rule must provide, in addition to the standard information requirements, a road safety audit in accordance with NZTA's Road Safety Audit Procedures for Projects - Guidelines, Transfund New Zealand Manual No. TFM9 2013.

All zones

4. Activity status: **Discretionary**

Where:

- a. The road is a National Road, Regional Road or Arterial Road; or
- b. Compliance is not achieved with INF-S14; INF-S15; INF-S23; INF-S24 or INF-S25.

Submission

1. Applications under this rule must provide, in addition to the standard information requirements, a road safety audit in accordance with NZTA's Road Safety Audit Procedures for Projects - Guidelines, Transfund New Zealand Manual No. TFM9 2013.

The above guidelines are not particularly suitable to low speed roads in residential areas as they are designed to be used on highways. They make it difficult in relation to street trees and light poles and other urban design features that are part of good urban design elements for street amenity and creating passive low speed design environments.

Relief sought

1. Applications under this rule must provide, in addition to the standard information requirements, a road safety audit in accordance with NZTA's Road Safety Audit Procedures for Projects - Guidelines, Transfund New Zealand Manual No. TFM9 2013 *or other assessment guidelines suitable for the land use environment that the road is serving.*

Point 59.28**Support / Support in part / Oppose**

Amend

Section: Definitions**Sub-section:** Definitions**Provision****Hazard-Sensitive Activities** means activities that are sensitive to natural hazards, including:

- a. childcare services;
- b. community facility;
- c. educational facility;
- d. emergency service facilities;
- e. healthcare activity;
- f. hospital;
- g. marae;
- h. multi-unit housing;
- i. places of worship; and
- j. residential units and minor residential units (including those associated with pakakāinga)

Submission

The blanket inclusion of all residential units in this definition is too crude.

Houses with resilient design for the particular hazard could be removed from this definition and placed in a lower risk category.

Relief sought

residential units and minor residential units (including those associated with pakakainga) *not designed specifically for the hazard area in which it is located.*

Add this category of houses to the definition of lower risk buildings and activities.

Calibre Comments and Recommendations for Amendments to Road Design Standards in PCC PDP.

Min. K Value for Crest Vertical Curves

There are several considerations for crest curves:

- Sight Distance
- Comfort
- Appearance

The proposed PCC values appear to be taken from Austroads to comply with the Appearance criteria. However this is easily the most onerous criterion and often not practical. Austroads suggests these are only required for important roads in flat topography regions, and are not considered mandatory.

I'd suggest minimum required K values only need to satisfy sight distance & comfort criteria. The following values (from Austroads Section 8.6.2) satisfy comfort criteria. They also satisfy sight distance criteria except where change in longitudinal grades is large (in these cases the K value can't be reduced to a simple table based on speed).

<20km/h : K = 0.6
 21-30km/h : K = 1.4
 31-40km/h : K = 2.5
 41-50km/h : K = 3.9

Min. K Value for Sag Vertical Curves

There are two considerations for sag curves:

- Headlight criteria (where no street lighting)
- Comfort

The proposed PCC values appear to be taken from Austroads Figure 8.7 to comply with Comfort criteria, and extrapolated to lower speeds. But using the Austroads formula (Section 8.6.4 - 8.6.5) to find more accurate values for the lower speeds gives the following figures:

<20km/h : K = 0.6
 21-30km/h : K = 1.4
 31-40km/h : K = 2.5
 41-50km/h : K = 3.9

These figures also satisfy the headlight criteria except where the change in longitudinal grade is large. In these cases the K value can't be reduced to a simple table based on speed.

Min. R Value for Horizontal Curves

The proposed PCC values appear to be taken from Austroads Figure 7.5 and extrapolated to lower speeds. However this table is using superelevation. In practice most urban roads will not be superelevated which will increase the minimum radius required. Using formula from Section 7.4 with a standard 3% crossfall gives the following values:

<20km/h : R = 10m
 21-30km/h : R = 25m
 31-40km/h : R = 45m
 41-50km/h : R = 75m

**Correspondence between
Council and submitter which
forms part of this submission**

Louise White

From: Brett Gawn <Brett.Gawn@calibregroup.com>
Sent: Monday, 1 February 2021 3:16 PM
To: Rory Smeaton
Subject: [EXTERNAL] Re: Proposed Porirua District Plan - KLP submission clarification

Categories: Actions complete

No problem Rory

Regards
Brett Gawn
Calibre
021 727052



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On 1/02/2021, at 2:43 PM, Rory Smeaton <Rory.Smeaton@porirua.govt.nz> wrote:

Tēnā koe Brett,

Thanks for the submission on the Proposed Porirua District Plan from KLP, and for putting it directly into the online portal, it really helps make the process efficient.

I have summarised this submission for our summary of decisions requested, and was just wondering if you would be happy if I split the first submission point relating to natural hazard overlays into three separate submission points? This will change how it is recorded in the database, but you should have a PDF of the original submission, and we also have a PDF record of the original.

Let me know if you have any questions or concerns around this.

Ngā mihi,

Rory

Rory Smeaton MNZPI
Senior Policy Planner
Kaihanga Mahere Kaupapahere Matua

Mob: 021 195 2071