

Appendix E

Plan Change 7 – Technical Planning and Infrastructure Report

Rotokauri North Proposed Private Plan Change 7

Report on technical planning and infrastructure matters relevant to Hamilton City Council

For Craig Sharman, the s42A report author for Plan Change 7

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Appendix 6	Proposed Figure 2-9D - Watercourse Classification

1 Executive Summary

This report identifies Hamilton City Council staff's technical planning and infrastructure concerns about the Rotokauri North Proposed Private Plan Change (Plan Change 7 (PC7)).

To address these concerns, the report recommends:

1. Amendments to PC7 text. These are shown as tracked changes throughout the report.
2. Amendments to PC7 figures. These are collated in s22.1 below.
3. Additional information be sought from the Requester. These recommendations are collated in s22.2 below.

The report's recommendations are without prejudice.

2 Introduction

2.1 Purpose

The purpose of this report is to set out concerns raised by the following units of Hamilton City Council (Council) about technical planning and infrastructure matters related to PC7: City Development, City Planning, City Transportation, Parks and Open Spaces and Planning Guidance.

2.2 Recommendations

Where relevant, this report makes recommendations in response to the issues Council has raised. These recommendations are highlighted with grey shading – **thus**. Any recommended changes to the plan change provisions are shown in red as follows:

- Additions: underlined; and
- Deletions: ~~strikethrough~~.

Recommended changes to the plan change provisions are identified and discussed throughout this report. Any recommendations are without prejudice.

2.3 Glossary of terms used in this report

AEP	Average Exceedance Probability
Council	Hamilton City Council
FWI	Far Western Interceptor
HASHAA	Housing Accords and Special Housing Areas Act 2013
ICMP	Integrated Catchment Management Plan
<i>Inter alia</i>	Amongst other things
MUSIC	Model for Urban Stormwater Improvement Conceptualisation
ODP	Hamilton City Operative District Plan
PCA	Plan Change Area
PDA	Private Development Agreement between Hamilton City Council, Rotokauri North Development No 1 Limited, MADE Group Limited, Green Seed Consultants Limited and Green Seed Holdings Limited. (D-3066095).
Plan Change Area	The area within the boundary of the Rotokauri North Proposed Plan Change Area shown on Figure 2-8A in PC7
PC7	Proposed Private Plan Change 7, that is, the Rotokauri North Proposed Private Plan Change
RITS	<i>Regional Infrastructure Specifications</i> (Waikato Local Authority Shared Services, 2018)

RMA	Resource Management Act 1991
RNMDRZ	Rotokauri North Medium-Density Residential Zone
RNSP	Rotokauri North Structure Plan
Rotokauri North	The Rotokauri North Structure Plan Area, which is shown on Figure 2-8A in Volume 2, Appendix 2. (See s4 in below).
QD	Qualifying development
SCICMP	Sub-catchment Integrated Catchment Management Plan
SH	State Highway
SHA	Special Housing Area
SNA	Significant Natural Area
The AEE	<i>Rotokauri North Private Plan Change: Assessment of Effects on the Environment</i> (Tollemache and Fraser-Smith, 2019)
The ICMP	<i>Rotokauri North: Sub-Catchment Integrated Catchment Management Plan</i> (Green Seed Consultants Limited, April 2019)
The Request	<i>Rotokauri North Private Plan Change Request: Planning Assessment: Assessment of Environmental Effects: Application to Hamilton City Council pursuant to Schedule 1 of the Resource Management Act 1991</i> (Tollemache Consultants Ltd, April 2019)
The Requester	Green Seed Consultants Limited
The Rotokauri North Structure Plan Area	The area within the boundary of the Rotokauri North Proposed Plan Change Area as shown on Figure 2-8A Rotokauri North Structure Plan

3 Special Housing Area

On 10 May 2018, Council resolved to recommend to the government that the PCA be declared a Special Housing Area pursuant to the Housing Accords and Special Housing Areas Act 2013 (HASHAA). The subsequent declaration was gazetted on 26 August 2019.¹

On 30 August 2019, Green Seed Consultants Limited applied to Council for a Qualifying Development (QD) resource consent pursuant to s25 (1) of HASHAA. The consent is for land modification, infrastructure development and subdivision associated with the provision of 151 residential units and 16 duplex units and their subdivision. This development covers approximately 15.1 hectares and is located at 321, 329, 335, and 341 Te Kowhai Road, and 350 and 372 Exelby Road, Rotokauri North – see Figure 1. Figure 2 shows the extent of the QD.

On 24 September 2019, Council sent Green Seed Consultant Limited a 9-page s92 request for further information on the Qualifying Development land use and subdivision application – see Appendix 1. As at 31 March 2020, Green Seed Consultant Limited had yet to provide the requested information. On that date Ms Fraser-Smith provided the following update on behalf of the Applicant:²

We are working on the matters raised to ensure that we can continue with the best outcome for the site and this is involving further work and investigation prior to responses. Our team, like many others, are also experiencing unforeseen setbacks due to implications of Covid-19 which has and will continue to disrupt work (including an inability for experts to access the site).

¹ [C-8038](#)

² [D-3284375](#)

As of 19 February 2021, Council had still yet to receive a response to its s92 request.

Unless PC7 is amended, some of the s92 matters of concern to Council will be made permitted under PC7, thereby avoiding the need for them to be addressed. Many of these concerns will likely arise in developing the balance of the PCA. While Council welcomes the opportunities and benefits that could arise from innovation, it is Council's view that the District Plan should not be amended in a manner that would result in proposed developments avoiding assessment within a robust consenting process. Neither should the plan be amended in a manner that precludes the ability to require application of tested infrastructure standards and practices. Such assessments and requirements are important for ensuring whole-of-life costs and impacts are considered and expected levels of service for the community are achieved.

For completeness, all matters identified in the s92 request are not expected to be addressed and resolved when considering PC7. Some matters require further detailed investigation that can only be done at the resource consenting stage. The matters relevant to PC7 are discussed in this report.



Figure 1 *Properties subject to the Qualifying Development application³*

³ Fraser-Smith, 2019. *Assessment of Environmental Effects: Qualifying Development: Application for a qualifying development to Hamilton City Council pursuant to section 25(1) of the Housing Accords and Special Housing Areas Act 2013* (p19).



Figure 2 Extent of Qualifying Development Rotokauri North⁴

4 Referencing “Rotokauri North”

To ensure clarity, certainty and brevity, it is recommended that the following definition of “Rotokauri North” is included in Appendix 1.1.2 of the District Plan as a consequential amendment:

Rotokauri North: Means the Rotokauri North Structure Plan Area, which is shown on Figure 2-8A in Volume 2, Appendix 2.

If the above recommendation were accepted, then the District Plan should be checked to ensure that the new definition does not create any unintended interpretation problems. Some additional consequential amendments may be required to address any such problems.⁵

The above definition is adopted for use in this report.

5 Stormwater Management

5.1 Comments on the ICMP

Policy 3.3.3b of the Operative District Plan (ODP) is: “*Integrated Catchment Management Plans shall be developed to determine how to manage Three Waters in an effective and integrated manner*” The explanation below this policy includes: “*A full Integrated Catchment Management Plan should be prepared iteratively with the development of each Structure Plan*”.

⁴ Rudsits, 2019a. *Infrastructure & Sub-Catchment ICMP Implementation Report: Rotokauri North Qualifying Development* (p2)

⁵ See s22.1.4.1 (11)a.

As PC7 is a private plan change, the Requester is not required to develop a full ICMP, or even a sub-catchment ICMP. Rather, the Requester must provide enough information to support the plan change. The Information Requirements for a sub-catchment ICMP set out in Appendix 1.2.2.6 of the ODP provide a useful checklist against which to test whether the information submitted with the Request relating to the integration of land use and three waters planning is sufficient to support the plan change.

At the plan change stage, the Requester must undertake enough assessment to understand the infrastructure issues and define a strategic 3-waters management approach. The Requestor must demonstrate that the proposed approach to development, and the proposed plan provisions that will manage that development, are sufficient and appropriate to achieve the relevant objectives and satisfy all the relevant Hamilton City Council, Waikato Regional Council and other statutory requirements.

The framework of the ODP provisions and the proposed plan provisions for Rotokauri North must provide Council the scope and discretion it needs, at subdivision / detailed design stage, to interrogate the detail to ensure fit-for-purpose 3-waters networks will be achieved. Council must be able to consider and control potential consequential effects of detailed design options. The ICMP does not clearly set out how stormwater will be managed in Rotokauri North to meet all requirements. It lacks sufficient detail to enable its implementation through the subdivision and land use consenting to achieve required outcomes with certainty.

Caleb Clarke (2020) has assessed the adequacy of the assessment of effects, proposed stormwater management methods and sub-catchment ICMP and found them deficient. He concluded and recommended as follows (pp3-4):

In general, much of this work is not fully resolved into a proposed discharge regime or stormwater infrastructure layout, and therefore in its current form does not provide suitable evidence that appropriate stormwater management on the site is feasible to support the zoning change. The key issues that are unresolved are

- A. The land requirement for flood and frequent storm storage, appropriate water quality treatment and open channel conveyance is not clearly defined and may not meet normal expectations of yield or equitable burden from multiple existing titles and therefore create problems for subdivision.*
- B. The toolbox approach in the SCICMP includes elements that do not comply with development standards³ and, therefore, are unlikely to be acceptable for public vesting. Particularly, the proposal includes roads receiving private kerb discharges and subsoil drainage without discharge connections at sufficient depth. Other options within the SCICMP toolbox that may be appropriate as alternatives such as pipes or increased upstream swales may require additional land filling that exceeds the expected or viable costs of normal residential development, as well as taking up more footprint exacerbating issue A above.*

It is recommended that the applicant is directed to address these issues before land use change is approved.

It is recommended that more detail is required to be included in the ICMP to define an acceptable stormwater management solution. This should address the matters identified in Mr Clarke's Stormwater Technical Assessment and include, inter alia, a concept plan showing the locations and footprints of the key stormwater infrastructure such as wetlands, dry detention basins, conveyance channels and swales. One or more tables should also be included setting out the nominal dimensions and key performance criteria for each of these infrastructure items.

It is further recommended that this concept plan and these tables be included in Appendix 2 to the District Plan to guide future consenting of subdivision and land-use in Rotokauri North.

If those details were included in the District Plan, developers would be able to depart from them, provided they presented technical evidence as part of their consent applications justifying such departure.

This report identifies deficiencies in the ICMP, any additional information the Requester needs to provide, and any amendments to the plan provisions deemed necessary to meet all requirements. Recommended amendments to the ICMP are documented in Appendix 2.

5.2 Policy 3.6A.2.5b

It is recommended that Policy 3.6A.2.5b be deleted, thus:

~~3.6A.2.5b~~

~~Require subdivision and development to implement the Rotokauri North Sub-Catchment Integrated Catchment Management Plan.~~

This is because, as discussed in 5.1 above, the ICMP is insufficient to guide development of Rotokauri North. In the absence of the above policy, the following provisions in the ODP are enough to ensure integrated management of land use and the three waters within Rotokauri North:

- (1) Objective 3.3.3
- (2) Policy 3.3.3a
- (3) Policy 3.3.3b
- (4) Policy 25.13.2.3c; and
- (5) Policy 25.13.2.3d.

5.3 Drainage and Conveyance

5.3.1 Summary of the proposal

Rotokauri North is within four catchments – the Ohote, Te Otamanui, Mangaheka and Rotokauri South – which all drain to the Waipa River⁶. Most of Rotokauri North comprises flat land⁷ across which the fall is approximately 2m.⁸ The gradient along these water ways between Rotokauri North and the Waipa River is very flat.

In addition, the water table in Rotokauri North is high, just 0.1 to 1.5m below ground surface⁹. Groundwater levels show a direct and immediate response to rainfall, and soils are expected to have low permeability. Consequently, the use of infiltration devices for stormwater management is expected to be limited within Rotokauri North.¹⁰

These conditions combine to make drainage of Rotokauri North challenging.

The lack of fall across Rotokauri North limited the use of a piped gravity stormwater network, so the Requestor proposes swales and conveyance channels be used to dispose of stormwater from Rotokauri North.¹¹

⁶ Tollemache, M. and Fraser-Smith, R., 2019. *Assessment of Effects on the Environment*. s2.5, pp11-12.

⁷ Rudsits, B., 2019b. *Infrastructure Report*. The topographical plan (Drawing Number 015F) in Appendix 2.

⁸ Rudsits, B., 2019c. *Stormwater and MUSIC Modelling Report*. P

⁹ Tollemache, M. and Fraser-Smith, R., 2019. *Assessment of Effects on the Environment*. S2.8.3, p16.

¹⁰ Rudsits, B., 2019b. *Infrastructure Report*. First paragraph on p7.

¹¹ Rudsits, 2019c. *Stormwater and MUSIC Modelling Report*. S5.1, p12.

The *Infrastructure Report*¹² summarises the stormwater system as follows:

*The ICMP (Fraser-Smith et al., 2018) proposes a range of treatment options for stormwater, both at source, and communally. The primary conveyance system will comprise swales and channels capable of conveying the 10-year ARI peak runoff from all impervious services, such as roads, carparks and buildings. The secondary flow network will accommodate flood flows up to the 100-year ARI plus climate change by utilising the swales, channels and road carriageways. Refer to **Figure 4** and drawing **1693-0-032, Appendix 3**, showing an indicative primary swale network for conveyance and treatment, and wetlands for stormwater treatment.*

The ICMP (Fraser-Smith et al., 2018) provides design solutions to meet the outcomes prescribed in the Regional Infrastructure Technical Specifications (RITS) (Waikato Local Authority, 2018) and the Waikato Regional Council Stormwater Management Guideline (SMG) (Shaver, 2018a). Final options will be determined at the subdivision stage for public and communal infrastructure, and at building consent stage for individual lots.

In general, development within catchments that discharge to streams must provide detention (temporary storage) such that the post development flows for the 50%, 10% and 1% Average Exceedance Probability (AEP) 24-hour rainfall events do not exceed 80% of the pre-development peak flows.

However, some of these statements are not fully reflected in the concept drawings. This is discussed further in s5.3.2 below.

Although the ICMP proposes a range of treatment options for stormwater, both at source and communally, the option to be implemented will be determined at the subdivision stage for public and communal infrastructure, and at building consent stage for individual lots.¹³

5.3.2 Information missing from the drawings

Contrary to the quote above¹⁴, neither Figure 4 in the *Infrastructure Report*, nor drawing 1693-0-032 in Appendix 3 of the ICMP clearly show a complete, indicative primary swale network. There is not even a line depicting swales in the legend in either of these graphics, despite the title of the latter drawing being “Subcatchments with indicative swales and wetland locations”.

It is recommended the ICMP and Appendix 2 of the District Plan include a map of the swale network layout showing which roads and blocks are proposed to have swales.

At various parts of the documents, for example, in Table 10 of the ICMP (p.48), there are references to “green corridors”, i.e. more than one green corridor. Figure 2-8A shows only a single green corridor, namely the “Green Spine”. It is recommended the Structure Plan, i.e. Figure 2-8A, shows the full extent of all proposed green corridors.

The ICMP refers to “off-line dry detention basins” (p.51), but their location is not mapped and labelled either. It is recommended the ICMP and Appendix 2 of the District Plan include a concept plan showing the possible locations and extents of communal stormwater devices.

¹² Rudsits, 2019b. *Infrastructure Report: Rotokauri North Private Plan Change*. P6.

¹³ Second-to-last paragraph on p6 of Attachment 16 to the AEE

¹⁴ 5.3.1

The Request lacks clarity about the stormwater management system that is proposed. Because maps are very schematic and incomplete, it is difficult to understand how PC7 intends for stormwater to be managed. More detail is necessary to demonstrate whether the stormwater management concept is practical and feasible and to enable Council to assess whether it is acceptable. The additional detail recommended would provide clarity and certainty for plan users.

5.3.3 Inconsistency with the RITS

The Private Development Agreement sets out repeatedly the requirement that the development be in accordance with the RITS.

The *Infrastructure Report* states the development of the ICMP was based on the *Regional Infrastructure Technical Specifications* (Waikato Local Authority Shared Services, 2018). However, the following, which are proposed in the ICMP, are inconsistent with the RITS:

- (1) The discharge of private stormwater to kerbs;
- (2) The proposed primary conveyance network; and
- (3) The provision, or lack of provision, of subsoil drainage for roads, parking areas and swales and conveyance channels within the road corridor.

These inconsistencies are discussed further as follows.

5.3.3.1 Discharge of private stormwater to kerbs

The general reliance on discharge of private primary stormwater runoff to road drainage infrastructure is not acceptable to Council. This method of managing stormwater has significant asset management risks that Council is not prepared to accept, such as pavement saturation and failure, and subsoil network blockage. The additional volume and depth of surface stormwater flow between kerbs would also compromise travel options and safety for pedestrians, scooter users and cyclists during regular rain events. It could also compromise safety for motor vehicles, particularly at intersections where water will flow over the road. The RITS¹⁵ does not allow for kerb discharges from new developments in greenfield areas.

Mr Black has expressed extreme concern about the unacceptable safety risk associated with flooding at intersections. He notes that the design should avoid or minimise flooding of the arterial road network to allow access by emergency services during flood events. He requests information on the extent of flooding that is expected to occur, on average, once every 10 years.¹⁶ **It is recommended that this information be sought from the Requester.**

5.3.3.2 Primary conveyance network

It is unacceptable to Council to have water flowing down roads and across intersections during regular rainfall event; such an outcome would represent a low level of service for pedestrians and cyclists and introduce health and safety risks for them and motor vehicle users. Pedestrians crossing the street would likely get wet feet and trousers. Passing motor vehicles being driven through streaming stormwater on the carriageway could create waves or splashes that could further drench pedestrians on the adjacent footpath. Streaming stormwater would be deepest on the part of the road carriageway normally used by cyclists. They, too, would likely end up with wet footwear, socks and trousers. Cyclist attempting to avoid deeper water would need to cycle further out in the traffic lane thereby putting themselves in conflict with motor vehicles. Motor vehicles negotiating flooded

¹⁵ S4.1.9.4

¹⁶ Black, A. 2020, p11, s5.2

roads risk losing traction and effective braking, leading to increased potential for crashes, particularly where stormwater streams across intersections.

Using the road carriageway as the primary stormwater conveyance would be inconsistent with Rule 25.13.4.2 (a) in the ODP, which states:

A stormwater reticulation and disposal system shall be provided that is adequate to safeguard people from injury or illness and protect property from damage caused by surface water.

Furthermore, while the RITS does not explicitly state the road carriageway cannot be the primary stormwater conveyance, it provides plenty of guidance on design parameters and outcomes that leads Council to conclude that road carriageways are not an acceptable means of primary stormwater conveyance. Appendix 3 lists relevant extracts from the RITS and commentary that support this conclusion.

5.3.3.3 Sub-soil drainage for roads

S3.3.14.7 of the RITS states:

*Unless specified otherwise or agreed to by Council, piped subsoil drainage shall be provided to protect road formations from deterioration or loss of strength caused by a high water table and as part of swale stormwater systems. Design shall be in accordance with NZTA specifications F/2 and F/5. Refer to section 3.3.19.3 of NZS4404 for more details
All piped subsoil drains shall discharge by gravity into a suitable component of the public stormwater system or approved discharge point.*

For typical details of subsoil drains see Drawing D3.4.1.

NZTA specifications F/2 and F/5 both require outlets from subsoil drains to be constructed clear of embankments and with enough slope to prevent silting. The RITS Drawing D3.4.1 specifies that, where possible, the invert of a sub-soil drain should be 1,000mm below the top of the kerb, but not less than 700mm.

Section 3.3.19.3 of NZS4404 states:

Where considered necessary by the TA [Territorial Authority] or the developer's professional advisor, piped subsoil drainage shall be provided to protect road formations from deterioration or loss of strength caused by a high water table and as part of swale stormwater systems. Design shall be in accordance with NZTA specification F/2.

Piped subsurface drains shall be provided on each side of all urban roads where the natural subsoils have inadequate permeability or unacceptably high water table to enable long term strength of the new pavement to be maintained.

All piped subsurface drains shall discharge by gravity into a suitable component of the public stormwater system or approved discharge point.

For two typical details of under-kerb drainage and subsoil drainage see figure 3.5.

Figure 3.5 in NZS4404 specifies the top of the subsoil drain shall be at least 200mm below the lowest subgrade level on the cross section.

S3.3.14.8 of the RITS states:

Subsoil and batter drain outlets shall be to catchpits or manholes.

There is no mention in the PC7 documentation that any stormwater catchpits or manholes will be provided in Rotokauri North. Based on Council's experience with the SHA QD, this is because no piped stormwater network is likely to be proposed as part of the subsequent consent process. The PC7 documentation provides no information about how and where the sub-soil drains for roads will be terminated to prevent damage and silting, keep functioning and be maintained. Council is concerned that, because of the high water-table in Rotokauri North, the lack of fall to the receiving waters, and because the water level in the swale is higher than the adjacent subsoil drain, the subsoil drains will fail to function properly.

Another concern to Council is the sections of road that will have no swale in the upper parts of sub-catchments where the cumulative contributing catchment is less than 1.5ha. Along these sections of road there will be no nearby outlet for the sub-soil drains¹⁷. There is a serious risk that the sub-soil drains will not function properly on these sections of road.

If a road's basecourse or subgrade is not adequately drained, there is risk the road's foundation or pavement will fail – the road surface will deform, develop potholes and the surface could break up. Such premature failure would require on-going road maintenance or reconstruction, resulting in increased operational costs and disruption for the community.

The same issue applies to the car parking areas, including that associated with the Neighbourhood Centre.¹⁸

The ICMP identifies some of these risks, including the risk of being “unable to provide subsoil drainage due to above ground stormwater conveyance and devices”¹⁹. The only measure it offers to respond to these risks is to monitor groundwater depth prior to designing the subsoil drains.²⁰ This alone will not address the risk.

The ICMP also identifies the opportunity for “Pavement subsoil drainage to be integrated with stormwater conveyance system”²¹. But it is difficult to see how that would work as typical cross sections for local and collector roads in the *Infrastructure Report* show the inverts of swales are likely to be above the subsoil drain²².

Council seeks confirmation that the urbanisation of Rotokauri North will provide sub-soil drainage for roads that will comply with the RITS.

5.3.3.4 Sub-soil drainage for swales and conveyance channels

The RITS states that infiltration swales are not suitable within the road corridor²³, so the swales proposed in PC7 for construction in the road corridor must have underdrainage. No swale

¹⁷ Third paragraph in s5.1 of Rudsits (2019c, p12) and Figure 3.6A-1 at Volume 1, p3-62 of Attachment 4 to the AEE

¹⁸ Tollemache Consultants Ltd, 2019, *Sub-Catchment ICMP*, p37, “Issues/Potential Effects” for “Car Parking Area (Neighbourhood Centre areas”.

¹⁹ Ibid, p36, “Issues/Potential Effects” for “Roads”.

²⁰ Ibid, pp36-37

²¹ Ibid, p36 “Opportunities” for “Roads”.

²² Drawings 1693-0-360 and 1693-0-361 in Appendix 3 to Rudsits, 2019b, *Infrastructure Report*

²³ Waikato Local Authority Shared Services, 2018, p329 – last row of Table 4-15: Vested treatment device preferences

underdrainage is shown on the typical cross sections for local and collector roads included in the *Infrastructure Report*²⁴ or otherwise identified or discussed in the PC7 documents.

Council seeks confirmation that any swales proposed to be constructed in road corridors will have under drainage that complies with the RITS.

5.4 Naturalisation of modified watercourses

The AEE states: *“The RNSP [(Rotokauri North Structure Plan)] anticipates the replanting of the site[']s modified watercourses (streams) along with their naturalisation. These would be vested as drainage reserve, providing opportunities to protect enhanced stream networks with the PPC area, and incorporate these into the recreation network.”*²⁵

Modified watercourses are identified in Attachment C to the ICMP²⁶. There are two such watercourses: an Ohote Stream tributary, which lies on an east-west alignment, and a Te Otamanui Stream tributary, which lies approximately on a north-south alignment. The former tributary appears to lie generally within the “Green Spine” shown on Figure 2-8A Rotokauri North Structure Plan, but the Structure Plan does not recognise the latter tributary. Te Otamanui Stream tributary that is a modified watercourse coincides with the proposed Collector Road north of the Green Spine, but not the approximately 110m section of tributary that lies south of the Green Spine.

It is recommended the sections of stream to be naturalised or vested as drainage reserve are identified as “future reserve” on a map to be included in Appendix 2 of the District Plan and that these include, at least, those lengths defined as “modified waterways”.

5.5 Major overland flow conveyance channels

Section 3.6A.1.3 of the proposed PC7 provisions states:

.... The following are key components of the open space network as shown on the Structure Plan:

- iii. Streams and stormwater networks – corridors are shown along identified permanent streams within the site and along major overland flow conveyance channels. It is anticipated that the corridors will be primarily used for stream enhancement and stormwater management purposes (conveyance, treatment and detention) as required by the sub-catchment ICMP, and may as a secondary function provide opportunities for informal and passive recreation.*

The final design, location and extent of the open space network will be determined at detailed design stage which accompanies subdivision.

The ICMP states: “The overarching strategy for stormwater is detailed in section 5 of the Stormwater Modelling and MUSIC Modelling report prepared by McKenzie & Co. Consultants (2019).”²⁷

Section 5 of the latter report states: *“Details of the proposed primary network for the development are provided in Appendix B”*. Appendix B comprises drawings 1693-0-032G and 1693-0-033F. These drawings show only indicative locations of wetland inlets and schematic indications of the directions of stormwater flows to and from the wetlands.

²⁴ Drawings 1693-0-360 and 1693-0-361 in Appendix 3 to Rudsits, 2019b

²⁵ S6.7.19, p57

²⁶ Tonkin & Taylor Ltd, 2018, Technical review of stream classifications, Figure 1 in Appendix A

²⁷ S8.3.1, p47

Contrary to the statement above in Section 3.6A.1.3 iii, the Structure Plan does not show corridors along identified permanent streams and all major overland flow conveyance channels. For instance, the Structure Plan does not show corridors along the major overland flow conveyance channels discharging to the Rotokauri South, Mangaheka or Te Otamanui catchments. Neither does it show any major overland flow conveyance channels discharging in north to south or south-to-north directions to the Green Spine. The *Urban Design Assessment* (Munro, 2019) does, however, show such corridors - see:

- (1) Figure 6.1 Concept 1 Master Plan
- (2) Figure 6.2 Concept 1 Master Plan – Stormwater Management Concept: Bottom CKL Ltd

Nutsford's hydrogeological assessment²⁸ identifies a storage channel concept for the Green Spine, which includes a main channel with 30m base width to support permanent base-flows in a run-riffle-pool type arrangement within a wider corridor (76m overall top width) to accommodate larger events. The channel has a maximum overall depth of 2m. Such a channel would be significant infrastructure, have a large footprint within Rotokauri North, and have implications for Rotokauri North, and vice versa, which are discussed in Nutsford's assessment. These implications could include:

- (1) The need to line the channel. If the channel extends below the groundwater table, groundwater inflows would need to be managed during construction and flatter channel and basin side slopes may be required for stability. This would increase the footprint of the channel or basin.²⁹ Also, post-construction, groundwater would take up part of the volume of the channel that is needed for flood storage;³⁰
- (2) If the channel is lined, then upward ground pressures would need to be considered in design;³¹
- (3) If the summer groundwater level drops below the base of the channel, it could be difficult to maintain a wetted base³², and wetland plants, which are relied upon for stormwater treatment, biodiversity and amenity, could die;
- (4) Ground settlement induced by groundwater drawdown;³³ and
- (5) Stormwater infiltration through the base or sides of the channel or basins could elevate local groundwater levels and cause surface flooding.³⁴

The proposed Structure Plan (Figure 2-8A) gives no indication of the likely footprint of the Green Spine, nor does it give any indication of the potential locations and extent of stormwater wetlands or off-line dry detention basins. Nutsford states: "*Where storage basins are required they are likely to be largely accommodated within the corridor footprint; however, offline storage in adjacent reserves could still be required.*"³⁵

It is recognised the final design, location and extent of the open space network will be determined at detailed design stage, which accompanies subdivision. Nevertheless, it is recommended a drawing illustrating the stormwater management concept is included in the District Plan, either in the Structure Plan, Figure 2-8A, or in Appendix 2, including indicative locations and footprints of:

- (6) Swales;

²⁸ Nutsford, 2018. Letter report: Rotokauri North ICMP: Desktop Review of Hydrogeological Conditions Influencing Stormwater Design: Attachment I to the ICMP.

²⁹ Ibid, s4.3.1, p7

³⁰ Ibid, s4.2.1, p6

³¹ Ibid, s4.2.2, p6

³² Ibid, s4.2.1, p6

³³ Ibid, s4.2.2, p6

³⁴ Ibid, s4.2.4 b, p7

³⁵ Ibid, s2, p1.

- (1) Major overland flow conveyance channels;³⁶
- (2) Green corridors (i.e., streams and stormwater corridors) along identified permanent streams;³⁷
- (3) Stormwater wetlands; and
- (4) Off-line dry detention basins.³⁸

5.6 Hydrogeological constraints

Nutsford³⁹ sets out findings of a desktop review of hydrogeological conditions in Rotokauri North and their implications for stormwater design. While noting there is limited hydraulic conductivity or infiltration data available for the area, he found there is likely to be limited potential for larger scale infiltration of stormwater.⁴⁰ He also concluded: “It may be necessary to restrict groundwater infiltration in areas with shallow depths to water and limited freeboard”.

PC7 adds a note to Rule 25.14.4.2f) ii to include permeable pavements as a means of compliance with the Rule. However, this note is not necessary, because permeable pavements, being permanent, paved, all-weather, dust-free surfaces, fall within the scope of standard 25.14.4.2.

In addition, disposing of stormwater by means of ground soakage will not always be appropriate, depending on the hydraulic conductivity of the soil, the depth of the water table below ground level, and the freeboard available at the site.

Finally, notes do not have statutory status, and the discretion within the notes is ultra vires.

To remedy these deficiencies, it is recommended that Rule 25.14.4.2 f) ii be amended as follows:

25.14.4.2 Parking, Loading Spaces and Manoeuvring Areas

...

Design

...

f) Parking spaces, loading spaces and manoeuvring areas shall:

...

ii. Be formed and drained with a permanent sealed or paved all weather, dust-free surface in a manner suitable for the type and quantity of vehicles using the site.

Note

...

~~1. — For Rotokauri North development, permeable pavements will also be considered a means of compliance with (ii).~~

The following rules provide for permeable paving:

- 25.13.4.5 a (Water Efficiency Measures);
- 25.14.4.1 h ii (Vehicle Crossings Internal Vehicle Access – Design and Access Widths); and
- 25.14.4.2 f ii (Parking, Loading Spaces and Manoeuvring Areas – Design).

³⁶ See s9.3 regarding provision 3.6A.1.3 Open Space Network: c) Streams and Stormwater Corridor.

³⁷ Ibid

³⁸ Refer to 5.3.2 and p51 of the ICMP.

³⁹ Nutsford, 2018. Letter report: Rotokauri North ICMP: Desktop Review of Hydrogeological Conditions Influencing Stormwater Design: Attachment I to the ICMP.

⁴⁰ Ibid, p7, s24.2.3, second paragraph

Information requirements for Assessments of Environmental Effects, Water Impact Assessments and ICMPs include information related to permeable paving. Assessment criteria for activities not complying with relevant standards in the Plan, discretionary activities, non-complying activities and ICMPs include for appropriate assessment of any proposal to use permeable pavement.

5.7 Conclusion about the proposed stormwater management

The ICMP submitted as part of the PC7 Request does not set out clearly in words and graphics how stormwater and groundwater in Rotokauri North will be managed to meet Council's and Regional Council's requirements. PC7 lacks enough robust technical evidence to support the feasibility of the proposed stormwater management system.

6 Chapter 3 – Structure Plans

6.1 Introduction

This section recommends amendments to PC7 additions to Chapter 3 of the District Plan. However, it does not include all such recommendations. Other sections of this report also address PC7 provisions included in Chapter 3 as follows:

- (1) Stormwater Management is addressed in s5;
- (2) Transportation in s10;
- (3) Staging Activity Status in s13;
- (4) Explanation of Rules in section 14; and
- (5) Residential Zones in section 15.

7 3.6 – Rotokauri

7.1 3.6 d

To eliminate unnecessary words, including avoiding repetition, it is recommended s3.6 d be amended as follows:

- d) Chapter 3.6A refines *and supersedes* the Rotokauri Structure Plan with respect to ~~the northern area land within Rotokauri North (approximately 140 hectares of land), and in all aspects will supersede~~ the Rotokauri Structure Plan for any land identified in the "Rotokauri North" area.

A clean version is as follows:

- d) Chapter 3.6A refines and supersedes the Rotokauri Structure Plan with respect to land within Rotokauri North.

8 3.6A - Rotokauri North – Overview and Vision

It is recommended that s3.6A be amended as follows for the reasons set out below.

3.6A Rotokauri North

~~Overview & Vision~~

The Rotokauri North Structure Plan ~~a~~Area (Rotokauri North) is approximately 140 hectares, which previously fell within the Rotokauri Structure Plan area. This chapter refines the Rotokauri Structure Plan with respect to the northern area, and in all aspects will supersede the Rotokauri Structure Plan for any land identified in the “Rotokauri North” area. It is bounded to the north by Te Kowhai Road and to the west by Exelby Road and is shown on Figure 2-8A in Volume 2, Appendix 2. Most of this area was declared The Rotokauri North Structure Plan resulted from the majority of ~~Most of this area being recommended by Council as~~ a Special Housing Area in accordance with the Housing Accords and Special Housing Areas Act 2013. ~~It brings forward the planned growth area associated with part of Stage 2 of the Rotokauri Structure Plan, establishing a new structure plan specific to Rotokauri North, along with objectives, policies and rules. Rotokauri North provides for a Medium-Density Residential Zone, and a neighbourhood centre (Business 6 Zone). Rotokauri North is also identified as providing 10% of its housing yield as affordable housing.~~

Vision

- a) Development of Rotokauri North is guided by the following vision:
- i. ~~It is intended to be a~~ medium-density residential ~~community development,~~ centred on opportunities to establish with a neighbourhood centre, and connected to ~~surrounding~~ employment opportunities and provide a connected by ~~roading,~~ pedestrian and cycle networks.
 - ii. Quality uUrban design ~~and form~~ outcomes, are prioritised including through specific rules relating to this Structure Plan which seek a higher quality of subdivision outcomes, with urban blocks, the establishment of a grid-patterned road network and avoidance, wherever possible, of rear lots and culs-de-sacs wherever possible, and the establishment of an interconnected urban roading network.
 - iii. 10% of the housing yield is affordable housing.
 - iv. Integrated, accessible and high-quality open spaces.

~~A number of specific methods are proposed for Rotokauri North. These implement the Rotokauri North objectives and policies outlined in this chapter. For simplicity, these new objectives and policies are included in Chapter 3, however are implemented through the methods in Chapters 3, 4, 23 and 25.~~

~~In the event that there is a conflict between the outcomes and objectives and policies of 3.6A and any other objective/policy in the District Plan, the outcomes sought for Rotokauri North and described in section 3.6A.1 and the objectives and policies in 3.6A.2 shall be afforded a greater weighting.~~

A clean version of the above is as follows:

3.6A Rotokauri North

The Rotokauri North Structure Plan Area (Rotokauri North) is approximately 140 hectares. It is bounded to the north by Te Kowhai Road and to the west by Exelby Road and is shown on Figure 2-8A in Volume 2, Appendix 2. Most of this area was declared a Special Housing Area in accordance with the Housing Accords and Special Housing Areas Act 2013.

Vision

- a) *Development of the Rotokauri North is guided by the following vision:*
- i. *A medium-density residential development, with a neighbourhood centre and connected to employment opportunities by road, pedestrian and cycle networks.*
 - ii. *Quality urban design outcomes, including through the establishment of a grid-patterned road network and avoidance, wherever possible, of rear lots and culs-de-sac.*
 - iii. *10% of the housing yield is affordable housing.*
 - iv. *Integrated, accessible and high-quality open spaces.*

8.1.1 Reasons for the amendments

- (1) Most deletions are to eliminate unnecessary words and to make the section consistent with comparable sections of the ODP.
- (2) The final paragraph is recommended to be deleted because it is considered inappropriate. If there were conflict between the objectives and policies of Section 3.6A and those of any other part of the District Plan, then those conflicts should be weighed-up on a case-by-case basis; otherwise, sustainable management may not be promoted.
- (3) 3.6A a iv is included to recognise and provide for the importance of integrated, accessible and high-quality open space in a medium-density development.

9 3.6A.1 Structure Plan Components

9.1 3.6A.1.1 Residential

It is recommended 3.6A.1 be amended as follows:

3.6A.1 *Structure Plan Components*

3.6A.1.1 *Residential*

- a) *Residential development is planned across ~~the majority most of the Structure Plan area Rotokauri North. via t~~The Medium-Density Residential Zone ~~to provide~~s for a variety of site sizes and housing typologies, ~~to create~~ing a community with a mixed demographic and opportunities for more affordable living. The ~~Rotokauri North area also Structure Plan~~ includes specific rules to contribute “affordable” housing for First Home Buyers.*
- b) *A Medium Density Overlay ~~A~~ is included on the Structure Plan for sites within 400m of the Business 6 Zone (being a convenient walkable distance). Within the Overlay ~~a greater building height is~~ higher buildings are enabled to support ~~opportunities for~~ intensification of housing ~~opportunities, along with providing and~~ a wider range of housing typologies.*
- b) *Duplex dwellings are encouraged across the residential area ~~, as a specific means~~ to achieve land efficiencies, ~~to give effect to the~~ affordable housing requirements and ~~elsewhere to provide~~ a variety of housing typologies. ~~The Structure Plan employs a~~An acceptable solution code approach, ~~has also been development for a specific high-quality duplex typology~~ to ensure that ~~these duplexes~~ integrate with the planned form of development. ~~The A~~ specific, ~~high-quality~~ duplex typology is ~~identified that is~~ a permitted activity on eligible lots, while all other designs for duplexes require resource consent.*

- d) The integration of ~~specific~~ subdivision and land use controls for ~~the Rotokauri North Structure Plan area~~ creates a ~~traditional~~ neighbourhood character ~~which~~ comprising public fronts and interface with the street. ~~Specific~~ Subdivision ~~provisions~~ controls ~~lot and block shape and dimensions~~ to ensure high quality urban form outcomes, including ~~establishing~~ urban blocks that ~~relate to~~ ~~establish~~ an interconnected, ~~grid-patterned~~ roading network and avoid rear lots ~~and culs-de-sac~~. This ensures that all lots have an appropriate frontage to a street, maximising opportunities to create high quality streetscapes and public places. ~~The m~~Minimum lot and urban block dimensions ~~also~~ ensure that each lot ~~is capable of accommodating~~ ~~can accommodate~~ an appropriate dwelling that achieves a high-quality interface with the street. ~~Development controls for residential dwellings supporting encourage~~ building mass towards the street to provide opportunities for rear yards to accommodate private outdoor living courts. ~~Controls to achieve this outcome start at the subdivision stage, where the lot and block shape and dimensions are controlled to ensure that the intended urban form outcomes can be achieved when applying the development controls for residential dwellings.~~

A clean version is as follows:

3.6A.1 Structure Plan Components

3.6A.1.1 Residential

- a) Residential development is planned across most of Rotokauri North. The Medium-Density Residential Zone provides for a variety of site sizes and housing typologies to create a community with a mixed demographic and opportunities for more affordable living. The Structure Plan includes specific rules to contribute affordable housing for First Home Buyers.
- b) A Medium Density Overlay is included on the Structure Plan for sites within 400m of the Business 6 Zone (being a convenient walkable distance). Within the Overlay higher buildings are enabled to support intensification of housing and a wider range of housing typologies.
- c) Duplex dwellings are encouraged across the residential area to achieve land efficiencies, affordable housing and a variety of housing typologies. The Structure Plan employs an acceptable solution code approach to ensure that duplexes integrate with the planned form of development. A specific, high-quality duplex typology is identified that is a permitted activity on eligible lots, while all other designs for duplexes require resource consent.
- d) The integration of subdivision and land use controls for Rotokauri North creates a neighbourhood character comprising public fronts and interface with the street. Subdivision provisions control lot and block shape and dimensions to ensure high quality urban form outcomes, including urban blocks that establish an interconnected, grid-patterned roading network and avoid rear lots and culs-de-sac. This ensures that all lots have an appropriate frontage to a street, maximising opportunities to create high quality streetscapes and public places. The minimum lot and urban block dimensions also ensure that each lot can accommodate an appropriate dwelling that achieves a high-quality interface with the street. Development

controls for residential dwellings encourage building mass towards the street to provide opportunities for rear yards to accommodate private outdoor living courts.

9.1.1 Reasons for the amendments to 3.6A.1.1 d

The amendments eliminate unnecessary words and repetition. “Traditional” is deleted because it is considered the proposed development is not traditional.

9.2 3.6A.1.2 Neighbourhood Centre

It is recommended s3.6A.1.2 be amended as follows for the reasons set out below.

3.6A.1.2 Neighbourhood Centre

- a) A neighbourhood centre (Business 6 zone) of approximately 1.14 hectares ~~is shown within the Structure Plan area which utilises the Business 6 zone provisions.~~
- b) The neighbourhood centre is intended to serve the day-to-day needs of ~~the residential community~~ Rotokauri North residents and people from the nearby industrial area.

A clean version is:

3.6A.1.2 Neighbourhood Centre

- a) A neighbourhood centre (Business 6 zone) of approximately 1.14 hectares.
- b) The neighbourhood centre is intended to serve the day-to-day needs of Rotokauri North residents and people from the nearby industrial area.

9.2.1 Reasons for amendments

- (1) The recommended amendments to 3.6A.1.2(a) clarify that the Business 6 zone provisions apply to the neighbourhood centre and not to the whole Structure Plan area.
- (2) The recommended amendments to 3.6A.1.2(b):
 - a) Clarify which residential community the neighbourhood centre serves; and
 - b) Reflects the intention set out in the notified policy 3.6A.2.2b that the neighbourhood centre also serve the nearby industrial areas.

9.3 3.6A.1.3 Open Space Network

It is recommended that s3.6A.1 be amended as follows for the reasons set out below.

3.6A.1.3 Open Space Network

~~The open space network shown on the Structure Plan is intended to provide for a range of functions including stormwater and ecology and neighbourhood reserves for passive and informal recreation.~~ The following are key components of the open space network ~~as~~ shown on the Structure Plan:

~~a)i-~~ **Significant Natural Area protection** – ~~this includes the existing scheduled SNA 11 Kereru Bush Reserve.~~

~~b)ii-~~ **Neighbourhood reserves Parks** –

~~Three (3)~~ neighbourhood ~~reserves parks~~ are shown in indicative locations on the Structure Plan. ~~The y intention of the neighbourhood reserves are to~~ provide for a range

of *passive and* informal recreation facilities and ~~provide small~~ focal points for the neighbourhoods. To achieve adequate informal recreation provision and distribution, neighbourhood parks shall be dispersed within Rotokauri North so that no residential unit shall be more than 500m walking distance from a neighbourhood park of at least 5,000 m². More than 3 neighbourhood parks may be needed to achieve this.

c)iii. Streams and ~~s~~Stormwater networksCorridors—

~~Corridors~~ are shown along identified permanent streams ~~within the site,~~ and ~~along~~ major overland flow conveyance channels. ~~It is anticipated that~~ ~~The~~ corridors will be ~~primarily~~ used ~~primarily~~ for stream enhancement and stormwater management purposes (conveyance, treatment and detention), ~~as required by the sub-catchment ICMP, and~~ ~~may~~. ~~As~~ a secondary function, they may also provide opportunities for informal and passive recreation.

d)iv. Sports park—Community Park

~~the indicative location for a future sports park is shown on the structure plan as future reserve. Sports parks provide for formal active recreation including sports fields suitable for senior grade play, junior fields and training areas, and also service a neighbourhood park, whilst they will primarily service the local population, they will also form part of the city-wide network of sporting facilities.~~

One community park is shown on the Structure Plan as Future Reserve. It will be a large multifunctional park that provides informal recreation, socialising and event space for the wider community and serve a neighbourhood park function as well.

The final design, location and extent of the open space network will be determined at the detailed design stage, ~~which~~ accompanies subdivision. The provision of a ~~sports community~~ park is a matter to be pursued through Council's powers and functions within the Local Government Act 2002 to acquire land for district-wide recreational purposes.

Further discussion and recommendations about the stream and stormwater corridors are set out at s5.5 above.

A clean version of the above is as follows:

3.6A.1.3 Open Space Network

The following are key components of the open space network shown on the Structure Plan:

a) Significant Natural Area

SNA 11 Kereru Bush

b) Neighbourhood Parks

Three neighbourhood parks are shown in indicative locations on the Structure Plan. They provide for a range of passive and informal recreation facilities and focal points for the neighbourhoods. To achieve adequate informal recreation provision and distribution, neighbourhood parks shall be dispersed within Rotokauri North so that no residential unit shall be more than 500m walking distance from a neighbourhood park of at least 5,000 m². More than 3 neighbourhood parks may be needed to achieve this.

c) Streams and Stormwater Corridors

Corridors are shown along identified permanent streams and major overland flow conveyance channels. The corridors will be used primarily for stream enhancement and stormwater management purposes (conveyance, treatment and detention). As a secondary function, they may also provide opportunities for informal and passive recreation.

d) Community Park

One community park is shown on the Structure Plan as Future Reserve. It will be a large multifunctional park that provides informal recreation, socialising and event space for the wider community and serve a neighbourhood park function as well.

The final design, location and extent of the open space network will be determined at the detailed design stage, which accompanies subdivision. The provision of a community park is a matter to be pursued through Council's powers and functions within the Local Government Act 2002 to acquire land for district-wide recreational purposes.

9.3.1 Reasons for the amendments

- (1) To eliminate unnecessary words;
- (2) Use consistent terms; and
- (3) To provide clarity and certainty:
 - a) About the SNA: Currently, this SNA is on privately owned land; it is not a reserve and will not be unless and until it is vested in Council for that purpose. If that happens, then the reserve would be named as part of the relevant process. It is noted that the Tangata Whenua Working Group's Cultural Impact Assessment recommended the SNA be renamed "Kereru Reserve". As that name is inappropriate until it is a reserve, it is recommended that the Requester discuss with the Tangata Whenua Working Group how that group wishes this SNA to be named, prior to it becoming a reserve. Subject to confirmation from the Tangata Whenua Working Group, it is recommended the SNA be named "Kereru Bush".
 - b) About the size and distribution of neighbourhood parks;
 - c) That a neighbourhood park may be co-located with the community park; and
 - d) That the sub-catchment management plan is insufficient to guide development of Rotokauri North – see s5.1 above; and
 - e) That a sports park is no longer required, but a community park is required instead; and
 - f) About the functions of a community park.

9.4 3.6A.1.4 Transportation Network

Refer to s11.11 below.

9.5 Structure Plan Components - New Rule and Assessment Criterion

The following new rule and assessment criterion are recommended to enable Council to decline or approve any subdivision or land-use consent (with or without conditions) depending upon whether it is consistent with the Structure Plan Components.

3.6a.4.7 Consistency with Structure Plan

- (a) Subdivision and development within Rotokauri North shall:**
i. ...; and

- ii. Provide, be consistent with, or not prejudice or foreclose options for future development of, the structure plan components described in 3.6A.1.

<u>O6</u>	<u>For any subdivision or development, the extent to which the proposal:</u>
<u>a)</u>	<u>Provides for, is consistent with, or could prejudice or foreclose options for, future development of the Structure Plan components described in 3.6A.1.</u>

10 3.6A.2 Objectives and Policies

10.1 Introductory Statement

It is recommended this statement be amended as follows for the reasons set out in s.10.1.1:

3.6A.2 Objectives and Policies

When consent is required for subdivision and/or development within ~~the~~ Rotokauri North ~~Structure Plan area~~, the proposal ~~should~~ must be in accordance with the objectives and policies below and any general objectives and policies for Structure Plan areas (refer to Rule 3.3).

10.1.1 Reasons for amendments

- (1) To eliminate unnecessary words. See also s4 above.
- (2) "Must" is more appropriate than "should" because it is consistent with the wording of:
 - a) S104(1)(b)(vi) of the Resource Management Act 1991 (RMA): "When considering an application for a resource consent and any submissions received, the consent authority must, subject to Part 2, have regard to – (b) any relevant provisions of - (vi) a plan or proposed plan"; and
 - b) The introduction to s3.6.1 of the ODP.

10.2 Objective 3.6A.2.1 and Related Policies re Residential Development

It is recommended these provisions be moved from Chapter 3 to Chapter 4 of the District Plan. See s15.3 below.

10.3 Objective 3.6A.2.2 and Related Policies re Neighbourhood Centre

It is recommended these provisions be amended as follows for the reasons set out in s10.3.1:

3.6A.2.2

~~Opportunities for Enable~~ a neighbourhood centre ~~are enabled in~~ Rotokauri North.

3.6A.2.2a

~~The neighbourhood is supported by a~~ The neighbourhood centre ~~to services~~ the day-to-day needs of ~~the Rotokauri North~~ residents and ~~future~~ employees of ~~adjoining nearby~~ industrial areas, and ~~to enables~~ local employment.

3.6A.2.2b

Support the neighbourhood centre by directing retail activities to ~~the Business 6 Zone~~ it and discouraging them within the residential zones.

A clean version of the amended provisions are as follows:

3.6A.2.2

Enable a neighbourhood centre-in Rotokauri North.

3.6A.2.2a

The neighbourhood centre services the day-to-day needs of Rotokauri North residents and employees of nearby industrial areas and enables local employment.

3.6A.2.2b

Support the neighbourhood centre by directing retail activities to it and discouraging them within the residential zone.

10.3.1 Reasons for amendments

(1) Amendments to 3.6A.2.2:

- a) Clarify that the objective is for the neighbourhood centre to be in Rotokauri North; and
- b) Clarify that it is the neighbourhood centre, itself, that is to be enabled, not just opportunities for a neighbourhood centre.

(2) The amendments to 3.6A.2.2a:

- a) Recast the policy in the active voice;
- b) Clarify that the neighbourhood centre is intended to serve Rotokauri North residents, rather than residents from elsewhere;
- c) As no industrial areas adjoin Rotokauri North, it is more appropriate to describe them as “nearby”; and
- d) To clarify that the neighbourhood centre is intended to serve existing employees of nearby industrial areas as well as future employees in these areas.

(3) The amendments to 3.6A.2.2b:

- a) Eliminate unnecessary words; and
- b) Recognise there is only one residential zone within Rotokauri North.

10.4 Objective 3.6A.2.3 and Related Policies re Subdivision

It is recommended these provisions be moved from Chapter 3 to Chapter 23 of the District Plan. See s16.2 below.

10.5 Objective 3.6A.2.4 and Related Policies re Transportation

See s11.3 and s11.4 below.

10.6 Objective 3.6A.2.5 and Related Policies re Delivery of Infrastructure

It is recommended that Objective 3.6A.2.5 and Policy 3.6A.2.5a are amended as follows to correct grammar, improve readability and achieve consistent expression (requiring things to be done).

3.6A.2.5

Subdivision and development ~~isare~~ coordinated with the delivery of infrastructure.

3.6A.2.5a

Require subdivision and development to be coordinated and ~~undertake~~ the commensurate level of infrastructure design, funding and implementation to be undertaken.

10.6.1 Policy 3.6A.2.5b

It is recommended this be deleted. See s5.2 above.

10.6.2 New policy 3.6A.2.5c

A new policy 3.6A.2.5c is recommended – see s12.3.2.12 below.

10.7 Explanation below 3.6A.2 Objectives and Policies

It is recommended the explanation below Objective 3.6A.2.6 be amended as follows for the reasons set out in s10.7.1 below

Explanation

~~The objectives reflect the overall design approach for Rotokauri North, which is to create a well-planned medium density living environment that enables a variety of lifestyle and housing choices (and therefore a range of price points and provision of affordable housing).~~

~~The objectives recognise that the environment must create liveable and useable spaces, and the policies and associated methods require the development of urban blocks and interconnected roading networks at the time of subdivision, and for dwellings to create public fronts which address the street and encourage interaction, whilst generally ensuring that back yards are provided for private outdoor living spaces. The achievement of this pattern of development is important to establishing a high quality medium density living environment, and ensuring the integration of subdivision and land use outcomes, particularly where these relate to the creation of vacant fee simple lots and their subsequent development with individual houses.~~

~~Subdivision need not meet policy 23.2.3a, instead the comprehensive development of the area is achieved by specific lot and urban block dimensions rules for achieving the layout on the Rotokauri North Structure Plan.~~

~~In recognition of the affordable housing requirement that underpins Rotokauri North, the rules support the development and subdivision of duplex dwellings and apartments where these have frontage to the road network and are on fee simple titles.~~

~~The neighbourhood centre is intended to provide a limited range of everyday goods and services to Rotokauri North residents, and people who work in the nearby employment area, in a manner consistent with the hierarchy of business centres. The neighbourhood centre is located near the east-west collector roads and Burbush Road, to maximise catch-trade opportunities, and near the centre of the Residential Medium-Density Overlay area. This location will enhance the centre's commercial viability. Requiring any commercial activities to be located within the neighbourhood centre will also support the centre's viability and protect the amenity of the residential area.~~

~~The transportation objectives and policies are intended to promote the safety and wellbeing of people using different travel modes on the road network, in a manner consistent with the roading hierarchy. They promote opportunities for public transport infrastructure, walking and cycling. They also promote high amenity streetscapes. They aim to achieve a clear distinction between public and private spaces and to avoid vehicle access and parking functions dominating lot frontages. They also intend for public open space and the major stormwater conveyance and storage devices to have road frontage. This will enable these features to contribute to the visual character and amenity of Rotokauri North and enable the pedestrian and cycling networks to connect with them.~~

To promote the safety and wellbeing of people and avoid potential significant adverse environmental effects, the necessary three waters and transportation infrastructure must be in place and operational to service development.

The objective and policy relating to housing affordability implements commitments the requestor of the Rotokauri North Proposed Private Plan Change made in respect of the Statement of Intent, Hamilton Special Housing Areas Policy and the Hamilton Housing Accord. These provisions in the District Plan will secure, long-term, the provision of affordable housing in Rotokauri North after the Housing Accords and Special Housing Areas Act 2013 is repealed.

10.7.1 Reasons for amendments

10.7.1.1 Deletion of existing explanations

It is recommended below⁴¹ that objectives, policies and explanations relating to the Rotokauri North Medium-Density Residential Zone and subdivision be relocated to Chapters 4 and 23, respectively. This includes all the explanations below Objective 3.6A.2.6 in the notified version of PC7.

10.7.1.2 Addition of new explanations

With the relocation of the objective, policies and explanations described in 10.7.1.1, the remaining objectives and policies relate to the following for which explanations are recommended:

- a) The neighbourhood centre;
- b) Transportation;
- c) Co-ordinating subdivision and development with infrastructure provision; and
- d) Affordable housing.

10.7.1.3 Explanations re the neighbourhood centre

These explanations are drawn from the *Urban Design Assessment: Rotokauri North* (Ian Munro, 2019). See the following sections in that report: Executive Summary (b), 6.7 (3) and (9), 7.5, 8.3(d), 10.7(f), 10.11(f), 10.15(c) and 11.1(b).

10.7.1.4 Explanations re Transportation

The recommended explanations summarise the principles and intent underpinning the transportation objectives and policies. Some of the explanations are drawn from the *Rotokauri North Private Plan Change Request: Planning Assessment: Section 32 Assessment* (Tollemache Consultants Ltd, 2019)⁴². The explanations regarding road frontage for open space and major stormwater conveyance and storage devices are drawn from Munro (2019).⁴³

10.7.1.5 Explanations re infrastructure provision

The explanations are drawn from *Rotokauri North Private Plan Change Request: Planning Assessment: Section 32 Assessment* (Tollemache Consultants Ltd, 2019)⁴⁴.

10.7.1.6 Explanations re affordable housing

These explanations are drawn from the *Rotokauri North Private Plan Change Request: Planning Assessment: Assessment of Environmental Effects* (Tollemache Consultants Ltd, 2019). See the reasons for change relating to 3.6A.4.1 (p.20).

⁴¹ See Sections 15.3, 15.3.1.17, 16.3 and 16.3.1.11

⁴² See Appendix 2, p5, re Objective 3.6a.2.4.

⁴³ See Sections 3.6(e) and 10.1(e).

⁴⁴ See Appendix 2, pp6-7, re Objective 3.6a.2.5.

11 Transportation

11.1 Introduction

Alastair Black (Gray Matter Limited) has reviewed the Request and the updated Integrated Transportation Assessment (“the updated ITA”) attached to Submission 35. He has concluded:

*From a transport planning perspective, the ultimate location and transport connections generally appear appropriate. However, the proposal is inadequate in terms of the support for passenger transport corridors and multi-modal connections to the wider area beyond the structure plan area. This is due to out of sequence nature of the timing and the lack of existing services and safe facilities for pedestrians, cyclists and bus users along nearby transport corridors. We are concerned about the level of detail in the traffic modelling outputs provided in the ITA. There is no information provided on the expected staging of development and little information on the form of intersections.*⁴⁵

11.2 Requests for further information

Mr Black has listed further information he requires to assess the transport effects of PC7, particularly those effects occurring beyond Rotokauri North.⁴⁶ This list is reproduced in Table 1. It is recommended this information be sought from the Requester.

Table 1: Further transportation information Mr Black has requested

<i>Information Request</i>	<i>Reason for requiring further information</i>
<i>Provide updated traffic modelling, that includes:</i> <ul style="list-style-type: none"><i>= Network diagrams showing the proposed road network included in each scenario (including how the zones are connected to the network);</i><i>= Peak hour traffic volumes for the affected network (not just intersection volumes provided at Attachment A of the ITA);</i><i>= Change in traffic volumes plots between the various scenarios to understand the effects beyond the plan change area;</i><i>= Level of service plots for the various scenarios;</i><i>= Modelling a scenario without the Collector 2 intersection</i>	<i>The ITA only provides traffic modelling outputs for the intersections.</i> <i>No information is provided on the increase on traffic volume on the existing rural road network beyond the plan change area.</i>
<i>A summary of traffic volumes along the affected roads links.</i> <i>It would be helpful if this was combined with the implementation table and triggers for mitigation / intervention.</i>	<i>Traffic volumes are likely to increase on these narrow rural roads and improvements may be necessary to address safety and efficiency effects.</i>

⁴⁵ Black, A. 2020, p1

⁴⁶ Ibid, Table 1, pp5-6

Information Request	Reason for requiring further information
Clarification on whether the Green Spine includes a road and new intersection to Exelby Road.	The legend to ITA Figure 5-7 is "Green Spine (could include a road)". No road is shown on the Staging Diagram referred to in Rule 3.6A.4.2 d) ii).
Provide more detail on the Implementation Plan and links to the proposed planning provision so that we can better understand if the proposed plan provisions adequately provide for the recommended transport infrastructure. We would prefer that the planning provisions identify the likely stages and required infrastructure (similar to Rule 3.7.4.3 for the Ruakura Structure Plan).	Specific comments provided in Section 4.4 ⁴⁷ below. Planning provisions do not include: <ul style="list-style-type: none"> - Requirements for Stage 1 - Upgrades of Exelby Road and Burbush Road - Specifically requiring future intersection assessments - Public transport - "monitoring of Burbush Road"
Clarification of the Note to Rule 3.6A.4.2d)i) is required as its purpose is unclear.	Would this acknowledgement of staged development be better placed in the structure plan overview and/or or as a new policy under Objective 3.6A.2.5?
Provide updated cross-sections (Figures 3.6A-1 to Figure 3.6A-7) that specifically identify the on-road cycle lanes and buffers and provide dimensions.	No dimensions are included on the cross-sections provided within Chapter 3.6A. However, the cross-sections are intended to supersede the criteria for Transport Corridors at Appendix 15 which includes dimensions. Alternatively the cross-sections could be removed from the proposed plan provisions.

11.3 3.6A.2.4 - Transportation Objective

It is recommended that the proposed transportation objective for Rotokauri North be amended as follows to improve clarity and consistency with the ODP.

3.6A.2.4

Encourage a legible roading layout that supports a range of travel modes, ~~whilst~~while:

- (a) ~~Minimising~~ effects on ~~the~~ State Highway 39;
- (b) ~~Providing~~ a strong definition of public spaces; ~~and~~
- (c) ~~Reinforcing~~ a clear differentiation between the private and public realm ~~;~~ and
- (d) ~~Managing~~ speeds ~~with on~~ the Rotokauri North roading network (excluding ~~the~~ State Highway 39)

11.4 3.6A.2.4 a to f - Transportation Policies

It is recommended that the proposed transportation policies for Rotokauri North be amended as follows for the reasons set out below.

⁴⁷ Black, A. 2020, p8, s4.4

3.6A.2.4a

The roading network maximises vehicular, cycling and pedestrian amenity, connectivity and permeability wherever possible, consistent with the roading hierarchy, and that the local road network is designed to achieve a low speed environment.

3.6A.2.4b

Encourage roads to form urban blocks and to front public open spaces.

3.6A.2.4c

~~Enable vehicle access from other roads, access lots or rear lanes to avoid driveway vehicle crossings over dedicated protected cycle lanes or 3m wide shared paths paths specifically designed as shared-use walking and cycling paths on the minor arterial and collector roads identified on the structure plan by enabling access from side roads, access lots or rear lanes.~~

3.6A.2.4d

~~Avoid new driveway Eliminate vehicle crossings onto the State Highway 39, or new roading connections which are not identified on the Structure Plan.~~

3.6A.2.4da

~~Avoid new roading connections with State Highway 39 that are not identified on the Structure Plan.~~

3.6A.2.4e

Encourage vehicle crossings serving two adjacent dwellings to be combined, and or otherwise co-located, to maximise lengths of footpath unencumbered by a vehicle crossing.

3.6A.2.4f

~~Require provision of infrastructure that enables and encourages travel by public transport.~~

Additional transportation policies, 3.6A.2.4aa and 3.6A.2.4ca, are recommended at s16.8.3 below.

11.4.1 Amendments to Policy 3.6A.2.4c

- (1) The term “side road” is not defined in the ODP, so it is recommended it is substituted with the “other road”.
- (2) The term “drive way crossing” is not defined in the ODP, so it is recommended it be substituted with the term “vehicle crossing” which is so defined.
- (3) Qualifying “access” by adding “vehicle” improves clarity.
- (4) The meaning of “dedicated protected cycle lanes” is unclear. In the future, it is likely that motorised transport devices, including e-scooters, will be allowed to use a cycle lane. In that case, the lanes would not be dedicated for cycle use. If “dedicated” and “protected” were deleted, then the policy would apply to all cycle lanes.
- (5) It is desirable to avoid vehicle crossings over cycle lanes or any specifically designed shared-use walking and cycling paths (regardless of their width) wherever they are, not just on the roads listed in the notified provision. Although the Requester intends for these facilities to be provided on the collector roads, they could also be constructed elsewhere, such as within, or parallel to the Landscape Buffer alongside SH39. The designation process will determine the nature of any cycle facilities to be provided along the minor arterial.
- (6) The re-ordering of the policy puts it in the active voice and improves clarity.

11.4.2 Amendments to Policy 3.6A.2.4d

- (1) Urbanisation of Rotokauri North provides an opportunity to reorganise property access for properties within Rotokauri North that currently have direct access to and from SH39. Mr Black

notes there are currently 18 existing vehicle crossings providing such access within Rotokauri North, including at farm gates, and recommends there should be no direct property access to SH39.⁴⁸ The safety and efficiency of this section of SH39 would be enhanced if direct property access to it were eliminated.

- (2) The updated ITA states: “direct vehicle access to SH39 from individual lots is not considered to be appropriate under any circumstances because of road safety and road function implications”.⁴⁹
- (3) The recommended amendments to Policy 3.6A.2.4d make it clear that, following urbanisation, within Rotokauri North neither existing nor new vehicle crossings will have access to or from SH39.
- (4) Eliminating property access to and from SH39 within Rotokauri North will enable the proposed Landscape Buffer between Rotokauri North and SH39 to be continuous, except at any roads from within Rotokauri North intersecting with SH39.⁵⁰
- (5) Properties within Rotokauri North having direct access to SH39 will have existing use rights until they are urbanised. Once a property is subdivided, its existing vehicle crossings to SH39 would be closed and alternative access, other than from SH39, would need to be provided.
- (6) See s11.4.3 for the reason for deleting reference to “road connections”.

11.4.3 Proposed new Policy 3.6A.2.4da

- (1) It is not clear in the notified version of Policy 3.6A.2.4d whether the policy refers just to road connections to SH39 that are not shown on the Structure Plan, or **any** road connections that are not shown on the Structure Plan. Policy 3.6A.2.4da provides clarity and certainty that the former is intended.

11.4.3.1 Proposed new Policy 3.6A.2.4f

- (1) To minimise car dominance in Rotokauri North, priority will need to be given to enabling and encouraging use of public transport, as well as walking and cycling. This proposed new policy fills a gap in PC7.

11.5 Collector 2 / SH39 Intersection

PC7 includes provision for an intersection between Collector 2 and SH39. Mr Black⁵¹ notes that this intersection will impact on the function and safety of the State highway and that the Collector 1/SH39 roundabout and the existing Burbush Road/SH39 are likely to have enough capacity to accommodate the traffic generated from Rotokauri North. In accordance with Mr Black’s suggestions, it is recommended additional modelling be undertaken to test the effects of not providing the Collector 2/SH39 Intersection.

11.6 Collector 1 / SH39 Intersection

The updated ITA proposes that the Collector 1 / SH39 Intersection should initially be a priority-controlled intersection and later upgraded to a roundabout⁵². However, Mr Black has expressed concerns about the safety of a priority-controlled intersection at this location. He agrees with the NZTA submission that a roundabout would be a safer form of intersection. See the recommendation in s11.7.1 below.

⁴⁸ Black, A. 2020, p.12

⁴⁹ Seneviratne, 2020. *Rotokauri North Proposed Plan Change: Integrated Transportation Assessment Report*. S9.1, p53.

⁵⁰ See s12.4 below.

⁵¹ Ibid, p8, s4.5

⁵² Seneviratne, A. 2020, p48 - s6.3 and p58 – Table 26

11.7 Lack of clarity and consistency / missing information

11.7.1 Intersections with SH39

The staging of development of the roading network within Rotokauri North is unclear. The updated ITA indicates that the first sub-stage of the development should involve construction of a single lane roundabout at the Collector 2/SH39 intersection and that the Collector 1/SH39 intersection should initially be a priority-controlled intersection⁵³. However, this conflicts with Figure 2-9B in PC7, which indicates the location of Stage 1 and suggests that Collector 1 should be constructed first.

It is recommended the Requester confirms the proposed staging of development of the roading network and the type of intersection to be constructed on SH39.

11.7.2 Exelby Road / Green Spine Intersection

The legend in proposed Figure 2-8A Rotokauri North Structure Plan indicates the Green Spine could include a road. If it does, it could also include an intersection with Exelby Road. However, it is not clear from the PC7 Documents whether a new intersection at this location is intended. Any road or intersection associated with the Green Spine will be the subject of an ITA prepared to support a resource consent for the relevant part of the development. Nevertheless, it is appropriate to identify in s3.8.3A the transport facilities required as part of the Rotokauri North development.

It is recommended the Requester confirms whether a road associated with the Green Spine will intersect with Exelby Road, and, if so, provides an assessment of the effects of that intersection on the roading network.

11.7.3 Effects of development on Exelby Road and Burbush Road

The updated ITA discusses potential additional connections to Exelby Road but does not identify them clearly on any plan.

Mr Black has concerns about the effects of development of Rotokauri North on the safety and efficiency of Exelby and Burbush Roads.⁵⁴ Development of Rotokauri North is likely to significantly increase the traffic on Exelby Road and Burbush Road south of the site, beyond Rotokauri North. The Updated ITA does not quantify the increase in traffic and includes no assessment of the effects of this increased traffic on the safety and efficiency of these narrow, rural roads. They are only 5.5 to 5.7m wide and have no pedestrian or cycle facilities.⁵⁵ Nor does it identify any measures to mitigate any such adverse effects.

It is recommended the Requester confirms the locations of all potential new road connections to Exelby Road and Burbush Road within Rotokauri North, quantifies the increase in traffic, the effects of developing Rotokauri North on Exelby and Burbush Roads, including outside Rotokauri North, and any measures necessary to mitigate those effects.

Mr Black advocates additional traffic modelling be undertaken to assess the effect on these roads of a delay in provision of the minor arterial.⁵⁶

⁵³ Seneviratne, A. 2020, p48 - s6.3, p58 – Table 26 and p27 – Figure 6-1

⁵⁴ Black, A. 2020, p5, s4.1

⁵⁵ Ibid, s4.3, p.7

⁵⁶ Ibid

It is recommended that the following additional information, which Mr Black has identified⁵⁷, be sought from the Requester to inform an appropriate planning response to the management of the transportation effects of development of Rotokauri North on Exelby and Burbush Roads:

- (1) Network diagrams showing the proposed road network included in each scenario (including how the zones are connected to the network);
- (2) Peak hour traffic volumes for the affected network both inside and outside Rotokauri North (not just intersection volumes provided at Attachment A of the ITA);
- (3) Change in traffic volumes plots between the various scenarios to understand the effects between the scenarios beyond Rotokauri North; and
- (4) Level of service plots for the various scenarios.

11.8 Figure 2-9B - Staging, Transport Network and Reserves

Proposed Figure 2-9B in Appendix 2 to the District Plan shows in the north-western corner of Rotokauri North a proposed road with a nominally north-south alignment connecting SH39 and Exelby Road, and another road connecting from the former proposed road to the Indicative Stage 1 Qualifying Development Area. These two roads are not shown on Figure 2-8A, the Rotokauri North Structure Plan. The former road would result in a third new intersection on SH39 and an additional intersection on Exelby Road. Neither of these intersections have been assessed in the updated ITA.

The collector network shown on Figure 2-9B is not consistent with that shown on Figure 2-8A. For example, the western collector does not provide a continuous north-south corridor extending through to Rotokauri North's southern boundary.

It is recommended the Requester confirms the proposed roading network within Rotokauri North, amends Figures 2-8A and Figure 2-9B accordingly to make them consistent and assesses the effects of these roads and their intersections on the roading network.

11.9 Minor arterial

The Structure Plan Map (Figure 2-8A) shows the eastern boundary of Rotokauri North aligned with the future minor arterial. However, this may not be the final location of the arterial. When this report was drafted, the team investigating, and preparing the notice of requirement for, the minor arterial provided the drawing included in Appendix 4 as their best assessment, at that time, of the arterial's likely alignment. It should be noted that it is provisional and subject to change.

If that alignment were confirmed, the designation of the minor arterial by Council could result in a strip of land zoned Future Urban between the eastern boundary of Rotokauri North and the western boundary of the designation. If this strip of land were to remain zoned Future Urban, this may create a problem for the development of the south-eastern corner of Rotokauri North. This is because Rule 14.3 in the ODP prescribes only a limited number of activities as permitted in the Future Urban Zone. Any activities not listed in the table, including road or sports field, would be a non-complying activity for which a resource consent would be required. A further plan change, or a variation to PC7, would be needed to change the zoning of that strip of land. It is beyond the scope of PC7 to resolve this matter.

See the recommendations at 22.1.4.1 (4).

⁵⁷ Ibid. This repeats, with some additional wording, information requested in Table 1 above in s11.2

11.10 Indicative transport corridor cross sections

11.10.1 Figures 3.6A-1 to 3.6A-5

Under the ODP, proposed new transport corridors are assessed against, amongst other things, the following criterion:

G11 The extent to which transport corridor design provides design elements identified in or otherwise contrary to any criteria contained in Table 15-6a of Appendix 15.

Table 15-6a of Appendix 15 specifies the minimum dimensions and other requirements for transport corridor elements.

Alternatively, the note provided with Assessment Criterion G1 states:

Acceptable means of compliance for the provision, design and construction of infrastructure is contained within the Hamilton City Infrastructure Technical Specifications.

Council has the following issues with Figures 3.6A-1 to 3.6A-5:

- (1) The reliance on the road carriageway to convey all stormwater drainage from lots within catchments up to 1.5ha is unacceptable (Figure 3.6A-1);⁵⁸
- (2) It is not clear to where the subsoil drains depicted in Figure 3.6A-1 would drain and, therefore, whether they would function;⁵⁹
- (3) On the cross-sections showing swales, the pavement subsoil drains appear to be lower than the swale inverts, so it is not clear the subsoil drains will function;⁶⁰
- (4) No sub-soil drainage is shown for swales within the road corridor;⁶¹
- (5) The cross-sections are not dimensioned, which will make implementation of the Structure Plan difficult; the design requirements would have to be relitigated for every land-use consent application to which they are relevant, which would be very inefficient;
- (6) The cross-sections may not accurately reflect the width and depth of conveyance channels that will be needed;⁶²
- (7) The cross-sections do not show or dimension the 0.6m buffers that the updated ITA (Commute, 2020, p.19) recommends be provided between car parking and cycle lanes on Collector Roads;
- (8) Maximum batter slopes are not specified on the drawings;
- (9) The swale side slope, 1:3,⁶³ are not traversable for motor vehicles and can result in motor vehicles over-turning. Mr Black recommends the design of swales should avoid or minimise the use of barriers and culvert headwalls that create hazards for errant vehicles;⁶⁴
- (10) Swales greater than 1m deep may require specific design and treatment, particularly on higher volume collector roads and at intersections. The posted speed limit may influence the design;⁶⁵
- (11) No typical cross-sections or plan views are provided to show the design of swales and associated culverts at intersections, including the provisions to be made there for pedestrians to cross the swales (and roads) and for continuity of under-ground services;
- (12) The figure number "3.6A-5" is repeated;

⁵⁸ See s5.3.3.1 above.

⁵⁹ See s5.3.3.3 above.

⁶⁰ See s5.3.3.3 above.

⁶¹ See s5.3.3.4 above.

⁶² See Mr Clarke's conclusions reproduced in s5.1 above.

⁶³ McKenzie & Co Consultants, 2019, Table 7, p13

⁶⁴ Alastair Black, 2020, s5.1, p10

⁶⁵ Ibid

- (13) Council is opposed to swales in the centre of the transport corridor, as depicted in the second figure numbered 3.6A-5, because, typically, one direction of travel on the road must be closed temporarily whenever the swale requires maintenance; and
- (14) Council's policy direction on provision of cycle facilities is currently being reviewed. There is an emerging preference for segregated facilities.

It is recommended that, either:

- (1) The cross-sections are amended to address satisfactorily the above issues; or
- (2) The cross-sections are retained, and a set of criteria are included in PC7 for assessing the detailed cross-sections at the time of subdivision; or
- (3) The cross-sections be deleted from PC7 and then the ODP provisions relating to cross-sections will apply in Rotokauri North.

For this report, it is assumed that Recommendation (3) is adopted. If either Recommendation (1) or (2) were adopted, then amendments to PC7, additional or alternative to those set out in this report, would be required.

If cross-sections other than those described in Appendix 15, Table 15-6a ii were incorporated into the District Plan for Rotokauri North, then the following additional amendments to PC7 would be required:

- (1) A new policy to support the different transport corridor standards for Rotokauri North and explain why they are different from the City-wide standards.
- (2) Exclusions from the following for development of Rotokauri North in favour of the alternative cross-sections:
 - a) 25.14.4 Rules – General Standards: 25.14.4.1 Vehicle Crossings and Internal Vehicle Access: Design and Access Widths h) iii; and
 - b) Appendix Table 15-6a ii in Appendix 15.

11.10.2 Figures 3.6A-6 and 3.6A-7

It is recommended that the cross-sections for the minor arterial (Figures 3.6A-6 and 3.6A-7) be deleted from PC7 and the future designation process be relied upon for including appropriate cross-sections for the minor arterial in the District Plan.

11.11 Structure Plan Components – 3.6A.1.4 Transportation Network

Provision 3.6A.1.4 describes the transportation components of the Structure Plan. It is recommended it be amended as follows for the reasons explained below.

3.6A.1.4 Transportation Network

- a) *The transportation network is based on a transport corridor hierarchy which includes (in order):*
 - i. Major Arterial (State Highway 39) (~~upgrades proposed as new intersections with the Structure Plan area~~);
 - ii. Minor Arterial Roads;
 - iii. Collector Roads; and
 - iv. Local Roads.
- aa) A new roundabout intersection between State Highway 39 and the Collector is required as part of Stage One.

- ab) The new Minor Arterial will connect to State Highway 39 at the existing Koura Drive / Te Kowhai Road intersection to the north and intersect with new east-west and north-south Minor Arterials at the south-eastern corner of Rotokauri North. Council will use the designation process to determine its alignment and design, and these may be refined during the detailed design stage.
- ac) North of the Green Spine, Burbush Road will be realigned to connect with the new Minor Arterial to the east, and the existing alignment will be stopped. The remainder of Burbush Road within Rotokauri North will be retained and upgraded to a Collector.
- ad) The new east-west Collector will intersect with the Minor Arterial to the east and Exelby Road to the west.
- ae) A possible road within the Green Spine may intersect with Exelby Road.
- af) Three Collectors on nominally north-south alignments, including Burbush Road, extend to the southern boundary of Rotokauri North.
- ag) Exelby Road along the western boundary of Rotokauri North will be upgraded to a Collector.
- b) ~~The road network~~ Minor Arterial and Collectors ~~is also anticipated to will~~ include cycling facilities (either ~~via off-road shared-use walking and cycling paths or on-road cycle lanes~~). ~~for Minor Arterial and Collectors, and a~~ All roads ~~are expected to will~~ have pedestrian facilities. ~~Where dedicated cycle facilities or 3m shared paths are proposed, On Collectors, no~~ vehicle crossings ~~over these facilities~~ can be established over the cycle lanes or shared-use walking and cycling paths. This is to ~~support the development of these facilities and to~~ establish safe and convenient pedestrian and cycle networks and encourage their use. Alternative vehicle access using rear lanes, access lots or access from ~~side other~~ roads is required. Details of the Minor Arterial will be determined by a designation process and a subsequent detailed design process.
- ~~c) Roads may also be designed to accommodate a swale on the lower lying areas (and in lower parts of the catchment).~~
- ~~d) Illustrations of the road cross-sections are provided in Figures 3.6A-1 to 3.6A-7. These are expected to work in tandem with the Chapter 23 – Subdivision Rules (and take precedence over Appendix 15 guidelines).~~

11.11.1 Reasons for amendments to 3.6A.1.4a

- (1) The addition of “transport corridor” clarifies the type of hierarchy.
- (2) The words relating to the State highway that are recommended for deletion are out of place in a transport corridor hierarchy list; they are restated in the recommended new provision “aa”.
- (3) The word “road” is recommended to be deleted because this terminology is inconsistent with the ODP, which refers to a “transport corridor hierarchy” – see Appendix 15-4 of the District Plan; transportation planning is more than just planning for roads.

11.11.2 New provisions 3.6A.1.4aa to 3.6A.1.4ag

These provisions recognise the various changes required to the transportation network to accommodate development of Rotokauri North.

With respect to provision 3.6A.1.4aa: Renee Fraser-Smith reported at a meeting with Council staff on 4 February 2021 that the Requester is amending the proposed Rotokauri North road network to include only one new intersection with SH39. The Collector Road intersection with SH39 will need to a roundabout unless the Requester undertakes further traffic modelling and safety assessments to demonstrate otherwise.

The nature of the intersections specified in 3.6A.1.4aa are in accordance with the detail set out in Table 26 of *Rotokauri North Proposed Plan Change: Integrated Transportation Report* (Seneviratne, 2020). It is noted that this proposal is different from that described in the application for a Qualifying Development for Stage 1. It is recommended the Requester confirms, before or during the hearing, the nature and location of any proposed new intersections with SH39.

With respect to provision 3.6A.1.4ae: see 11.7.2 above.

11.11.3 Amendments to 3.6A.1.4 (b)

- (1) The words “is also anticipated to” and “are expected to” introduce uncertainty as to whether the cycling and pedestrian facilities will be provided. Replacing these terms with “will” removes that uncertainty.
- (2) Avoiding vehicle crossings over the cycle lanes or shared-use paths will not help the construction (development) of the facilities but will make them safer and more attractive to their potential users. The proposed rewording of the third-to-last sentence clarifies what the banning of vehicle crossings will support, that is, the use of the cycling and pedestrian facilities.
- (3) “Other roads” replaces “side roads” because the latter term is not defined in the ODP.
- (4) The final sentence explains how the Minor Arterial will be planned.

11.11.4 Amendments to 3.6A.1.4 (c)

As discussed in s5 above, the Requester has not demonstrated that the swales or conveyance channels within the transport corridor are feasible, so it is recommended this provision is deleted.

11.11.5 Amendments to 3.6A.1.4 (d)

For the reasons set out in s11.10, it is recommended the cross sections on Figures 3.6A-1 to 3.6A-7 be deleted.

11.12 New Rule 3.6A.4.5 – Landscape Buffer

The notified plan change includes the following assessment criterion:

O		Rotokauri North
O1		<i>For any subdivision adjacent to the SH39 network:</i>
	a)	<i>Subdivison [sic] should establish a landscape buffer against SH39 (with a minimum width of 3m), and estsblish [sic] suitable legal mechanism for ongoing protection of the landscape buffer.</i>

Assessment Criterion O1a is worded as a rule, which is inappropriate. To capture its intent and to provide certainty, it is recommended that a new rule, 3.6A.4.5 be included in PC7 and Assessment Criterion O1a be amended as follows:

3.6A.4.5 SH39 Landscape buffer

- a) A landscape buffer at least 3m wide comprising ecologically-sourced indigenous planting shall be established and maintained between SH39 and Rotokauri North to provide visual amenity and screening.
- b) The landscape buffer shall be privately owned, and its owners shall be responsible for its on-going maintenance.
- c) If a 3.5m shared path is constructed alongside the 3m wide landscape buffer within a combined corridor at least 8.5m wide, 3.6A.4.5b shall not apply and the combined corridor shall vest in Council following completion of path construction and planting.

O		Rotokauri North
O1		<i>For any subdivision adjacent to the SH39 networkthe extent to which:</i>
	<i>a)</i>	<i>Subdivision should establish a landscape buffer against SH39 (with a minimum width of 3m), and establish suitable legal mechanism for ongoing protection of the landscape buffer. The landscape buffer and associated planting will provide visual amenity and screening between SH39 and Rotokauri North and contribute to indigenous biodiversity.</i>
	<i>b)</i>	<i>The design of the buffer:</i> <ul style="list-style-type: none"> <i>i. Applies CPTED principles; and</i> <i>ii. Provides for traffic safety.</i>

The buffer strip could be made wider and a shared-use walking/cycling path incorporated in it. Under proposed Rule 3.6A.4.1a f ii⁶⁶, this path would be required before the first residential unit within Stage 1 is occupied. If a shared path were to be provided in this way, then existing driveway access to properties from SH39 would have to be eliminated to comply with proposed Rule 3.6A.1.4 b⁶⁷. If a path were to be incorporated into the landscape buffer, then the minimum width specified in 3.6A.4.5a would need to be increased.

11.13 New Rule 3.6A.4.6 – Public Transport Infrastructure

In the past, Council has retrofitted public transport routes and related infrastructure into new greenfield developments once the population there has grown to a level that justifies establishing the service. This approach involves a lengthy consultation process required under the Local Government Act. Retrofitting facilities in this way typically encounters opposition from property owners who do not want a bus stop located outside their property and the disruption associated with its establishment and operation.

As Rotokauri North will be an out-of-sequence development and is relatively isolated from developed parts of Hamilton, in the short to medium term, many residents of Rotokauri North will

⁶⁶ See s12.2 above.

⁶⁷ See s11.11 above.

need to travel out of Rotokauri North for employment and services. To achieve the vision for Rotokauri North, a medium-density residential area with high quality urban design and without car dominance, a more efficient and effective means of establishing public transport infrastructure is needed.

To implement new Policy 3.6A.2.4f⁶⁸, to enable and encourage use of public transport, the following are recommended:

3.6A.4.6 Public transport Infrastructure

(a) The public transport infrastructure listed in (b) shall be provided as part of the development of a new transport corridor or upgrading of an existing transport corridor:

- i. That is identified as part of a proposed public transport route in Figure 2-9C in Appendix 2; or
- ii That will be used as a public transport route in the interim, until the proposed public transport routes shown in Figure 2-9C are constructed; or
- iii That will be used as a public transport route to service a significant origin or destination for public transport passengers, for example, a school site, but is not shown as a proposed public transport route in Figure 2-9C.

(b) The infrastructure to be provided in accordance with (a) includes:

- i. Accessible bus stops;
- ii. Bus stop road markings;
- iii. Bus stop signs;
- iv. Bus shelters at selected locations;
- v. Bus lay-by/timing points;
- vi. Bus priority measures at key intersections;
- vii. Bus turning facilities (including interim facilities); and
- viii. Facilities for pedestrians to cross roads to access public transport stops.

Appendix 2: Structure Plans

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Figure 2-9C - Rotokauri North - Proposed Public Transport Routes

Bus stops would still need to be gazetted through the normal Council process, but that is outside of the scope of the District Plan and should be a formality in relation to Rotokauri North.

11.13.1 New Figure 2-9C – Proposed Public Transport Routes

It is recommended that a new Figure 2-9C showing proposed public transport routes in Rotokauri North is included in Appendix 2. This figure is referred to in, or related to, the following new provisions recommended:

- (1) Policy 3.6A.2.4f (see s11.4 and s11.4.3.1);
- (2) Rule 3.6A.4.6 (see s11.13);
- (3) Information Requirement: Appendix 1.2.2.24 c (see s11.13.2); and
- (4) Assessment Criterion: Appendix 1.3.3 O8 (see s11.13.2).

⁶⁸ See s11.4 and s11.4.3.1 above.

On 19 February 2021, Andrew Carnell, Team Leader – Network Planning and Performance, Waikato Regional Council provided Figure 3 in Appendix 5. He advised that the Regional Council has yet to determine the preferred option for Rotokauri North; this is still a “work in progress”. He also provided detailed maps of 4 options for servicing Rotokauri North – see Figures 4 to 7 in Appendix 5.

Council has previously provided feedback to the Regional Council that the north – south “bus primary corridor” extending from Rotokauri North through the Rotokauri Structure Plan area is impractical because of the terrain.⁶⁹

Council has also advised the Regional Council that it does not support Options 3 and 4 as possible public transport routes through Rotokauri North.⁷⁰ These options include provision of a roundabout on the minor arterial south of the Koura Drive / Te Kowhai Road roundabout. Council will not include this roundabout in the designation and design of the minor arterial. Council’s view is that, if either Option 1 or Option 2 were not to eventuate⁷¹, then the existing Koura Drive / Te Kowhai Road roundabout should be considered as the bus turn-around location.

It is recommended that, prior to the hearing, the Requester, Waikato Regional Council and Hamilton City Council work together to determine the best public transport option for Rotokauri North and show it on Figure 2-9C.

Figure 2-9C is discussed further at s22.1.4.5 below.

11.13.2 Information Requirement and Assessment Criteria

The following new information requirement and assessment criterion are recommended to support implementation of new rule 3.6A.4.6:

Appendix 1.2.2.24 Rotokauri North

- c) Subdivision creating a new, or requiring the upgrading of an existing, transport corridor that is described in Rule 3.6A.4.6 (a) in relation to a public transport route.*
- i) Evidence of the following consultation and responses to the issues raised in that consultation:*
 - A. Consultation with Waikato Regional Council and Hamilton City Council regarding the following:*
 - 1. The location, alignment and corridor cross section dimensions of the proposed transport corridor;*
 - 2. The location of proposed public transport infrastructure identified in Rule 3.6A.4.6; and*
 - 3. Opportunities to extend public transport services to and within Rotokauri North, including any prerequisite development thresholds and when and how these services will be funded.*

⁶⁹ See Figure 3 in Appendix 5.

⁷⁰ See Figures 6 and 7 in Appendix 5

⁷¹ See Figures 4 and 5 in Appendix 5.

Appendix 1.3.3: Restricted Discretionary, Discretionary and Non-Complying Assessment Criteria

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<u>O8</u>	<u>The creation or upgrading of all or part of a transport corridor that is described in Rule 3.6A.4.6 (a): The extent to which public transport infrastructure of the type described in Rule 3.6A.4.6 will:</u>
	<u>a) Be included in the transport corridor.</u>
	<u>b) Enable and encourage the use of public transport.</u>

12 Rule 3.6A.4.2 - Staging and infrastructure provision

12.1.1 Triggers for new or upgraded infrastructure

Objective 3.3.2 of the ODP is: “New development is appropriately serviced and properly integrated to minimise City network impacts”. Associated policies are:

- 3.3.2a: *The use of land for urban development will not be allowed unless appropriate infrastructure is provided for and the servicing of this land will maintain the efficiency and sustainability of regionally significant existing and planned infrastructure.*
- 3.3.2b *New development is able to be adequately serviced in terms of Three Waters and transport infrastructure.*
- 3.3.2c *Development is co-ordinated with the provision of infrastructure and social infrastructure.*
- 3.3.2d *Staging and sequencing is in general accordance with any staging indicated on the relevant Structure Plan.*

To give effect to these provisions, it is expected PC7 will set out how development of Rotokauri North will be sequenced or staged and will include sufficient staging rules to avoid the development having unacceptable environmental effects, either locally, or on infrastructure networks outside Rotokauri North.

It is recognised, however, that these rules should avoid imposing unnecessary early infrastructure construction costs on developers, or unnecessarily restricting the developers’ approach to developing Rotokauri North.

With respect to the provision of transportation infrastructure, the Request does not identify when new infrastructure or upgrades will be required within or outside Rotokauri North to provide for the traffic generated by the development. This is contrary to the approach taken elsewhere in the ODP. For example, Rules 3.7.4.3 and 3.8.5.3 set out the staging and infrastructure required in relation to development of the Ruakura and Te Awa Lakes Structure Plan Areas, respectively. These rules set triggers for when new or upgraded infrastructure is required, such as “prior to any section 223⁷² certificate for subdivision under the Resource Management Act being issued”⁷³ and “where consented development will result in more than 500 vehicle movements in the peak hour”⁷⁴.

⁷² This should refer to a section 224 certificate, which certifies that the required physical works have been completed.

⁷³ Rule 3.8.5.3.1 in the Decisions Version

⁷⁴ Rule 3.8.5.3.2 in the Decisions Version

The Request proposes that the trigger for just 2 upgrades (construction of the minor arterial and the east-west link between Stage One and Burbush Road) be determined by an ITA prepared before development progresses beyond Stage One. Timing of infrastructure upgrades is determined in the future through the preparation of ITAs that will be required as part of the subdivision and land use consent applications.⁷⁵

But there is a risk this approach would result in the cumulative effects of development of Rotokauri North going unrecognised and unmitigated. This is because an individual consent application for a development within Rotokauri North will be assessed on its own effects on infrastructure networks, not the cumulative effects of all development within Rotokauri North to the date of that application. The guidance note on safety and efficiency below Table 15-2b: Broad ITA checklist states: *"It is not a requirement of this Plan that individual proposals mitigate the effects of other proposals in order to achieve the desirable levels of service"*.

It is necessary and appropriate, therefore, for triggers that take cumulative effects into account to be identified and incorporated into the District Plan as part of the plan change process.

To do this, Mr Black has advised⁷⁶ that further traffic modelling or assessment is required as set out in the second row of Table 1 above (see s11.2).

It is recommended the Requester be asked to provide an updated ITA, prior to the hearing, that identifies triggers for all necessary new or upgraded transportation infrastructure and that these triggers be included in PC7 provisions.

12.2 Proposed new rule 3.6A.4.1a - Stage One

The notified version of PC7 includes no staging and infrastructure provision for Stage One. Although infrastructure required to be provided to support Stage One is identified in the PDA, the PDA does not identify precisely when it needs to be implemented. Also, the PDA could be terminated. It is appropriate and necessary, therefore, for these requirements to be included in the District Plan to provide clarity and certainty. Otherwise, the development of Rotokauri North could have significant adverse effects on existing infrastructure networks. To remedy this deficiency in the notified PC7, a new provision, 3.6A.4.1a, is recommended as follows. The reasons for each part of this new provision are explained below. For clarity and simplicity of referencing the infrastructure in the staging rules, it is also recommended that the proposed collector roads be numbered and labelled in Figure 2-9B as they are in Figure 6-1 of the updated Integrated Transport Assessment ("the Updated ITA")⁷⁷, which was attached to Greenseed Consultants Limited's submission on PC7 (Submission 35).

3.6A.4.1a Staging and Infrastructure Provision – Stage One

- a) Stage One is the area labelled "Indicative Stage 1 Qualifying Development Area" in Figure 2-9B.
- b) The infrastructure described in 3.6A.4.1a (c) to 3.6A.4.1a (f) inclusive shall be provided prior to the time specified in each provision, or, if no such time is specified, prior to any section 224 certificate for subdivision within Stage One under the Resource Management Act.

⁷⁵ Rule 3.6A.4.2 (d)

⁷⁶ Black, 2020, p5, s4.1 and Black, 2021

⁷⁷ Seneviratne, 2020. *Rotokauri North Proposed Plan Change: Integrated Transportation Assessment Report*. Table 26, pp58-59.

c) Wastewater

- i. Stage One shall be serviced by the following:*
 - A. A conventional gravity local reticulation system; and*
 - B. As shown on Figure 2-9A:*
 - 1. Pump station (WWPS1);*
 - 2. WWPS1 (Stage 1) Permanent Transfer Main;*
 - 3. Either a 600mm diameter gravity interceptor, or an Interim Transfer Main, to connect from the WWPS1 Permanent Transfer Main to, and to discharge into, the existing Far Western Interceptor.*
- ii. Any interim infrastructure shall be decommissioned and removed, and the permanent infrastructure constructed and vested in Council within 12 months of the later of the following to occur:*
 - A. Council or the applicant obtaining the rights to the land required for the permanent infrastructure; or*
 - B. Engineering plan approval being issued for the relevant permanent infrastructure.*

d) Water

- i. As shown on Figure 2-9A:*
 - A. The existing 100mm diameter pipeline along Ruffell Road near Onion Road shall be replaced with a 150mm diameter pipeline and connected to the existing 250mm pipeline at its north-eastern end and to the existing 150mm pipeline at its south-western end; and*
 - B. A 250mm diameter pipeline shall be installed between the existing 250mm diameter pipeline at Ruffell Road / Arthur Porter Drive Intersection, along Ruffell Road, Errol Close and Te Kowhai Road to the entrance to Stage One. It shall follow the existing 100 mm diameter pipeline. The new pipeline shall be connected to the existing 250mm diameter at its north-eastern end; and*
 - C. A 150mm diameter pipeline shall be installed from the north-eastern corner of Te Koura Drive / Te Kowhai Road roundabout to the entrance to the Stage One development area, parallel to the new 250mm diameter pipeline.*

e) Stormwater

- i. A sub-catchment ICMP for Rotokauri North prepared by a suitably experienced and qualified professional shall be submitted with any resource consent application for any development requiring stormwater infrastructure or connection to existing stormwater infrastructure.*
- ii. Any resource consents for development requiring stormwater infrastructure or connection to existing stormwater infrastructure shall require construction, commissioning, operation and maintenance of the stormwater infrastructure required by the sub-catchment ICMP prepared pursuant to Rule 3.6A.4.1 e i commensurate with that required to service that stage of development, including any amendment to the sub-catchment ICMP agreed with Hamilton City Council in writing prior to lodging any such consent application.*

f) Transport

- i. Collector 1 and a single-lane roundabout where Collector 1 intersects State Highway 39;**
- ii. Before the first s224 certificate is issued for Stage One, a 3.5m wide shared walking and cycling path connecting Collector Road 1 to the existing walking and cycling path at Mangaharakeke Drive (State Highway 1) either:**
 - A. Alongside State Highway 39 and through the Koura Drive roundabout; or**
 - B. Through Rotokauri North;**
- iii. [Any other upgrades to Burbush Road or Exelby Road south of Rotokauri North, or other transportation network upgrades, that further traffic modelling identifies will be necessary].**

12.2.1 The reasons for new rule 3.6A.4.1a

12.2.1.1 Rule 3.6A.4.1a (a)

The definition of “Stage One” inserted at the beginning of the rule provides clarity and certainty about what the term means. This definition is also relevant to Rule 3.6A.4.2 which refers to “Stage One” 8 times but does not define the term.

12.2.1.2 Rule 3.6A.4.1a (b)

This provision defines the default time by which the infrastructure listed in 3.6A.4.1a is to be implemented, unless specified otherwise.

12.2.1.3 Rule 3.6A.4.1a (c) Wastewater

This rule gives effect to the relevant parts of the PDA (Schedules Two and Seven).

12.2.1.4 Rule 3.6A.4.1a (d) Water

This rule gives effect to the relevant parts of the PDA (Schedules Three and Seven).

12.2.1.5 Rule 3.6A.4.1a (e) Stormwater

This rule gives effect to the relevant parts of the PDA (Schedule Five).

12.2.1.6 Rule 3.6A.4.1a (f): (i), (ii) and (iii)

The Updated ITA identifies this infrastructure is needed for the initial development.⁷⁸

12.2.1.7 Rule 3.6A.4.1a (f) (ii)

The provision of the shared walking and cycling path, by either route, is a requirement of the PDA. Because the Rotokauri North development is isolated from existing development and out of the development sequence provided for in the ODP and Council’s *2018-2048 Infrastructure Strategy*, Mr Black has recommended the path be required to be constructed before any dwelling in Rotokauri North is occupied.⁷⁹

12.2.1.8 Rule 3.6A.4.1a (f) (iii)

This provision is a placeholder for any other necessary transportation network upgrades that are identified through any additional traffic modelling completed before the hearing, as recommended in 12.1.1 above.

⁷⁸ Seneviratne, 2020. *Rotokauri North Proposed Plan Change: Integrated Transportation Assessment Report*, Table 26, pp58-59

⁷⁹ Black, 2020, p13, bottom row

12.3 Rule 3.6A.4.2 – Beyond Stage One

3.6A.4.2 sets out the rules about staging and the provision of the infrastructure required to service development of Rotokauri North beyond Stage One. It is recommended it be amended as follows for the reasons explained in s12.3.2. A clean version of the proposed provisions is set out in s12.3.1.

3.6A.4.2 Staging and Infrastructure Provision – Beyond Stage One

Any development in ~~the~~ Rotokauri North ~~Structure Plan Area~~ beyond Stage One shall be undertaken in accordance with the following.

a) Wastewater

- i. ~~Prior to any development requiring wastewater infrastructure (or connection to existing infrastructure) beyond Stage One occurring, a~~ A report prepared by a suitably ~~independent~~, experienced and qualified ~~person professional~~ shall be submitted with any resource consent application for ~~such development any development requiring wastewater infrastructure or connection to existing wastewater infrastructure. This report shall which~~ outlines the quantum of ~~residential~~ development beyond Stage One that can be satisfactorily serviced in terms of wastewater with the Stage One interim transfer main and a single pump station (WWPS1) as shown in Appendix 2 Figure 2-9A.
- ii. ~~Once development has reached the threshold identified in that report, a~~ Any resource consents for development that would result in the cumulative development, including potential permitted development, within Rotokauri North exceeding the threshold identified in that report and requiring wastewater infrastructure (or connection to existing infrastructure) shall ~~include and provide for~~ require provision of the following infrastructure, as shown in Appendix 2 Figure 2-9A, before the threshold is exceeded:
 - ~~a~~A. Construction and commissioning of a second pump station (WWPS2) and the WWPS2 permanent transfer main;
 - ~~b~~B. Extension of the wastewater reticulated network ~~in the permanent alignment shown in Appendix 2 Figure 2-9A 2~~ with the strategic infrastructure, being a 600 mm diameter ~~wastewater main gravity interceptor~~ (or any other alignment or pipe size as agreed with Hamilton City Council in writing prior to lodging any such consent application) from Burbush Road connecting to the Far Western Interceptor (FWI); and
 - ~~c~~C. Decommissioning and removal of the ~~interim Stage One wastewater infrastructure (as shown in Appendix 2 Figure 2-9A being the WWPS1 (Stage 1) interim transfer main along Te Kowhai Road and its connection with the Far Western Interceptor FWI).~~

b) Water

- i. Resource consents for development beyond Stage One requiring water supply infrastructure ~~(or connection to existing~~ water supply

infrastructure) ~~beyond Stage One~~ shall ~~include and provide for~~ require provision of the following:

~~aA.~~ Extension of the ~~water supply network by the completion of a~~ 450mm diameter pipeline from Arthur Porter Drive to the North-South Minor Arterial (~~Strategic Infrastructure~~, east of Burbush Road;), ~~as shown in Appendix 2 Figure 2-9A,~~ and from there ~~a looped distribution network servicing through the~~ Rotokauri North ~~Structure Plan~~ along ~~an alignment~~s and with the pipeline diameters ~~and specifications~~ as agreed with Hamilton City Council in writing prior to lodging any such consent application.

c) Stormwater

- i. ~~Prior to any development requiring stormwater infrastructure (or connection to existing infrastructure) beyond Stage One occurring, When required by Rule 25.13.4.1, a sub-catchment integrated catchment management plan (ICMP) for Rotokauri North (the RNICMP) prepared by a suitably independent, experienced and qualified person professional shall be submitted with any resource consent application for such development (as required by Rule 25.13.4.1) any development beyond Stage One requiring stormwater infrastructure or connection to existing stormwater infrastructure.~~
- ii. Any resource consents for development requiring stormwater infrastructure ~~(or connection to existing stormwater infrastructure)~~ shall ~~include and provide for require~~ construction ~~and~~, commissioning, operation and maintenance of the stormwater infrastructure ~~as required by the RNICMP-sub-catchment ICMP prepared pursuant to Rule 3.6A.4.2 c i~~ commensurate with that required to service that stage of development, including any amendment to the ~~RNICMP-sub-catchment ICMP as is~~ agreed with Hamilton City Council in writing prior to lodging any such consent application.

d) Transport

- ~~i. Prior to any development beyond Stage One occurring, an Integrated Transport Assessment (ITA) report prepared by a suitably independent, experienced and qualified person shall be submitted with any resource consent application for such development (as required by Rule 25.14.4.3). The purpose of the ITA is to identify the number of lots/dwellings that can be developed beyond Stage One, prior to the construction of the strategic transport corridors identified below.
Note: it is acknowledged that as a staged development the construction of the strategic transport corridors may not necessarily be required at the same time, therefore the "triggering" of specific thresholds identified in the ITA may be dependent on the sequence of staging.~~

- ii. ~~Once development has reached the threshold identified in the ITA report (as relevant to “triggering the necessary strategic transport corridor”), any resource consents for further residential lots/dwellings shall include and provide for the following:~~
- ~~a. Extension of the primary east-west collector route (as shown in Appendix 2 Figure 2-9B) from Stage One in an eastwards direction connecting to Burbush Road; and~~
 - ~~b. Construction of the north-south arterial corridor (as shown in Appendix 2 Figure 2-9B) that lies within the Rotokauri North Structure Plan area.~~
- iii. Development triggers, i.e., the number of residential lots (or equivalent) that can be established in Rotokauri North, prior to each listed transport corridor construction or improvement are as follows.

<u>Transport corridor construction or improvement</u>	<u>Development trigger (e.g. Total number of residential lots (or equivalent) in Rotokauri North)</u>
<u>A. Upgrading of the following to collector transport corridor standard between State Highway 39 and the southern boundary of Rotokauri North:</u> <u>a) Burbush Road; and</u> <u>b) Exelby Road</u>	<u>[To be determined prior to the hearing]</u>
<u>B. Extension of the East-West Link (as shown in Appendix 2 Figure 2-9B) to connect Stage One to Burbush Road</u>	<u>[To be determined prior to the hearing]</u>
<u>C. Construction of the north-south minor arterial corridor between State Highway 39 and the south-eastern corner of Rotokauri North and its connection to the proposed east-west minor arterial that will pass under the Waikato Expressway Te Rapa Section, or the continuation of the north-south minor arterial to the south</u>	<u>[To be determined prior to the hearing]</u>
<u>D. Upgrading of any existing transport corridor that is described in 3.6A.4.6(a) and the provision on it of the</u>	<u>[To be determined prior to the hearing]</u>

<u>public transport infrastructure listed in 3.6A.4.6(b).</u>	
<u>E. [Any other upgrades to Burbush Road or Exelby Road south of the Rotokauri North Structure Plan Area, or other transportation network upgrades, that further traffic modelling identifies will be necessary – to be determined prior to the hearing]</u>	<u>[To be determined prior to the hearing]</u>

- iv. Any subdivision consent that results in the cumulative number of [e.g.] consented residential lots within Rotokauri North exceeding a development trigger identified in 3.6A.4.2 (d) (iii) shall require the triggered transport corridor construction or improvement before the development trigger is exceeded.

12.3.1 Clean version of 3.6A.4.2

3.6A.4.2 Staging and Infrastructure Provision – Beyond Stage One

Any development in Rotokauri North beyond Stage One shall be undertaken in accordance with the following.

a) Wastewater

- i. A report prepared by a suitably experienced and qualified professional shall be submitted with any resource consent application for any development requiring wastewater infrastructure or connection to existing wastewater infrastructure. This report shall outline the quantum of development beyond Stage One that can be satisfactorily serviced in terms of wastewater with the Stage One interim transfer main and a single pump station (WWPS1) as shown in Appendix 2 Figure 2-9A.
- ii. Any resource consent for development that would result in the cumulative development, including potential permitted development, within Rotokauri North exceeding the threshold identified in that report shall require provision of the following infrastructure, as shown in Appendix 2 Figure 2-9A, before the threshold is exceeded:
 - A. Construction and commissioning of a second pump station (WWPS2) and the WWPS2 permanent transfer main;
 - B. Construction of a 600 mm diameter gravity interceptor (or any other alignment or pipe size as agreed with Hamilton City Council in writing prior to lodging any such consent application) from Burbush Road connecting to the Far Western Interceptor (FWI); and
 - C. Decommissioning and removal of the WWPS1 (Stage 1) interim transfer main and its connection with the FWI.

b) Water

- i. Resource consents for development beyond Stage One requiring water supply infrastructure or connection to existing water supply infrastructure shall require provision of the following:
 - A. Extension of the 450mm diameter pipeline from Arthur Porter Drive to the North-South Minor Arterial (east of Burbush Road), as shown in Appendix 2 Figure 2-9A, and from there through Rotokauri North along alignments and with the pipeline diameters as agreed with Hamilton City Council in writing prior to lodging any such consent application.

c) Stormwater

- i. When required by Rule 25.13.4.1, a sub-catchment ICMP for Rotokauri North prepared by a suitably experienced and qualified professional shall be submitted with any resource consent application for any development beyond Stage One requiring stormwater infrastructure or connection to existing stormwater infrastructure.
- ii. Any resource consents for development requiring stormwater infrastructure or connection to existing stormwater infrastructure shall require construction, commissioning, operation and maintenance of the stormwater infrastructure required by the sub-catchment ICMP prepared pursuant to Rule 3.6A.4.2 c i commensurate with that required to service that stage of development, including any amendment to the sub-catchment ICMP agreed with Hamilton City Council in writing prior to lodging any such consent application.

d) Transport

- iii. Development triggers, i.e., the number of residential lots-(or equivalent) that can be established in Rotokauri North, prior to each listed transport corridor construction or improvement are as follows.

Transport corridor construction or improvement	Development trigger ([e.g.] Total number of residential lots (or equivalent) in Rotokauri North)
A. Upgrading of the following to collector transport corridor standard between State Highway 39 and the southern boundary of Rotokauri North: <ul style="list-style-type: none">a) Burbush Road; andb) Exelby Road	[To be determined prior to the hearing]
B. Extension of the East-West Link (as shown in Appendix 2	[To be determined prior to the hearing]

	<i>Figure 2-9B) to connect Stage One to Burbush Road</i>	
C.	<i>Construction of the north-south minor arterial corridor between State Highway 39 and the south-eastern corner of Rotokauri North and its connection to the proposed east-west minor arterial that will pass under the Waikato Expressway Te Rapa Section, or the continuation of the north-south minor arterial to the south</i>	[To be determined prior to the hearing]
D.	<i>Upgrading of any existing transport corridor that is described in 3.6A.4.6(a) and the provision on it of the public transport infrastructure listed in 3.6A.4.6(b).</i>	[To be determined prior to the hearing]
E.	<i>[Any other upgrades to Burbush Road or Exelby Road south of the Rotokauri North Structure Plan Area, or other transportation network upgrades, that further traffic modelling identifies will be necessary – to be determined prior to the hearing]</i>	[To be determined prior to the hearing]

- iv. *Any subdivision consent that results in the cumulative number of [e.g.] consented residential lots within Rotokauri North exceeding a development trigger identified in 3.6A.4.2 (d) (iii) shall require the triggered transport corridor construction or improvement before the threshold is exceeded.*

A new information requirement is needed to implement 3.6A.4.2 d) iv; see s12.4.

12.3.2 Reasons for amendments to Rule 3.6A.4.2

12.3.2.1 Rule 3.6A.4.2 heading

The addition of “- *Beyond Stage One*” to the heading distinguishes the scope of the rule from that of proposed new rule 3.6A.4.1a.

12.3.2.2 Suitably qualified and experienced person

Rule 3.6A.4.2 refers to “*suitably independent, experienced and qualified person*” 3 times. This terminology is inconsistent with similar requirements elsewhere in the ODP. Nowhere else is the requirement for someone to be “independent”. Also, without further qualification, it is not clear of

whom or what the person should be independent. Therefore, it is recommended that “independent” be deleted.

Similar rules in the ODP identify a variety of different people who must be “suitably experienced and qualified”, or vice versa, including “practitioner”⁸⁰, “expert”⁸¹, “archaeologist”⁸², “ecologist”⁸³, etc.

Rule 25.14.4.3m requires, “All ITAs shall be completed by suitably qualified professionals ...” To be consistent with that rule, it is recommended proposed rule 3.6A.4.2d(i) be amended by replacing the word “person” with “professional”. To achieve consistent wording throughout Rule 3.6A.4.2, it is recommended that all reference within that rule to “person” be amended to “professional”.

12.3.2.3 Consistent infrastructure descriptions

Infrastructure is described in Rule 3.6A.4.2 and shown in Appendix 2 Figure 2-9A. However, the terminology used in the rule is often different from that used in the figure, including in its legend. This difference has the potential to cause confusion and uncertain outcomes. To provide clarity and certainty of outcome, it is recommended the descriptions in the rule align with the descriptions in the figure.

12.3.2.4 Rule 3.6A.4.2 (a)(i)

It is recommended that “residential” be deleted, because business activity within the Business 6 Zone, as well as residential activity, could produce wastewater, and this needs to be considered.

In addition to the amendments that are explained above, other amendments are recommended to eliminate unnecessary words.

12.3.2.5 Rule 3.6A.4.2 (a)(ii)

Amendments are recommended to Rule 3.6A.4.2 (a) (ii) to provide clarity that:

- (1) The listed infrastructure must be provided before the threshold is exceeded;
- (2) This will be required as a condition of the relevant consent; and
- (3) The consent will require the developer to provide the listed infrastructure.

In addition, it is recommended that “Appendix 2 Figure 2-9A” is referenced in the first paragraph to extend the reference to sub-clause “a” and to avoid needing to repeat it in each of the sub-clauses “b” and “c”.

12.3.2.6 Rule 3.6A.4.2 (a)(ii)(B)

In addition to the amendments to this provision that are discussed above, the following are recommended:

- (1) Deletion of the “2” after “Figure 2-9A” because it is unnecessary.
- (2) Addition of “application”, to clarify that it is the consent application that is lodged, not the consent itself.
- (3) Addition of “(FWI)” because these letters are used in Appendix 2 Figure 2-9A as an abbreviation for the “Far Western Interceptor”.

12.3.2.7 Rule 3.6A.4.2 (a)(ii)(C)

In addition to the amendments to this provision that are discussed above, it is recommended that:

⁸⁰ 25.4.4 and Appendix 1.2.1 (i) (ii)

⁸¹ Appendix 1.2.2.16 Zone (a) xviii

⁸² Appendix 1.2.2.7(c)

⁸³ Appendix 1.2.2.18 (n) xii

- (1) “Far Western Interceptor” is abbreviated to “FWI”, if the recommendation to include “(FWI)” in Rule 3.6A.4.2 (a) (ii) (b) were accepted, to shorten the rule; and
- (2) “Along Te Kowhai Road” is deleted because this section of the pipeline is just part of the WWPS1 (Stage 1) interim transfer main.

12.3.2.8 Rule 3.6A.4.2 (b)

The recommended amendments:

- (1) Eliminate unnecessary words; and
- (2) Improved clarity, including that water supply infrastructure will be required as a condition of consent.

12.3.2.9 Rule 3.6A.4.2 (c)(i)

In addition to amendments explained above, other amendments are recommended to:

- (1) Eliminate unnecessary words and improve clarity;
- (2) To clarify that a sub-catchment ICMP is required for a development only if Rule 25.13.4.1 requires this; and
- (3) To clarify that the ICMP notified with PC7 will not satisfy the rule. This is because, as discussed in 5.1 above, the ICMP is insufficient to guide development of Rotokauri North.

12.3.2.10 Rule 3.6A.4.2 (c)(ii)

The recommended amendments clarify that the relevant resource consents will require the provision of stormwater infrastructure and its operation and maintenance.

12.3.2.11 Rule 3.6A.4.2 (d) (i)

This notified provision requires the development triggers to be determined by an Integrated Transport Assessment and fixed as a condition of consent. This is ultra vires. It is also inconsistent with the ODP, which specifies development triggers for the Ruakura⁸⁴ and Te Awa Lakes⁸⁵ Structure Plans. Therefore, it is recommended that this provision be deleted.

12.3.2.12 Rule 3.6A.4.2 (d) (i) - Note

It is recommended the note in 3.6A.4.2 (d) (i) be expressed as a policy under Objective 3.6A.2.5 as follows, as this would better serve its apparent purpose:

3.6A.2.5c

Development will be staged, and ITAs will be undertaken at each stage to determine how to manage effects of development on existing and planned transport infrastructure.

12.3.2.13 Rule 3.6A.4.2 (d) (ii)

These triggered new transport corridors are incorporated into new rule 3.6A.4.2 (d) (iii).

12.3.2.14 Rule 3.6A.4.2 (d) (iii)

This recommended rule is consistent with the approach taken in the ODP and in accordance with Alastair Black’s recommendations.⁸⁶ The recommended rule suggests “the total number of residential lots in Rotokauri North” as an example of a trigger metric. However, an alternative metric, for example, “traffic in the peak hour” or “total vehicles per day traffic generation”, may be more appropriate. At present, there is insufficient information to determine the most appropriate trigger metric or any proxy measure to make it easier to track.

⁸⁴ See Rules 3.7.4.3.3, 3.7.4.3.4 and 3.7.4.3.5

⁸⁵ See Rule 3.8.5.3.1 b in the ODP.

⁸⁶ See s11.1 and s11.2 above.

12.3.2.15 Rule 3.6A.4.2 (d) (iv)

This rule clarifies when the triggered infrastructure improvement or construction is required. The recommended rule suggests “the total number of residential lots in Rotokauri North” as an example of a trigger metric. However, an alternative metric, for example, “traffic in the peak hour”, may be more appropriate.

12.3.3 Recognition of new ITA trigger

For completeness and consistency with Rule 3.6A.4.2 d iii, new ITA requirements (25.14.4.3 ja) are recommended at s17.8 below.

12.4 New Information Requirement – Appendix 1.2.2.24 c)

The following new information requirement is recommended to implement 3.6A.4.2 d) iv:

1.2.2.24 Rotokauri North

....

c) Any subdivision in Rotokauri North

i) Identify whether approval of the subdivision consent would exceed a development trigger listed in 3.6A.4.2 d) iii.

13 Rule 3.6A.4.3 – Staging Activity Status

It is recommended Rule 3.6A.4.3 be amended as follows for the reasons set out below:

3.6A.4.3 Staging Activity Status

a) Any application for resource consent not in accordance with Rule 3.6A.4.1a or 3.6A.4.2 is a ~~discretionary~~ non-complying activity.

~~b) Council's discretion shall include, but not be limited to, the following assessment criteria:~~

~~c) Any discretionary application for resource consent not in accordance with Rule 3.6A.4.2 shall be considered in accordance with the normal tests for notification under the RMA.~~

13.1 Reasons for amendments to Rule 3.6A.4.3

13.1.1 Rule 3.6A.4.3 (a)

It is recommended “discretionary” be replaced with “non-complying” because the infrastructure provisions of 3.6A.4.1a and 3.6A.4.2 are specific and are key to opening Rotokauri North for development. Non-compliance with these provisions should be at least non-complying; in the Te Awa Lakes Plan Change decision, failure to comply with infrastructure provisions is a prohibited activity. A non-complying status still enables an applicant to provide an alternative option to address the infrastructure requirements or demonstrate that under the circumstances, non-compliance is acceptable. A discretionary status implies that alternatives will be acceptable, which may not be the case.

13.1.2 Rule 3.6A.4.3 (b)

It is recommended that these assessment criteria be included, with amendments, at Appendix 1.3.3. The recommended amendments are discussed at s19 and s19.1.7 to s19.1.14 below in relation to new criteria O7.

13.1.3 Rule 3.6A.4.3 (c)

It is recommended this rule be deleted, because it is unnecessary as it simply restates a requirement of the Resource Management Act.

14 3.6A.4.4 – Explanation to Rules

It is recommended this explanation be deleted as the information it contains does not aid interpretation of the rules, which is typically the purpose of an explanation. The s32 Report is the appropriate place for justification for allowing the plan change.

15 Residential Chapter

15.1 Introduction

PC7 introduces to Chapter 4 Residential Zones a new Rotokauri North Medium-Density Residential Zone (RNMDRZ), which is the zoning for most of Rotokauri North.

Gillian Cockerell and Sam Le Heron reviewed these proposed changes on behalf of Council's Planning Guidance Unit and recommended amendments to achieve consistency with the ODP.

15.2 4.1.3a - Medium-Density Residential Zone

It is recommended 4.1.3a be amended by adding a comma after "Rotokauri North" as follows:

4.1.3 Medium-Density Residential Zone

- a) *The Medium-Density Residential Zone applies to identified greenfield areas within the Rototuna, Rotokauri, Rotokauri North, Ruakura and Te Awa Lakes Structure Plan areas. This zone recognises that medium-density housing is more easily achieved when it is comprehensively planned from the start, rather than being retrofitted into an existing urban environment.*

15.3 New Objective 4.2.14 and policies

PC7 includes in Chapter 3 Structure Plans an objective and policies relating to the RNMDRZ. To be consistent with the ODP, it is recommended these provisions be deleted from Chapter 3, inserted instead in Chapter 4, and amended as follows for the reasons set out below.

Objective	Policies
3.6A.2.1 4.2.14 Development within the <i>The Rotokauri North Structure Plan area Medium-Density Residential Zone enables achieves a medium-density residential environment which has high levels of amenity and allows for a range of housing densities and typologies.</i>	3.6A.2.1a 4.2.14a <i>Enable a medium-density residential urban form and character which is defined by:</i> <ul style="list-style-type: none">i. a clear definition <i>Clearly delineating</i> between public and private spaces, including roads, recreation reserves and drainage reserves;ii. <i>Ensuring</i> building bulk and massing <i>is focused located</i> towards the road frontage and side boundaries of lots, with less development within the rear yards (excluding rear lane accessed garaging);iii. e<i>Ensuring</i> there is sufficient space between the rear of opposing dwellings to provide privacy and rear yards

	<p>for outdoor living, along with maintaining with <u>privacy and</u> reasonable solar access to rear yards;</p> <p>iv. eEnsuring opportunities for convenient, comfortable and safe interaction at the public <u>space</u> / private road <u>property</u> boundary interface through the provision of low fence heights, and enabling visually open porch structures extending into the front yard; and</p> <p>v. a reliance on <u>Providing</u> high quality, and safe, interconnected <u>and accessible</u> roads and public open spaces <u>rather than relying on in preference to</u> large private outdoor spaces.</p>
	<p>3.6A.2.1b 4.2.14b Enable <u>Encourage</u> a diverse range of options for residential developments (including smaller on <u>280m²</u> vacant lots, duplexes and multi-unit <u>apartments</u> residential developments) which:</p> <p>i. Is encouraged by <u>Near the Business 6 Zone within a height overlay the Residential Medium-Density Overlay on the Structure Plan Figure 2-8A where in proximity to the Business 6 Zone; and</u></p> <p>ii. outside of the overlay is encouraged in close proximity to <u>Near</u> collector roads, <u>natural open space, parks and recreation</u> reserves;</p>
	<p>iii. 4.2.14c i. is supported by the opportunity to rReduce dependence on cars by a reduction in limiting the number of onsite car parks for duplexes and apartments; and.</p>
	<p>iv. 4.2.14d acknowledge that additional site coverage is required to achieve higher density outcomes, particularly <u>Enable higher site coverage for apartments in Rotokauri North Medium-Density Residential Zone where onsite parking is accessed by a rear lane and stormwater is managed appropriately.</u></p>
	<p>3.6A.2.1c 4.2.14e Enable appropriate duplex housing that support an urban street frontage character on sites where:</p> <p>i. On sites with a <u>There is</u> sufficient road frontage width;</p> <p>ii. There is a combined vehicle crossing; and</p> <p>iii. the dominance of eCar parking <u>dominance</u> is minimised; and.</p>

	<p>Otherwise evaluate other duplex housing opportunities based on their ability to minimise the adverse effects of car parking on building setbacks and the dominance of these elements to an urban streetscape.</p>
	<p><u>4.2.14f</u></p> <p><u>Enable apartments that:</u></p> <p><u>i. Are on sites:</u></p> <p><u>A. Big enough to accommodate the proposed number of residential units and ancillary spaces; and</u></p> <p><u>B. Where all residential units have public space frontage and private space to the rear; and</u></p> <p><u>ii. Through site layout, building design and landscaping:</u></p> <p><u>A. Clearly delineate public and private space;</u></p> <p><u>B. Promote passive surveillance of adjoining public spaces;</u></p> <p><u>C. Avoid bland featureless elevations, high blank walls and non-permeable fencing; and</u></p> <p><u>D. Orientate habitable rooms, balconies and entrances to public space.</u></p>
	<p><u>3.6A.2.1d 4.2.14g</u></p> <p>Control road façade elements to ensure dwellings relate to the road, including height controls, presence of a front door, sufficient glazing, ability to establish verandas / porches, landscaping provision, fencing heights, garage setbacks, and the control of garage in proportion to the façade width.</p>
	<p><u>3.6A.2.1e 4.2.14h</u></p> <p>Enable the development and use of rear lanes, including opportunities for rear garaging/parking and habitable areas above the garage, especially where lot or dwelling frontage widths are narrow.</p>
	<p><u>4.2.14i</u></p> <p><u>On corner sites and above garages accessed from rear lanes enable the development of ancillary residential units that will enhance passive surveillance of a transport corridor or rear lane and protect amenity.</u></p>
	<p><u>3.6A.2.1f 4.2.14j</u></p> <p>Enable<u>Require</u> outdoor living spaces which that are:</p> <p>i. Are e<u>Commensurate</u> with medium-density development;</p>

	<p>ii. Are pPrimarily focused at the rear of dwellings for privacy; and</p> <p>iii. Are sSupported by opportunities to utilise front porches for outdoor living (as transitional spaces and to enable interaction with the street).</p>
	<p>3.6A.2.1g 4.2.14k</p> <p>Recognise the opportunity for Enable:</p> <p>i. sService functions areas within side and rear yards, and garages; and</p> <p>ii. Network utilities in rear lanes.</p>
Explanation	
<p>The objectives and policies reflect the overall design approach for the Rotokauri North Medium-Density Residential Zone, which is to create a well-planned medium-density living environment that enables a variety of lifestyle and housing choices (and therefore a range of price points and provision of affordable housing) and where car parking dominance is minimised.</p> <p>The objectives-provisions recognise that the environment must create liveable and useable spaces; and the policies and associated methods require the development of urban blocks and interconnected roading networks at the time of subdivision, and for dwellings to must create public fronts which address the street and encourage interaction, whilst generally ensuring that and back yards are must be provided for private outdoor living spaces. The achievement of this pattern of development is important to establishing a high-quality medium-density living environment, and ensuring the integration of subdivision and land use outcomes, particularly where these relate to the creation of vacant fee simple lots and their subsequent development with individual houses.</p> <p>Subdivision need not meet policy 23.2.3a, instead the comprehensive development of the area is achieved by specific lot and urban block dimensions rules for achieving the layout on the Rotokauri North Structure Plan.</p> <p>In recognition of the affordable housing requirement that underpins Rotokauri North, the rules support the development and subdivision of duplex dwellings and apartments where these have frontage to the road network and are on fee simple titles.</p>	

15.3.1 Reasons for amendments

15.3.1.1 Amendments to Objective 4.2.14

- (1) To clarify it relates specifically to the RNMDRZ;
- (2) To replace “achieves” with “enables” to be consistent with the terms used in the ODP; and
- (3) To delete “densities and” to avoid confusion; the objective of the zone is to achieve overall a “medium” density, not a range of densities.

15.3.1.2 Amendments to Policy 4.2.14a i

- (1) To reframe the provision as a policy (an action) rather than an objective;
- (2) To replace “clear definition” with “clearly delineating”, which is considered a more appropriate wording in this context;
- (3) To eliminate unnecessary words; public spaces are defined in the ODP as: “Means any space (whether in public or private ownership) that can be accessed without charge by everyone to use or see. This can include roads, squares, public place, parks and reserves”; and

- (4) To clarify the policy; the words after “including” are examples of “public” spaces, not private spaces.

15.3.1.3 Amendments to Policy 4.2.14a ii

- (1) Inserting the word “ensuring” at the start to clarify the action required and make the policy consistent with the District Plan;
- (2) Delete “massing” because it has the same meaning as “bulk”; and
- (3) Replace “focused” with “located” to clarify that the intention of the policy is not to “orientate” (“focus”) the building on the side boundaries, for example.

15.3.1.4 Amendments to Policy 4.2.14a iii

- (1) To eliminate unnecessary words.

15.3.1.5 Amendments to Policy 4.2.14a iv

- (1) To clarify the meaning.

15.3.1.6 Amendments to Policy 4.2.14a v:

- (1) To make it clear that all public spaces, not just roads, are to be high quality, safe, interconnected and accessible, and subdivision and development need to deliver such spaces to support the proposed medium-density residential development. “Public space” is defined in the ODP⁸⁷ - see s15.3.1.2 (3) above.
- (2) Replacing “a reliance” with “Providing” to be consistent with the expression of the other 4.2.14a policies.
- (3) “Open” is deleted, so that the policy can rely on the definition of “public space”.
- (4) “Roads” is deleted, because roads fall within the definition of “public space”.

15.3.1.7 Amendments to Policy 4.2.14b

- (1) To eliminate unnecessary words;
- (2) To clarify that the RNMDRZ is to enable development, not vacant lots; and
- (3) To clarify the minimum vacant lot size.

15.3.1.8 Amendments to Policy 4.2.14b i

- (1) To eliminate unnecessary words.
- (2) The policy incorrectly refers to “a height overlay on the Structure Plan”. It should refer instead to the “Residential Medium-Density Overlay”.
- (3) Include reference to Figure 2-8A as the structure plan which identifies the Residential Medium-Density Overlay.

15.3.1.9 Amendments to Policy 4.2.14b ii

- (1) “Recreation reserves” are not defined in the ODP.
- (2) Within Rotokauri North, in addition to near collector roads, high amenity areas suitable for apartment development are near natural open space (that is, the SNA), parks and well-designed stormwater devices, swales and conveyance channels.

15.3.1.10 Amendments to Policy 4.2.14c

- (1) To eliminate unnecessary words.
- (2) To comply with Policy 11a in the National Policy Statement on Urban Development 2020 (July 2020), which states: “*the district plans of tier 1, 2, and 3 territorial authorities do not set minimum car parking rate requirements, other than for accessible car parks*”. Hamilton City Council is a Tier 1 local authority. The abbreviated policy will support implementation of

⁸⁷ Appendix 1.1.2

methods, other than through car parking requirements, to reduce dependence on cars, for example, the provision of public transport, ride share and car share facilities and services, walking and cycling facilities, and opportunities for people to live, work and play locally.

15.3.1.11 Amendments to Policy 4.2.14d

- (1) A high percentage of site coverage exacerbates stormwater management issues, which are a significant challenge in this catchment. Therefore, higher site coverage should only be allowed where it is necessary to accommodate carparking accessed from a rear lane and stormwater is managed appropriately.
- (2) The amendments to this policy and Rule 4.6.6⁸⁸ align the 2 provisions.

15.3.1.12 Amendments to Policy 4.2.14e

- (1) To provide clarity and certainty; “urban street frontage character” is not defined in the ODP.
- (2) The deleted paragraph beginning “Otherwise evaluate ...” is unnecessary. It is an assessment criterion, not a policy. Policy 4.2.14d iii covers part of what is included in the deleted paragraph. It is not clear what is meant by “the adverse effects of car parking on setbacks”. A separate assessment criterion to cover this policy is unnecessary; it is covered by the General Criterion A3(a): “Assessment against relative objectives and policies including Chapter 2 Strategic Framework”.

15.3.1.13 New Policy 4.2.14f

- (1) This policy fills a gap in notified PC7, which had no policy about apartments.
- (2) The proposed policy items i and ii are based on the outcomes set out in s1.4.2.3 and s1.4.2.4 of the Residential Design Guide, in Appendix 1.4.2 respectively.

15.3.1.14 Amendments to Policy 4.2.14i

- (1) This policy fills a gap in notified PC7, which had no policy about ancillary residential units.
- (2) The proposed policy supports rule 4.7.1 d – see s15.12.

15.3.1.15 Amendments to Policy 4.2.14j

The amendments:

- (1) Eliminate unnecessary words;
- (2) “Require”, rather than simply “enable”, the provision of outdoor spaces with the stated attributes; and
- (3) Provide clarity and certainty.

15.3.1.16 Amendments to Policy 4.2.14k

The term “service functions” is not defined in the District Plan, so its meaning is unclear. However, the ODP defines “service areas” and “network utility” as follows:

Service areas: Means an area provided for the service needs (including rubbish and recycling bin storage requirements) of the occupants of a residential unit; commercial; industrial; community or recreational activity.

Network utility: Means any activity or structure relating to:

- a) Distribution or transmission by pipeline of natural or manufactured gas petroleum or geothermal energy.
- b) Telecommunication or radiocommunication.
- c) Transformation, transmission, or distribution of electricity.

⁸⁸ See s15.10.

- d) *The holding, transmission and distribution of water for supply.*
 - e) *Stormwater drainage or sewerage reticulation systems.*
 - f) *Beacons and natural hazard emergency warning devices.*
 - g) *Meteorological services.*
 - h) *Construction, operation and maintenance of power-generation schemes.*
 - i) *A project or work described as a “network utility operation” by regulations made under the Resource Management Act 1991.*
- And includes the operation and maintenance of the network utility service. The definition of network utilities does not include roads or structures associated with the operation of roads such as signs, traffic signals or street lights. Amateur Radio is excluded from this definition; see **Amateur Radio Configuration**.*

The recommended amendments to Policy 4.2.14i provide clarity and certainty.

15.3.1.17 Amendments to the Explanation:

- (1) The explanation below objective 3.6A.2.6 in the Notified Request is amended by deleting parts of the explanations that do not relate to the RNMDRZ and by including reference to minimising the dominance of car parking.

15.4 Rule 4.5.1 - Comprehensive Development Plan Process

PC7 includes an exclusion at Rule 4.5.1 g). It would be more useful to the reader if this exclusion were included at the beginning of Rule 4.5.1; it would save them from reading through the whole rule before discovering the exclusion. Therefore, it is recommended PC7 be amended as follows:

4.5.1 Comprehensive Development Plan Process

- a) *These rules do not apply to Rotokauri North.*
- aa) *The Medium-Density Residential Zone is divided into a number of Comprehensive*
....
- ~~g) *These rules do not apply to the Rotokauri North Structure Plan area.*~~

15.5 Rule 4.5.2 – Comprehensive Development Plan Process ...

It would be more helpful and make plan use more efficient if the exemption of Rotokauri North from Rule 4.5.2 were included at the beginning of the rule. It is recommended the rule be amended as follows:

4.5.2 Comprehensive Development Plan Process Once Consent Has Been Granted

- a) *These rules do not apply to Rotokauri North.*
- aa) *All development in an area subject to a Comprehensive Development Plan that has been granted consent is authorised.*
-
- ~~e) *These rules do not apply to the Rotokauri North Structure Plan area.*~~

15.6 Rule 4.5.4– Activity Table

Amendments to these rules are recommended as follows to:

- (1) Clarify the intent of each rule;
- (2) Use terms that are consistent with those in the ODP: replace “building” with “dwelling”; and

(3) Provide for accessory buildings as permitted activities in Rotokauri North.

....		
ff) A One duplex building dwelling per lot that complies with Rule 4.7.12a		P
gg) A One duplex building dwelling which that complies with Rule 4.7.12.a i. and ii., but not the Rotokauri North Acceptable Solutions Code in Rule 4.14, per lot		RD*
....		
ll) Any other dwellings(s) not provided above and/or any activity listed in ee), ff), gg) or hh) which does not comply with the a relevant standard in 4.7		D
mm) Accessory building		<u>P</u>

15.7 Rule 4.6.2 c) - Development Yield

To be consistent with the terms used in the ODP, it is recommended “density” is replaced with “development yield” as follows:

- a) ~~There is no density~~ No development yield rule is applicable in the Rotokauri North Medium-Density Residential Zone.

15.8 Rule 4.6.3 – Height in Relation to Boundary

PC7 introduces Note 2 which states that Rule 4.6.3 a) is not applicable in the RNMDRZ. Currently, this rule is unnecessary as it does not apply in the RNMDRZ as it applies only to land adjoining General Residential and Comprehensive Development Plan Areas, and neither of these areas adjoin the RNMDRZ. However, if the land adjoining RNMDRZ were rezoned General Residential, then it is recommended the rule should apply to avoid an inappropriate degree of shading for adjoining residential properties. Accordingly, it is recommended that Note 2 is deleted.

~~2. Rule a) is not applicable in the Rotokauri North Medium-Density Residential Zone~~

15.9 Rule 4.6.3 b) – Height in Relation to Boundary

It is unclear:

- (1) Where the standards would apply; and
- (2) What “proposed internal boundaries within a site” in Rule 4.6.3 b) i. (b) means.

It is recommended that the rule is clarified, and a diagram is developed and included in PC7 to assist with its understanding.

15.10 Rule 4.6.6 – Site Coverage

It is recommended an exclusion is included in Rule 4.6.6 a) to clarify that it does not apply to apartments in the RNMDRZ where onsite parking is accessed by a rear lane; such apartments are addressed in Rule 4.6.6 b). This amendment aligns Rule 4.6.6 with the amended Policy 4.2.14d.⁸⁹

4.6.6 Site Coverage

- a) ~~Except as provided for in b, the~~ maximum site coverage within the Rotokauri North Medium-Density Residential Zone and Ruakura Medium Density Residential Zone is 50%.
- b) For any apartments in Rotokauri North Medium-Density Residential Zone where onsite parking is accessed by a rear lane the maximum site coverage is 60%.

15.11 Rule 4.6.7 – Building Height

It is recommended:

- (1) An exclusion is included in Rule 4.6.7 a) to clarify that it does not apply to the Residential Medium-Density Overlay in the RNMDRZ; the overlay is addressed in Rule 4.6.7 b); and
- (2) 4.6.7 b) is amended to correctly reference the overlay figure number, eliminate unnecessary words and align the rule structure with that of 4.6.7 a).

4.6.7 Building Height

- a) The maximum height of a building or structure in the Rotokauri North Medium-Density Residential Zone (except within the Residential Medium-Density Overlay), Ruakura Medium Density Residential Zone and Te Awa Lakes Medium Density Residential Zone is 10m
- b) ~~In the Rotokauri North Medium-Density Residential Zone, any site that is~~ The maximum height of any building or structure within the 'Residential Medium-Density Overlay A' as shown on the Rotokauri North Structure Plan map Figure 2-8A the maximum height of any building or structure is 14m.

15.12 Rule 4.7.1 - Ancillary Residential Unit

It is recommended Rule 4.7.1 d) be amended as follows to ensure the wording is consistent with the ODP, unnecessary words are deleted, and to provide clarity and certainty:

- a) ~~In the Rotokauri North Medium-Density Residential Zone, an ancillary residential unit is only applicable if it meets~~ shall also meet all of the following:
 - i) Be located on a site which has two transport corridor boundaries (i.e. a corner lot); and have a separate pedestrian access from a transport corridor boundary; or
 - ii) The unit is Be located above a garage which fronts a rear lane at least 7m wide.
 - iii) ~~The rear lane must have a minimum width of 7m;~~
 - iv) ~~The unit must have a separate pedestrian access from a transport corridor boundary.~~

15.13 Rules 4.7.12 a) ii. and iii. – Specific Provisions for Rotokauri North

It is recommended that the rules are amended as follows:

⁸⁹ See s15.3 and s15.3.1.11.

- (1) “Duplex” and “duplex building” are replaced with “duplex dwelling”, and “must” is replaced with “shall”, to be consistent with the terms used in the ODP; and
- (2) Unnecessary words are deleted from 4.7.12 a) iii.

4.7.12 Specific Provisions for Rotokauri North

- a) Permitted Activity standards for a duplex dwelling:
 - ii. The duplex building dwelling must be served via one vehicle crossing only with a maximum width of 6m.
 - iii. The duplex building dwelling and layout ~~must~~shall comply with ~~all of the conditions specified in Rule 4.14 – Rotokauri North Acceptable Solutions Code~~.

15.14 Rule 4.8.2 - Building Setbacks

To make it clear that new building setback provisions apply in the RNMDRZ, rather than the existing provisions for the Medium-Density Residential Zone, it is recommended that the new provisions are included as Rule 4.8.2.2 and renumbered, and the existing set back provisions are renumbered as Rule 4.8.2.1 and retitled as set out below.

In addition, it is recommended that the building setback in 4.8.2.2aC be reduced from 3m to 2.8m. This would permit construction of a residential unit with a 1.8m minimum depth unenclosed verandah / porch space attached to it and set back 1m from the transport corridor boundary. If this change were not made, then such a design would not comply with the 3m setback standard and would require a resource consent as a Restricted Discretionary Activity. Reducing the building setback from 3m to 2.8m avoids the need for the consent and allows alternative use to be made of the additional 0.2m strip of the allotment.

In addition, further amendments are recommended, as set out below, to:

- (1) Clarity that the 2.8m setback from the transport corridor does not apply to a single storey unenclosed verandah / porch space attached to the front of the building; and
- (2) Eliminate unnecessary words.

4.8.2 Building Setbacks

4.8.2.1 Ruakura Medium-Density Residential Zone and Te Awa Lakes Medium-Density Residential Zone

a)	Transport corridor boundary – local and collector roads except where a garage provides access to a local or a collector road the garage shall be a minimum of 5m from that transport corridor boundary.	3m
b)	Transport corridor boundary – arterial roads	5m
c)	Side yards	
i.	Side yard east or south	1m
ii.	Side yard west or north	2m
iii.	As an alternative for either i. or ii. above, a zero lot boundary may be used subject to obtaining neighbours consent which may attach to a dwelling on an adjoining allotment.	
d)	Rear yard	3m

e) Waikato Riverbank and Gully Hazard Area	6m (applies to buildings and swimming pools)
--	--

4.8.2.2 Rotokauri North Medium-Density Residential Zone

f) In the Rotokauri North Medium-Density Residential Zone the following applies:	
ii. a) Transport Corridor boundary; except where a garage provides access to a legal road the garage shall be a minimum of 5m from that transport corridor boundary. <u>A. A single storey unenclosed verandah / porch space attached to a building;</u> <u>B. A garage providing access to a legal road</u> <u>C. Other than provided for in A and B</u>	3m <u>1m</u> <u>5m</u> <u>2.8m</u>
ii. b) Transport Corridor boundary Applies to a single storey unenclosed verandah / porch space attached to the building	1m
iii. b) Side yards	1m
iv. c) One side yard where legal provision is made for access for maintenance of the structure or it is a common / party wall.	0m
v. d) Rear Yard: for a building exceeding 5m in height <u>A. a building exceeding 5m in height</u> vi. B. Rear Yard for a building up to 5m in height and single storey only	8m <u>8m</u> 3m
vii. No rear yard setback applies to a building up to a height of 7m where the site adjoins a rear lane	
<u>C. A building up to 7m high where the site adjoins a rear lane</u>	<u>0m</u>

15.15 Rule 4.8.3 - Interface between Public and Private

It is recommended this rule be amended as set out below to remedy the following deficiencies:

- (1) The notified plan change introduced new interface provisions for the RNMDRZ where the existing Medium-Density Residential interface standards will not apply. However, as drafted in the notified Plan Change, the new rule aa) conflicts with the existing rule d);
- (2) The proposed rules refer to "Rotokauri North; they should refer to "the Rotokauri North Medium-Density Residential Zone" instead;
- (3) Rules cc) i and ii are unclear, use unnecessary words and do not read well; and
- (4) The use of the term "dwelling" in Rule 4.8.3 ff) potentially excludes apartments; "dwelling" should be replaced with "residential unit".
- (5) Amendment to 4.8.3 g iv and new Rule 4.8.3 g iv are required to manage the heights of fences built between a residential unit and Open Space Zone or open space reserve that will vest in Hamilton City Council. The new rule aims to achieve good visibility between such zone or reserves and adjoining residential units in accordance with CPTED principles to achieve passive surveillance. The rule also aims to achieve improved residential amenity and to enable social interaction between neighbours and between residents and users of the open space or reserves. Such social interaction will contribute to the development of a sense of community and belonging and help avoid social isolation and loneliness and their adverse consequences for individuals' mental health.

4.8 Rules – Specific Standards – Rotokauri North Medium-Density Residential Zone, Ruakura Medium-Density Residential Zone and Te Awa Lakes Medium Density Residential Zone

....

4.8.3 Interface between Public and Private

- a) ~~Except in the Rotokauri North Medium-Density Residential Zone, the front wall of all accessory buildings that are detached, including carports and garages, should be no further forward of the front building line of the dwelling than 0.5m.~~
- aa) In ~~the~~ Rotokauri North ~~Medium-Density Residential Zone~~ any garage or carport must be set back at least 1m from the front building line of the dwelling. ~~If the garage door does not face the transport corridor, a minimum of 10% of the garage façade facing the transport corridor must be glazed. This rule does not apply to garages or carports facing a rear lane.~~
-
- cc) In the Rotokauri North Medium-Density Residential Zone:
 - i. On a site ~~where~~ the transportation corridor boundary is 12.5m or greater, the ~~maximum~~ garage door width shall not exceed 6m of the front building line.
 - ii. On a site ~~where~~ the transportation corridor boundary is less than 12.5m, ~~the garage door may only be only~~ a single ~~garage~~ door up to 3.2m ~~width of wide is allowed on~~ the front building line.
- d) ~~Except in the Rotokauri North Medium-Density Residential Zone, A~~any wall, except the wall containing the garage door, of an accessory building facing the street must consist of at least 20% of glazed materials.

dd) In the Rotokauri North Medium-Density Residential Zone, if the garage door does not face the transport corridor, a minimum of 10% of the garage façade facing the transport corridor must be glazed. This rule does not apply to garages or carports facing a rear lane.

ff) In the Rotokauri North Medium-Density Residential Zone principal living rooms or the dining room of a dwelling residential unit must have the principal glazing associated with that room facing either the transport corridor frontage, or the rear yard (or rear lane if applicable).

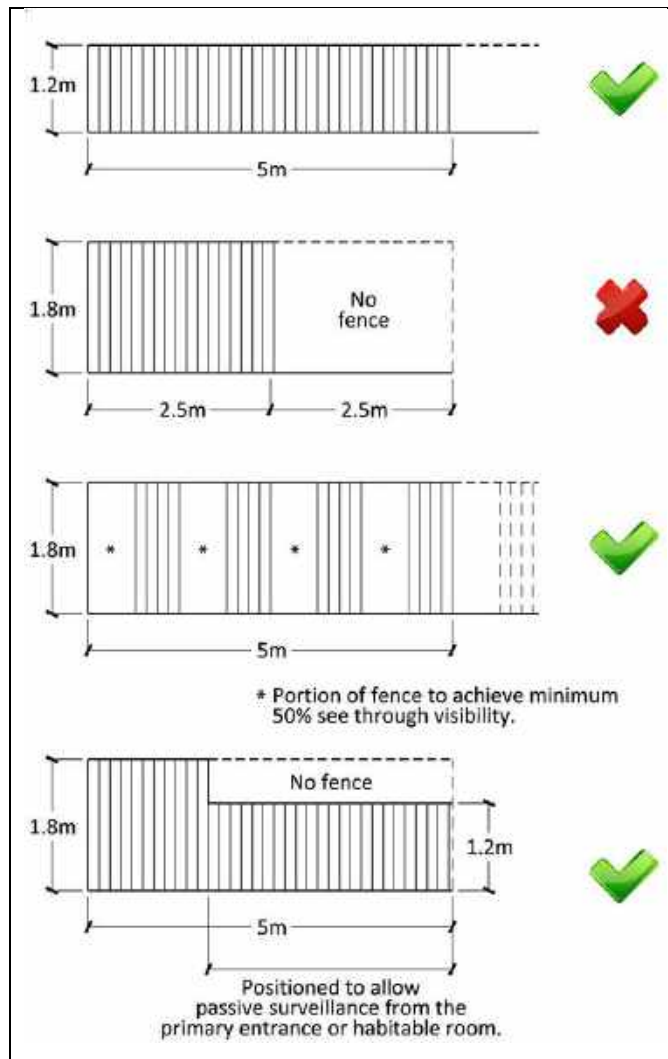
g) Maximum Fence Heights

<u>g Maximum Fence Heights</u>		
<u>i.</u>	<u>Front and side boundary fences or walls located forward of the front building line of the dwelling.</u>	<u>1.2m</u>
<u>ii.</u>	<u>Front and side boundary fences or walls located forward of the front building line of the dwelling surrounding north facing Outdoor Living Areas that face a transport corridor.</u>	<u>1.8m (with 50% or more of the fence visually permeable).</u>
<u>iii.</u>	<u>For sites adjoining an Open Space Area as shown on Figure 2-14: Ruakura Structure Plan – Land Use (Appendix 2), fences or walls located between the dwelling and the Area boundary.</u>	<u>1.5m (with 50% permitted at 1.8m provided 50% of that part over 1.5m is visually permeable).</u>
<u>iv.</u>	<u>Except as provided for in v, All other boundary fences or walls</u>	<u>1.8m.</u>
<u>v.</u>	<u>Within Rotokauri North, any fence between a residential unit and Open Space Zone or open space reserve that will vest in Hamilton City Council shall comply with the following standards:</u>	
	<u>A. Designed and constructed for less than 50% see-through visibility (e.g. close paling, masonry, or other opaque material)</u>	<u>1.2m maximum height</u>
	<u>B. Materials with 50% or more see-through visibility</u>	<u>1.8m maximum height</u>

Note

1. Refer to Figure 4.8.3h for examples of acceptable solutions.
2. Glass, metal bars or louvres are acceptable fence designs to achieve minimum 50% see-through visibility.

Figure 4.8.3h: Examples of acceptable solutions



15.16 Rule 4.8.4 - Residential Buildings – Separation and Privacy

PC7 proposes a new Rule, 4.8.4 b), which exempts residential buildings in the RNMDRZ from Rule 4.8.4.

The purpose of Rule 4.8.4 is to protect the privacy of each detached residential building when there is more than one on the same site. It achieves this by specifying a minimum separation distance between them. The privacy of detached residential buildings on a site in the RNMDZ deserves protection.

The operative rule 4.8.4 a) i exempts any attached residential dwellings from Rule 4.8.4. This would mean that an attached ancillary dwelling in the RNMDRZ, would be exempt as well. It makes sense to retain this exemption with respect to the RNMDRZ.

In the RNMDRZ the minimum side yard requirement for residential buildings on adjoining lots is 1m.⁹⁰ This means the separation between these residential buildings will be 2m. To be consistent with this, it is recommended that the minimum separation between detached residential buildings on the same site in the RNMDRZ be reduced from 3m to 2m.

⁹⁰ See Rule 4.8.2 f(iii) in the notified version, which s15.14 above recommends be renumbered as 4.8.2.2 b.

Therefore, it is recommended proposed Rule 4.8.4 b) be amended, as follows:

4.8.4 Residential Buildings – Separation and Privacy

- a) Residential buildings shall be set back at least 3m from the nearest part of any other residential building on the same site, except:
 - i. No separation is required between buildings that are attached.
 - ii. Where windows are located and designed (including by glazing) to avoid views between rooms in different buildings on the same site, separation distance shall be a minimum of 1.5m.
 - iii. In the Rotokauri North Medium-Density Residential Zone, residential buildings shall be set back at least 2m from the nearest part of any other residential building on the same site.
- ~~b) Clause a) does not apply in the Rotokauri North Medium-Density Residential Zone.~~

15.17 Rule 4.8.5 - Outdoor Living Area

PC7 proposes new outdoor living area provisions for the RNMDRZ, i.e. Rule 4.8.5 d). It is recommended Rule 4.8.5 be amended as set out below, for the following reasons.

- (1) Amendment of Rule 4.8.5 b): to make it clear that the new provisions, 4.8.5 d) and not the operative standards, apply in the RNMDRZ.
- (2) Amendment of Rule 4.8.5 d) ii. to:
 - c) Avoid problems arising from using “yard”, which has the same definition in the ODP as “setback”;
 - d) Replace “court” with “area” to be consistent with the ODP; and
 - e) Use wording that is consistent with the Rule 4.8.5 b).
- (3) Amendment of Rule 4.8.5 d) iii. to improve clarity and to ensure the terms used are consistent with the rest of the rule and the ODP, viz., by replacing:
 - a) “living space” with “living area”;
 - b) “studio” with “studio unit”; and
 - c) “dwelling” with “residential unit”.

4.8.5 Outdoor Living Area

- a) Each residential unit shall be provided with an outdoor living area that is:
 - i. For the exclusive use of each residential unit.
 - ii. Readily accessible from a living area inside the residential unit.
 - iii. Free of driveways, manoeuvring areas, parking spaces, accessory buildings and service areas.
 - iv. Located on a side of the residential unit which faces north of east or west.
- b) Outdoor living areas for residential units shall be a minimum of 40m² capable of containing a 6m diameter circle (except in the Rotokauri North Medium-Density Zone where d) applies) and for ancillary residential units shall be 12m² capable of containing a 2.5m diameter circle.
- c) The outdoor living area for an ancillary residential unit shall be separate from the outdoor living area provided for the principal residential unit.
- d) In the Rotokauri North Medium-Density Residential Zone the following applies:
 - i. Outdoor living areas for residential units shall be a minimum of 36m² capable of containing a 6m diameter circle; or
 - ii. The outdoor living area may comprise two distinct areas where a porch/verandah of minimum 8m² and with a minimum dimension of 1.8m ~~depth porch/verandah~~ is provided within the front yard at the front of the residential unit, and a minimum 30m² living ~~court area with a minimum dimension of 5m~~ is provided to the rear yard of the residential unit with a minimum dimension of 5m.

- iii. ~~For any~~ residential unit (excluding its carparking and access) located entirely above ground ~~the unit~~ must be provided with an outdoor living ~~space area~~ in the form of a balcony or roof terrace that ~~is at least 5m² for studio and one-bedroom dwelling (including an ancillary unit) and 8m² for two or more bedroom dwelling and has a minimum dimension of 1.8m.~~ satisfies the following standards:

	Type of residential unit located entirely above ground (except for carparking and access)	Minimum outdoor living area dimensions
<u>A</u>	<u>A studio unit and one-bedroom residential unit (including an ancillary unit)</u>	<u>5m² and with a minimum dimension of 1.8m</u>
<u>B</u>	<u>A residential unit with two or more bedrooms</u>	<u>8m² and with a minimum dimension of 1.8m</u>

15.18 Rule 4.8.6 - Service areas

PC7 proposes Rule 4.8.6 d) which exempts sites in the RNMDRZ from Rule 4.8.6.

Rule 4.8.6 requires developments to provide a service area to accommodate rubbish and recycling storage and clothes drying (i.e. a clothesline). The PC request asserts⁹¹ that the RNMDRZ does not need any service area requirements because:

- (1) On sites larger than 300m², space is likely to be available anyway, so there is no need to require it to be provided; and
- (2) On sites smaller than 300m²:
 - a) A garden shed and fold-up clothes lines can be accommodated within the outdoor living space;
 - b) Many residential units in the RNMDRZ will have 2 bedrooms and occupied by a small household that will have less service area and storage needs than the ODP requires; and
 - c) Rule 25.14 provides for solid waste to be considered.

While the clothes drying requirements could be provided in rear outdoor living areas, the solid waste requirements of Rule 25.14 are generic and do not specify the minimum area and dimensions that will be necessary to accommodate Council's new waste collection bins that were introduced from August 2020: each residential unit will be issued four different bins, each bin for different types of waste. Therefore, to exclude RNMDRZ from Rule 4.8.6 would be inappropriate.

Plan Change 6 (Regulatory Efficiency and Effectiveness Programme – REEP), which is now operative, amended the minimum service area for the General Residential Zone (not the Medium-Density Residential Zone) to 15m² and allowed two separate areas – 10m² for clothes drying and 5m² for rubbish and recycling. It also set a minimum dimension of 1.5m. The 5m² for rubbish and recycling is based on accommodating the bins to be used in Council's new waste collection system. It is recommended that these requirements be adopted for the RNMDRZ and included as Rule 4.8.6.2.

It is considered that Rule 4.8.6 c) in the ODP should also apply in the RNMDRZ, however the wording should reflect the General Residential Service Areas Rule 4.4.11 h) as amended by Plan Change 6.

Accordingly, it is recommended that Rule 4.8.6 be amended as follows:

⁹¹ Tollemach and Fraser-Smith, 2019. *Rotokauri North Private Plan Change Request: Planning Assessment: Assessment of Environmental Effects*, pp26-27.

4.8.6 Service Areas

4.8.6.1 Ruakura Medium-Density Residential Zone and Te Awa Lakes Medium-Density Residential Zone

Description	Minimum Requirements
a) Detached dwellings, duplex dwellings and dwellings in comprehensive residential developments	20m ² Minimum dimension 3m
b) Service area for ancillary residential unit	Additional 10m ² Minimum dimension 2.5m
c) All service areas	Readily accessible from each residential unit, not visible from a public place or in a front yard, or yard adjoining the Transport Corridor Zone or Open Space Zone. To be screened from the street and setback a minimum of 2m from primary building frontage.
d) Clauses a) to c) do not apply in the Rotokauri North Medium-Density Residential Zone.	

4.8.6.2 Rotokauri North Medium-Density Residential Zone

Description	Minimum requirements per Residential Unit
a) <u>Residential units – detached dwellings, duplex dwellings</u>	i. <u>At least 15m², and may be made up of two separate areas incorporating</u> a. <u>10m² for clothes drying (e.g. foldable clothesline)</u> b. <u>5m² for rubbish / recycling storage</u> ii. <u>Minimum dimension 1.5m</u>
b) <u>Ancillary Residential Unit</u>	i. <u>Additional 10m²</u> ii. <u>Minimum dimension 1.5m</u>
c) <u>Apartments</u>	<u>Individual or communal:</u> i. <u>10m²</u> ii. <u>Minimum dimension 1.5m</u>
d) <u>All Service areas</u>	i. <u>Clothes drying areas shall be readily accessible from each residential unit</u> ii. <u>Not visible from a public place.</u>

	<p><u>iii. Rubbish and recycling areas required for each residential unit shall be located where bins can be moved for collection without requirement for them to be moved through the residential unit (excluding garages).</u></p> <p><u>iv. Service areas may be located within garages where it is demonstrated that there is enough room to accommodate the minimum area without impeding parking.</u></p>
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15.19 Rule 4.11 xix. – Matters of Discretion and Assessment Criteria

It is recommended that an asterisk be added to proposed Rule 4.11 a) xix, to make the latter consistent with Rule 4.5.4 and to clarify that the notification Rule 1.1.9 applies.

Accordingly, it is recommended that Rule 4.11 a) xix be amended as follows:

4.11 Restricted Discretionary Activities: Matters of Discretion and Assessment Criteria

(a)

Activity Specific	Matter of Discretion and Assessment Criteria Reference Number (Refer to Volume 2, Appendix 1.3)
Rotokauri North Medium-Density Residential Zone	
xix. Any restricted discretionary activity*	<ul style="list-style-type: none"> • B – Design and Layout • C – Character and Amenity • O – Rotokauri North

15.20 Rule 4.14.1 - Rotokauri North Acceptable Solutions Code (for duplex buildings)

It is recommended that Rule 4.14.1 is amended by:

- (1) Replacing the word “buildings” in the title with “dwellings”, because the ODP defines “duplex dwelling” but not “duplex building”;
- (2) Correcting the name of the RNMDRZ;
- (3) Eliminating unnecessary words such as “so as”, “in order” and “still”;
- (4) Replacing the word “conditions” with “standards” to ensure the wording is consistent with District Plan terminology; conditions are associated with resource consents; and
- (5) Adding “dwelling” to “duplex” to achieve clarity of meaning through the definition of “duplex dwelling” in the ODP.
- (6) Deleting the last paragraph because it is misleading and unnecessary. It is misleading, because, under proposed Rule 4.5.4 (gg), a duplex dwelling that complies with Rule 4.7.12a (i) and (ii), but not the Rotokauri North Acceptable Solutions Code, is a Restricted Discretionary Activity. Also, it should be referencing Rule 4.5.4 rather than 4.5.3. The paragraph is unnecessary because it merely duplicates Rule 4.5.4 (II). The second paragraph in 4.14.1 is also unnecessary, as it merely

restates 4.5.4 (ff). However, it is accepted there is merit in highlighting to District Plan users that compliance with the Rotokauri North Acceptable Solutions Code (and other standards) will enable a duplex dwelling to be constructed without a landuse consent.

Accordingly, it is recommended Rule 4.14.1 be amended as follows:

4.14. Rotokauri North Acceptable Solutions Code (for ~~d~~Duplex ~~buildings~~ Dwellings)

4.14.1 Introduction

The Rotokauri North Medium-Density Residential Zone enables a specific form of duplex ~~housing dwelling so as~~ to promote affordable housing and housing choice in the new neighbourhood. However, ~~in order~~ to deliver on the Zone's urban design outcomes and avoid unacceptable adverse amenity effects, duplexes dwellings must be undertaken in a specific manner.

This Design Code sets out ~~the conditions~~ standards that must be complied with to allow duplex ~~development dwellings~~ within the Rotokauri North Medium-Density Residential Zone to be a Permitted activity (under rules 4.5.34(ff) and 4.7.12(a)).

Other relevant rules within the Rotokauri North Medium-Density Residential Zone must also ~~still~~ be complied with.

Where the ~~conditions~~ standards specified in this Code are met, the duplex dwelling can be progressed directly to a Building Consent and construction (unless it otherwise triggers the need for resource consent). Subdivision of the duplex dwelling under rule 23.3d can be obtained. To ensure that the subdivision does not occur in the absence of the duplex dwelling being constructed, a condition of consent will be imposed on all such subdivisions delaying the issue of section 224(c) until the duplex dwelling has received and passed a pre-lining inspection from Council.

~~Where the conditions specified in this Code are not met, the duplex will require land use consent as a Discretionary activity under rule 4.5.3~~

15.21 Rule 4.14.2 - Standards

It is recommended that:

- (1) The title of Rule 4.14.2 be amended by:
 - a) Replacing the word "conditions" with "standards", for the reasons explained in 15.20 above; and
 - b) Deleting the words "to be complied with" because they are unnecessary.
- (2) "Dwelling" is added to "duplex" to achieve clarity of meaning through the definition of "duplex dwelling" in the ODP.
- (3) "Residential" is added to 4.14.2(b)(i) to improve clarity regarding "units".
- (4) "Note" is included before the text that is italicised in the notified version to indicate that it is an advice note.
- (5) 4.14.2 d) and g) are deleted, because they are not rules, and their intent is included as a succinct advice note.
- (6) 4.14.2 e) and f) are recast as advice notes, because they are not rules.

Accordingly, it is recommended that Rule 4.14.2 is amended as follows:

4.14.2 ~~Conditions to be complied with~~ Standards

...

All ~~of~~ the following must be complied with for ~~the a~~ duplex dwelling to be a permitted activity under rules 4.5.3 and 4.7.12(a).

a) ~~s~~Site sSize

- i. The allotment must be at least 12.5m wide and 28m deep.
- ii. The site subject to the duplex dwelling must be a front site and not be subject to a vehicle access restriction in Chapter 25 (unless alternative access is obtained via a rear lane).

b) ~~e~~Car pParking

- i. Each residential unit within the duplex dwelling may only have one car parking space. It must be an unenclosed parking pad and shall not be enclosed into a carport or garage at any time. The subdivision consent shall record this as a consent notice.
- ii. The car park for each unit must be at least 2.5m x 5.5m, be located next to one another and be accessed from a single double-width vehicle crossing.
- iii. The vehicle crossing must be located at one side of the site and both parking spaces must be contained within 6.25m of the relevant side boundary.

c) ~~b~~Building lLocation and dDesign

- i. The duplex dwelling units must be off-set from one another such that one unit (the 'back' unit) shall be located no more than 8m back from front boundary (exclusive of any porch/verandah).
- ii. The second unit (the 'front' unit), shall be located no more than 4m back from the front boundary (exclusive of any porch/verandah).
- iii. Each duplex dwelling unit's front door must face the front boundary and be directly accessible from the public footpath. The back unit's front door may be screened for privacy from the car park of the front unit.
- iv. Each duplex dwelling unit shall provide a minimum 1m side yard between the unit and the relevant side boundary.

Note

1. For interpretation of the above, refer to Figures 4.14.2a) and 4.14.2b). These illustrate acceptable solution plans for a combination of 2-, 3- and 4-bedroom duplex dwelling units.

~~d) Notwithstanding the above conditions that must be complied with, the following are permitted, subject to compliance with MDRZ rules:~~

- ~~• Internal floor plan and unit layout.~~
- ~~• Façade shape and window design.~~
- ~~• Roof profile and shape.~~
- ~~• Cladding materials and colours.~~

~~e) 2.~~ The combination of different duplex units shall also be permitted i.e. ~~t~~The different duplex dwelling designs illustrated in Figures 4.14.2a) and 4.14.2b) could be mixed and matched as desired, ~~or both duplex dwelling units could have the same design, (or a different design that complied~~ s with 1.4.2 a)-c) could be used).

~~f)3.~~ Examples of how different duplex dwelling unit front facades could be designed are included as Figures 4.14.2c) and 4.14.2d). Examples of how the duplexes dwellings could appear in three dimensions are included as Figure 4.14.2e).

~~g).~~ ~~While the standards specified in 4.14.2 a) c) must be complied with, the intention is that as far as possible the design of each duplex reflect the individuality of the builder and future occupants.~~

4. It is intended that, as far as possible within the constraints of the standards, the design of each duplex dwelling reflects the individuality of the builder and future occupants. This could be achieved, for example, through the selection of the following building elements:

- Internal floor plan and unit layout;
- Façade shape and window design;
- Roof profile and shape; and
- Cladding materials and colours.

15.21.1 Car Parking Standard

Notwithstanding the amendments to 4.14.2 b recommended above, Council staff have grave concerns about, and are opposed to, those standards. It is not considered practical or desirable to require one unit to have another unit's vehicle parked directly in front of it for the following reasons:

- (1) Impaired access to the front door of the back unit.
- (2) High potential for either car to encroach upon the legal boundary between the two units.
- (3) Loss of amenity for the residential unit that must have another's car parked directly in front of its verandah. Besides the loss of visual amenity, the neighbours' coming and going, which could be at all hours, will likely disturb the occupants of the near unit and result in a loss of their privacy, and the peaceful and quiet enjoyment of their property.
- (4) This car parking arrangement is considered very likely to lead to disputes between neighbours.
- (5) Disputes may lead to one or both neighbours wanting to fence the boundary to their properties in the front yard to prevent incursion into their space, or to partly screen the neighbour's vehicle – under 4.8.3 g I, any such fence would be limited to 1.2m high. Such fencing could have adverse effects on visual amenity.
- (6) Rather than seeking to resolve such disputes directly with their neighbour, or through the courts (which is very expensive), the parties are likely to turn to the Council for help, since it was the standards in the Council's District Plan that created the problem in the first place. This would put stress and unnecessary workload on Council staff.
- (7) Council staff are also concerned for the wellbeing of the owners of the unit with the carparking in their front yard who would have to endure these adverse effects.

It is recommended that the Requestor delete 4.14.2 b and make alternative provision for carparking that would avoid the issues discussed above. Alternatives could include, for example, providing no carparking space for the duplex unit that will be constructed nearer to the transport corridor, or providing dedicated parking spaces for such units elsewhere in the neighbourhood.

16 Subdivision Chapter

16.1 Introduction

PC7 amends existing provisions within Chapter 23 and introduces a new objective, policy and rules regarding subdivision in Rotokauri North.

16.2 Objective 23.2.3, associated policy and explanation

It is recommended these be amended as follows for the reasons set out below.

Objective	Policies
23.2.3 Medium-Density Residential Zone (excluding Rotokauri North) and Rototuna Town Centre Zone areas are developed comprehensively.	23.2.3a Subdivision that creates additional allotments in the Medium-Density Residential Zone (excluding Rotokauri North) or the Rototuna Town Centre Zone does not occur without an approved Comprehensive Development Plan or Land Development Consents for Ruakura and Te Awa Lakes, except that this policy does not apply for development in Rotokauri North.
Explanation Comprehensive Development Plans are a useful tool to ensure a comprehensive approach to the layout and design of medium-density development. The Board of Inquiry Decision for Ruakura included a Land Development Consent process to ensure a comprehensive approach to layout and design within the medium density development occurs. Rotokauri North contains specific subdivision standards for development to create high amenity design and layout which are more prescriptive in terms of urban development form and layout than other areas in the Medium-Density Residential zone, so as to avoid the requiring land use consents for subdivisional layout via a Land Development Consent.	

16.2.1 Reasons for amendments

- (1) The amendments to the policy are to eliminate unnecessary words and to achieve consistency with the ODP.
- (2) The part of the explanation relating to Rotokauri North should be deleted, because the objective and policy do not apply to Rotokauri North.

16.3 New Objective 23.2.7, associated policies and explanation

The notified version of PC7 includes in Chapter 3 Structure Plans an objective and policy relating to subdivision. To be consistent with the ODP, it is recommended these provisions be deleted from Chapter 3, inserted instead in Chapter 23, and amended as follows for the reasons set out below.

Objective	Policies
3.6A.2.3 23.2.7 Subdivision in Rotokauri North shall be is designed comprehensively to deliver ensure a well-planned medium-density environment with a high standard of urban design quality.	3.6A.2.3a 23.2.7a Enable S subdivision in the Rotokauri North Structure Plan supports medium-density housing and is designed to that: <ol style="list-style-type: none"> Creates lots which that are rectangular in shape with and have a greater depth than width; Provides Enable lots superlots (i.e. large vacant lots) of a suitable shape and size to provide for apartment developments near collector roads, natural open space, parks and reserves and within the Residential Medium-Density Overlay;

	<p>iii. Form<u>s</u> a well-connected block structure that avoids:</p> <ul style="list-style-type: none"> • rear lots wherever possible; and minimises • culs-de-sac, streets to only except where there is no practical alternative or where (e.g., adjoining the green spine,) and where pedestrian connectivity can still be achieved; <p>iiiiv. Maximises street or pedestrian frontage to public open spaces, and where possible <u>including</u> at least one side of streams or any drainage reserves <u>that are</u> longer than 250m;</p> <p>iv. Maximises land efficiency so as to promote affordable housing while est achieving clauses <u>iii</u> and iii <u>iv</u> above;</p> <p>vi. Enables subdivision of <u>Can accommodate</u> a permitted activity duplex dwelling;</p> <p>vii. Enables subdivision around an approved land use consent;</p> <p>viii. Is consistent with the Rotokauri North Structure Plan.</p>
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Explanation

The objectives ~~s~~ reflects the overall design approach for Rotokauri North, which is to create a well-planned medium-density living environment that enables a variety of lifestyle and housing choices (and therefore a range of price points and provision of affordable housing). ~~It The objectives~~ recognises that the environment must create liveable and useable spaces, ~~and t~~The policies ~~and associated methods~~ require the development of urban blocks and interconnected roading networks at the time of subdivision, and for dwellings to create public fronts which address the street and encourage interaction, whilst generally ensuring that back yards are provided for private outdoor living spaces. ~~The achievement of this~~

Achieving the Rotokauri North subdivision pattern of development through lot and urban block layout is important to establishing a high-quality medium-density living environment, and ensuring the integration of subdivision and land use outcomes, particularly where these relate to the creation of vacant fee simple lots and their subsequent development with individual houses.

~~Subdivision need not meet policy 23.2.3a, instead the comprehensive development of the area is achieved by specific lot and urban block dimensions rules for achieving the layout on the Rotokauri North Structure Plan.~~

~~In recognition of the affordable housing requirement that underpins Rotokauri North, the rules support the development and subdivision of duplex dwellings and apartments where these have frontage to the road network and are on fee simple titles.~~

A clean version of the above is as follows:

Objective	Policies
<p>23.2.7</p> <p><i>Subdivision in Rotokauri North is designed comprehensively to ensure a medium-density environment with a high standard of urban design quality.</i></p>	<p>23.2.7a</p> <p><i>Enable subdivision in Rotokauri North that:</i></p> <ul style="list-style-type: none"> <i>i. Creates lots that are rectangular with a greater depth than width;</i> <i>ii. Provides lots of a suitable shape and size for apartment developments within the Residential Medium-Density Overlay and near collector roads and recreation reserves;</i> <i>iii. Forms a well-connected block structure that avoids:</i> <ul style="list-style-type: none"> <i>• rear lots wherever possible; and</i> <i>• culs-de-sac, except where there is no practical alternative (e.g., adjoining the green spine) and pedestrian connectivity can still be achieved;</i> <i>iv. Maximises street or pedestrian frontage to public open spaces, including, if possible, at least one side of streams or drainage reserves that are longer than 250m;</i> <i>v. Maximises land efficiency to promote affordable housing while achieving clauses iii and iv above;</i> <i>vi. Can accommodate a permitted activity duplex dwelling;</i> <i>vi. Is processed concurrently with a land use consent.</i>
<p>Explanation</p> <p>The objective reflects the overall design approach for Rotokauri North, which is to create a well-planned medium-density living environment that enables a variety of lifestyle and housing choices (and therefore a range of price points and provision of affordable housing). It recognises that the environment must create liveable and useable spaces.</p> <p>Achieving the Rotokauri North subdivision pattern of development through lot and urban block layout is important to establishing a high-quality medium-density living environment and ensuring the integration of subdivision and land use outcomes, particularly where these relate to the creation of vacant fee simple lots and their subsequent development with individual houses.</p>	

16.3.1 Reasons for amendments

16.3.1.1 Amendments to Objective 23.2.7

(1) To clarify that the objective relates to Rotokauri North;

- (2) Replace “shall be” with “is” to reframe the statement as an objective rather than a rule;
- (3) Replace “deliver” with “ensure” to be consistent with the terms used in the ODP; and
- (4) Replace “well planned” with reference to “a high standard of urban design quality” to clarify what is meant by “well planned”.

16.3.1.2 Amendments to Policy 23.2.7 a

- (1) To reframe the provision as a policy (an action) rather than an objective; and
- (2) Delete unnecessary words, including those that repeat the objective.

16.3.1.3 Amendments to Policy 23.2.7 a i:

- (1) To eliminate unnecessary words; and
- (2) Replace “which” with “that”, which is more appropriate because it specifically identifies the intended shape of the lots.

16.3.1.4 Amendments to Policy 23.2.7 a ii:

- (1) To replace “enable” with “provides” to avoid repetition of “enable” at the head of the policy;
- (2) Provide clarity and certainty – “superlots” are not defined in the DP;
- (3) Add reference to the suitable locations for apartment developments in line with notified Policy 3.6A.2.1b, which is recommended to be renumbered as Policy 4.2.14b⁹²; and
- (4) Delete unnecessary words.

16.3.1.5 Amendments to Policy 23.2.7 a iii:

- (1) To correct the numbering;
- (2) Achieve agreement between the singular subject “subdivision” and the verb “forms”;
- (3) Split rear lots and cul-de-sacs into separate bullet points to improve readability;
- (4) Delete “wherever possible” as it weakens the policy of avoiding rear lots and to achieve consistency with the non-complying activity status for rear lots specified at Table 23.3d ix b. This status makes it clear that PC7 intends that rear lots are avoided;
- (5) Replace the word “minimises” with “avoid” as the intention is to limit culs-de-sac to situations where there is no alternative and pedestrian connectivity can still be achieved;
- (6) Clarify, with an example, a situation where a cul-de-sac would be acceptable; and
- (7) Delete unnecessary words and improve clarity and certainty;

16.3.1.6 Amendments to Policy 23.2.7 a iv

- (1) To improve clarity and delete unnecessary words; and
- (2) To correct the numbering.
- (3) To replace “public open spaces” with “public spaces”, which are defined in the ODP.
- (4) Maximising street or pedestrian frontage to at least one side of streams or drainage reserves longer than 250m is desirable. Deletion of “if possible” will increase the likelihood that this will happen.

16.3.1.7 Amendments to Policy 23.2.7 a v

- (1) To replace the word ‘whilst’ with ‘while’ for consistency with the ODP;
- (2) Correct the numbering;
- (3) Delete unnecessary words; and
- (4) Improve clarity.

16.3.1.8 Amendments to Policy 23.2.7 a vi

- (1) To correct the numbering; and
- (2) Delete unnecessary words.

⁹² See s15.3 and s15.3.1.9

16.3.1.9 Deletion of Policy 23.2.7 a vii

- (1) Under the ODP, anyone can apply concurrently for subdivision and landuse consents, so the proposed policy adds nothing to the plan.

16.3.1.10 Amendments to Policy 23.2.7 a viii

- (1) Delete as existing policy 23.2.2a ii requires subdivision to be consistent with any Structure Plan so there is no need to repeat this in a policy specific to Rotokauri North.

16.3.1.11 Amendments to the explanation below objective 3.6A.2.6 in the Notified Request:

- (1) To delete parts that do not relate to subdivision in Rotokauri North;
(2) Delete parts that merely restate the objective or policies rather than explaining them;
(3) Delete text that relates to rules rather than the objective or policies.

16.4 Rule 23.3a - Activity Status Tables – Table 23.3d

It is recommended Table 23.3d be amended as follows to eliminate unnecessary words, or improve clarity, or recognise 3.6A.4.3a and 3.6A.4.2.

Table 23.3d: All zones in ~~the~~ Rotokauri North ~~Structure Plan area~~

Activity	Rotokauri North Activity Status
i. Boundary adjustment	P
ii. Amendments <u>to</u> unit-titles and company lease plans for the purpose of showing alterations to existing buildings or additional lawfully established buildings	P
....	
ix. Fee simple subdivision* <u>in accordance with Structure Plan Rules (3.6A.4):</u>	RD*
a) Any subdivision not in accordance with the Structure Plan <u>Rules (3.6A.4), unless specified otherwise</u>	D
<u>aa) Any subdivision not in accordance with the Structure Plan Staging and Infrastructure Provision Rules (3.6A.4.1a and 3.6A.4.2)</u>	<u>NC</u>

16.5 Rule 23.7.8 a) – Lot dimensions

It is recommended this rule be amended as follows for the reasons set out below:

23.7.8 Rotokauri North ~~Structure Plan Area~~ a) ~~For v~~ Vacant fee simple residential lots:

i. Minimum transport corridor boundary length	12.5m
ii. Minimum transport corridor boundary length if: <ul style="list-style-type: none">A legal mechanism (consent notice) restricts the width of a garage and vehicle crossing for any subsequent building development to a single car width up to 3.2m; OR <u>or</u>A rear lane provides legal vehicle access	10m
iii. Minimum lot depth	28m

iv. For corner lots only one transport corridor boundary needs to meet the minimum length and the minimum depth needs only be achieved along one side boundary.	
v. <u>Lots shall be rectangular.</u>	

16.5.1.1 Reasons for amendments

- (1) To remove unnecessary words.
- (2) To eliminate inappropriate capital font.
- (3) To fill a gap in the rules to implement the policy requiring lots to be rectangular⁹³.

16.6 Rule 23.7.8 b) – Block dimensions

- (1) It is recommended this rule be amended as follows to remove unnecessary words:

b) ~~All vacant fee simple lot subdivisions must comply with the following standards:~~

i. Maximum urban block length	250m
ii. Maximum urban block perimeter (bounded by roads)	750m
iii. For clarity the measurements above may be curvilinear and include frontage to a green linkage or reserve or proposed reserve	

- (2) To provide clarity and certainty of interpretation of a new term in the District Plan, it is recommended the following definition be added to Appendix 1.1:

Urban Block: Means a group of lots that is bounded by roads in the Rotokauri North Medium-Density Residential Zone.

16.7 Definition of rear lane

It is recommended that the definition of “rear lane” proposed in PC7 be amended as follows for the reasons set out below:

Rear Lane: Means a private way whose function is to ~~primarily serve as a provide~~ rear access to front sites or sites fronting a public reserve. This definition applies in ~~the~~ Rotokauri North ~~Strutture Plan area~~ only.

16.7.1 Reasons for amendments

- (1) It is recommended that the word “primarily” be deleted because it introduces uncertainty and could lead to unintended use of rear lanes.
- (2) Other amendments remove unnecessary words.

⁹³ Policy 23.2.7a – see s16.3

16.8 Rule 23.7.8 c – Design of rear lanes and roads

Rear lanes will be privately owned. An appropriate enduring legal entity will need to be established to own, manage, operate (including paying for the power for lighting) and maintain each rear lane. This entity could include, for example, a body corporate, limited liability company, or incorporated society.

Private rear lanes need to be designed to allow access for large rigid trucks, such as fire, furniture removal, refuse and recycling-collection trucks. The lanes may need to be widened at corners or bends and the pavement constructed to withstand the weight of these vehicles.

The large trucks will have the potential to damage the lanes and any underlying services. Council, which provides the refuse and recycling collection service under contract, requires the owner(s) of each rear lane to indemnify Council against claims for damage to the roads, foundation, or any other things within the lane caused or accelerated by the action of the refuse and recycling collection trucks or the collection contractor in traversing the lanes to provide the service. The owner(s) of each rear lane will need to enter into an agreement with Council in this regard. This matter is dealt with by a process outside of the District Plan.

The Overview and Vision within s3.6A of the notified version of PC7 states (emphasis added):

*Urban design and form outcomes are prioritised through specific rules relating to this Structure Plan which seek a higher quality of subdivision outcomes, with urban blocks, **the avoidance of rear lots and cul-de-sacs wherever possible**, and the establishment of an interconnected urban roading network.*

3.6A.2.3a

Subdivision in the Rotokauri North Structure Plan supports medium density housing and is designed to:

*ii. Form a well-connected block structure that **avoids rear lots wherever possible and minimises cul-de-sac streets to only where there is no practical alternative or where adjoining the green spine**, ...*

It is recommended elsewhere in this report that these sections be amended to read as follow:⁹⁴

a) Development of Rotokauri North is guided by the following vision:

....

ii. Quality urban design outcomes, including through the establishment of a grid-patterned road network and avoidance, wherever possible, of rear lots and culs-de-sac.

....

23.2.7a

Enable subdivision in Rotokauri North that:

....

iii. Forms a well-connected block structure that avoids:

- rear lots wherever possible; and*

⁹⁴ See s8 and s16.3

- *culs-de-sac, except where there is no practical alternative-(e.g., adjoining the green spine) and-pedestrian connectivity can still be achieved;*

....

However, there is no rule to implement the policy.

Table 23.3d in PC7 sets out the activity status of activities in all zones in Rotokauri North and includes:

Activity	Rotokauri-North Activity Status
x. Any subdivision which results in a permanent cul-de sac	D

To address the deficiencies identified above, a new rule 23.7.8 c iv is recommended below for inclusion in PC7 to ensure these matters are provided for at the time of subdivision, when the rear lane design will be determined.

23.7.8 Rotokauri North ~~Structure Plan Area~~

....

- c) All rear lanes and roads ~~/accessways must be constructed to the standards:~~

....

<u>iv.</u>	<u>Each rear lane shall be:</u>
<u>A.</u>	<u>Designed to provide access and egress for large rigid trucks such as fire, furniture removal, refuse and recycling-collection trucks.</u>
<u>B.</u>	<u>Connected to a transport corridor at each end.</u>
<u>C.</u>	<u>Privately-owned and its owners shall be responsible for its operation and maintenance.</u>
<u>D.</u>	<u>Common property under the Unit Titles Act when it serves more than 9 residential units.</u>

....

It is recommended this rule be duplicated in Chapter 25.14 Transportation to ensure these requirements are considered when land use is consented – see recommended rule 25.14.4.1 h v D in s17.5.

16.8.1 Limiting the number of residential units that a rear lane can serve

Rear lanes serve a similar function to that served by rights of way (ROWs) but aim to avoid vehicle crossings conflicting with shared pedestrian and cyclist paths. Rule 25.14.4.1 h in the ODP specifies the maximum number of residential units and the minimum formation and legal widths for ROWs.

The minimum widths ensure that opposing vehicles can pass without unreasonable delays and fire trucks can access all properties in an emergency.

Rule 23.7.8c in the notified version of PC7 specifies different minimum width requirements depending on whether the rear lane is one-way or two-way and how car-parking on the property (not on the rear lane) is arranged and the access to it.

The proposed layout of on-site car-parking is unlikely to be known when the subdivision is approved. Nevertheless, the implications of these rules will need to be considered at subdivision to ensure lots are big enough to accommodate the intended dwelling and carparking.

Mr Black⁹⁵ has recommended that the limits on the number of properties served by ROWs should also apply to rear lanes. This is because, if these limits were not to apply, then long, one-way rear lanes could result. These would increase the travel distance for residents and could result in people entering the lane in the wrong direction to avoid a long drive along the rear lane to enter their property. There is also the potential for pedestrians to have to walk a long way along rear lanes, which is also undesirable from a CPTED perspective. Mr Black has advised⁹⁶ that the 6 and 20 residential unit limits are consistent with NZS4404, promote slower vehicle speeds, and make walking and cycling more attractive through shorter block lengths and trip distance.

For these and other reasons set out below, it is recommended this rule be amended as follows.

23.7.8 Rotokauri North Structure Plan Area

c) All rear lanes and roads/accessways must be constructed to the standards:

i.	Minimum legal width of a t Two-way rear lane:	7m
	<u>A. Minimum legal width</u>	<u>7m</u>
	<u>B. Maximum number of residential units served</u>	<u>20</u>
ii.	Minimum legal width of o One-way rear lane where parking spaces accessed directly off the lane and/or any reverse vehicle manoeuvring into the lane are aligned between 0° (parallel parking) to 45° (angled parking) to the lane:	4m
	<u>A. Minimum legal width</u>	<u>4m</u>
	<u>B. Maximum number of residential units served</u>	<u>6</u>
iii.	Minimum legal width of o One-way rear lane where parking spaces accessed directly off the lane and/or any reverse vehicle manoeuvring into the lane are aligned between 46° (angled parking) and 90° (perpendicular parking):	7m
	<u>A. Minimum legal width</u>	<u>7m</u>
	<u>B. Maximum number of residential units served</u>	<u>6</u>
iv.	<u>Each rear lane shall be:</u>	
	<u>A. Designed to provide access and egress for large rigid trucks such as fire, furniture removal, refuse and recycling-collection trucks.</u>	

⁹⁵ Black, A. 2020B.

⁹⁶ Black, A. 2021A.

	<u>B.</u>	<u>Connected to a transport corridor at each end.</u>
	<u>C.</u>	<u>Privately-owned and its owners shall be responsible for its operation and maintenance.</u>
	<u>D.</u>	<u>Common property under the Unit Titles Act when it serves more than 9 residential units.</u>
<u>iv.</u>	Local Road minimum <u>legal</u> width (to be vested)	
		16.6m <u>See Note 1</u>
<u>vi.</u>	Collector Road minimum <u>legal</u> width (to be vested)	
		20.8m <u>See Note 1</u>

Note 1: This width does not provide for swales or street landscaping. Additional width will be required for these features, if present, and may be required to accommodate any other features or activities.

16.8.2 Reasons for amendments

- (1) Amendments to the heading: To remove unnecessary words.
- (2) The reasons for limiting the number of residential units a rear lane serves are set out in s16.8.1 above.
- (3) Addition of Rule 23.7.8 c iv A: To ensure these trucks can access and exit all rear lanes.
- (4) Addition of Rule 23.7.8 c iv B: To make it clear that culs-de-sac are to be avoided and to be consistent with Policy 23.2.7a iii – see s16.3 and s16.8.
- (5) Addition of Rule 23.7.8 c iv C: To ensure clarity and certainty.
- (6) Addition of Rule 23.7.8 c iv D:
 - a) To ensure there is a body corporate to effectively manage the ongoing operation and maintenance of the rear lane.
 - b) To be consistent with decisions on Plan Change 6 with respect to private ways.⁹⁷
- (7) Amendments to Rule 23.7.8 c iv and v:
 - a) Amendments to the dimensions: To be consistent with the dimensions recommended in the Integrated Transport Assessment (April 2019)^{98,99};
 - b) Addition of “legal” for clarity, and to be consistent with Rules 23.7.8 c) i, ii and iii; and
 - c) Addition of “with no swale”: For clarity.

These amendments are related to those discussed at s17.5 and s17.7.

16.8.3 Additional Policies

It is recommended the following additional policies be included in PC7 for the reasons set out below.

3.6A.2.4aa

Enable local and collector roads that prioritise level of service and safety for pedestrians and cyclists.

3.6A.2.4ca

The length of a rear lane is limited to promote slow vehicle speeds and safety and to make walking and cycling more attractive by minimising trip lengths.

⁹⁷ See Rule 23.7.3 f in the ODP.

⁹⁸ Recommended by Mr Black (2020A)

⁹⁹ See section 17.5 of this report.

16.8.3.1 Reasons for new Policy 3.6A.2.4aa

- (1) To explain why the minimum legal widths for local and collector roads are different from the City-wide standard.

16.8.3.2 Reasons for new Policy 3.6A.2.4ca

- (1) To fill a gap in PC7.
- (2) To support the parts of Rule 23.7.8 c relating to rear lanes, i.e. i, ii, iii and iv.
- (3) In conjunction with proposed Assessment Criteria O2, to provide for assessment of any consent applications that do not comply with 23.7.8.

16.8.4 Information Requirement and Assessment Criterion

The orientation of car parking on a lot accessed from a rear lane affects the minimum legal width of the rear lane. Conversely, the minimum lane width can affect the car parking orientation on such lots, and this can affect the area of the lot required for car parking, and therefore the balance of the lot available for a dwelling. It is recommended therefore that the following new information requirement and assessment criterion for subdivision in Rotokauri North be included in PC7:

Appendix 1.2.2.24 Rotokauri North

b) Subdivision creating a rear lane

- Demonstrate that lots accessed from the rear lane are sized to accommodate a dwelling and the car parking orientation requirements of 23.7.8c.

Appendix 1.3.3: Restricted Discretionary, Discretionary and Non-Complying Assessment Criteria

O2	The creation of a private rear lane: <u>The extent to which:</u>
	<u>c) Lots accessed from the rear lane are sized to accommodate a dwelling and the parking orientation requirements of 23.7.8c.</u>

16.9 New Rule 23.7.8 e – Vehicle crossing location restrictions

It is recommended that a new rule 23.7.8 e be added as follows for the reasons set out below:

e) Vehicle Crossing Location Restrictions in Rotokauri North

- No vehicle crossing(s) may be located over a cycle lane or a path specifically designed as a shared-use walking and cycling path. When either of these facilities is on an allotment's Transport Corridor frontage, a legal mechanism (consent notice) shall restrict vehicle crossings and access to that allotment to rear lanes, access lots or other roads.
- No vehicle crossing(s) may have direct access to or from State Highway 39.
- Vehicle crossing locations shall not adversely affect parking bays.

16.9.1 Reasons for New Rule 23.7.8 e

- (1) This rule duplicates proposed Rule 25.14.4.1 k because restrictions on vehicle crossing locations need to be considered at subdivision. Including the rule in Chapter 23 reduces the risk of these restrictions being overlooked at subdivision.
- (2) The explanations of the amendments to Policy 3.6A.2.4d, relating to eliminating vehicle crossings onto SH39 are relevant to new Rule 23.7.8 e. See s11.4.2.
- (3) 23.7.8 e ii makes it clear that, following urbanisation, no properties within Rotokauri North will have vehicle crossing access to or from SH39.

- (4) 23.7.8 e iii is intended to avoid vehicle crossings being constructed where vehicles using them will prevent use of parking bays for parking. It is also recommended this rule be replicated in Chapter 25.14 to ensure vehicle crossing locations approved as part of land-use consenting do not compromise parking bays.¹⁰⁰

Properties within Rotokauri North having direct access to SH39 will have existing use rights until they are urbanised. Once a property is subdivided, its existing vehicle crossings to SH39 would be closed and alternative access, other than from SH39, would need to be provided.

16.10 New Rules 23.7.8 f and 23.7.8 g – Neighbourhood parks

To provide clarity and certainty, it is recommended the following new rule be included in PC7:

23.7.8

- f) Where the Rotokauri North Structure Plan (Figure 2-8A) requires a neighbourhood park, each neighbourhood park shall:*
- i. Have a minimum area of 5,000m²;*
 - ii. Have transport corridor frontage along at least 50% of the total neighbourhood park boundary;*
 - iii. Be located on land that is generally flat; and*
 - iv. Accommodate a flat, square area 30m x 30m.*
- h) Neighbourhood parks shall be dispersed within Rotokauri North so that no residential unit is more than 500m walking distance from a neighbourhood park.*

16.11 Rule 23.7.8 h – Ecological Rehabilitation Management Plan and Landscape Concept Plan

The notified version of PC7 includes no rules to implement the objectives and policies listed in Table 2 below.

Table 2: ODP objectives and policies for which there are no implementation rules in PC7

Provision or subject	Objectives	Policies
The Waikato River	2.2.8	2.2.8a 2.2.8b 2.2.8c 2.2.8d 2.2.8e
Tangata whenua	2.2.9	2.2.9a 2.2.9b 2.2.9c 2.2.9d
Protection and restoration of the health and wellbeing of the Waikato River is restored and protected	2.2.10	2.2.10a 2.2.10b
Hamilton's Identity, Character and Heritage	2.2.11	2.2.11a 2.2.11b 2.2.11c 2.2.11d

¹⁰⁰ See s17.6.

Also, apart from renaming the Significant Natural Area, little has been included in the notified version of PC7 to recognise and provide for the principles and recommendations included in the Rotokauri North Tangata Whenua Working Group's *Cultural Impact Assessment* (2020).

To address these deficiencies, the following new rules, information requirements and assessment criteria are recommended. They are based on the above-mentioned *Cultural Impact Assessment* and similar provisions in the ODP for Te Awa Lakes¹⁰¹.

23.7.8 Rotokauri North ~~Structure Plan Area~~

....

- h) An application for subdivision in Rotokauri North shall be accompanied by:
 - i. An Ecological Rehabilitation Management Plan (ERMP) in accordance with Appendix 1.2.2.24 d; and
 - ii. A Landscape Concept Plan in accordance with Appendix 1.2.2.24 e.

....

1.2 Information Requirements

....

1.2.2.24 Rotokauri North

....

- d) Rotokauri North Ecological Rehabilitation Management Plan (ERMP)
 - i. The objective of the ERMP is to enhance aquatic and terrestrial ecological values within Rotokauri North.
 - ii. As a minimum, the ERMP is to include the following and the methods to implement them:
 - A. An indigenous fish management plan, including a summary of fish habitat and species present, a summary of planned works, permitting requirements, procedures for dealing with pest fish, biosecurity protocols, timing of works, procedures for recovering indigenous fish prior to and during works, roles and responsibilities of parties, reporting requirements and any specific mitigation measures.
 - B. Planting of trees for bat habitat, including tall tree species such as Kahikatea and Totara, in areas where bat habitat utilisation is likely to be high.
 - C. Lighting design that is sensitive to bat habitat including minimal lighting in areas close to the Waikato River, avoidance of upward-facing lighting and UV lighting, and avoidance of lighting in wetland and riparian margin areas.
 - D. A specific ecological rehabilitation plan to restore, protect and enhance, as a minimum, the modified watercourses within Rotokauri North identified in Figure 2-9D. The plan shall incorporate as a minimum:
 - 1. Ensuring new stream habitat mimics natural systems.
 - 2. Provision of passage for indigenous fish while, if practicable, excluding exotic pest fish species.
 - 3. Creation of a diverse and variable habitat and channel complexity over time to allow for differences in flow velocities.

¹⁰¹ Appendix 1.2.2.21 j and k in the ODP

4. A meandering channel.
 5. Creation of pool-riffle-run sequences.
 6. Avoidance of instream works during peak fish migration periods (August – December).
 7. Restoration planting, including wetland restoration, habitat enhancement and riparian buffer zones.
 8. Provision of vegetative cover, woody debris or other in-stream structures.
 9. Proposals for ongoing maintenance and management.
 - E. The establishment or enhancement of ecological corridors.
 - F. Evidence of engagement with tangata whenua during preparation of the ERMP including how the matters tangata whenua raised in that engagement have been addressed.
- e) **Rotokauri North Landscape Concept Plan**
- i. The objectives of the Rotokauri North Landscape Concept Plan are to protect or enhance the natural character and cultural, heritage and amenity values of Rotokauri North's open spaces, to recognise and provide for tangata whenua values and relationships with Rotokauri North, and their aspirations for the area, and to reflect the area's character and heritage.
 - ii. The Rotokauri North Landscape Concept Plan shall include:
 - A. A landscape concept for any areas of open space, including details of landscape treatment for neighbourhood parks, special purpose reserves, streets, footpaths, cycleways, stormwater swales, wetlands, detention basins, streams, riparian margins and the landscape buffer adjacent to State Highway 39.
 - B. Use of indigenous species and landscape design that reflect tangata whenua cultural perspectives including species that are valued as customary food or for traditional uses, and those that support indigenous biodiversity and provide habitat for mahinga kai, native birds and lizards.
 - C. Details of plant species and sizes at time of planting, including eco-sourcing of plants from within the Hamilton Ecological District and choice of species that reflect the history of the area.
 - D. Details of ongoing maintenance to ensure the planting achieves the best possible growth rates.
 - E. Details of any sites of significance for tangata whenua and how they will be protected, enhanced or commemorated.
 - F. Details of how the landscape plan will support cultural harvest.
 - G. Details of any proposed sites for water-related activities and proposed public access to them and to and alongside waterways and wetlands.
 - H. Details of any interpretation materials communicating the history and significance of places and resources and any tangata whenua inspired artwork or structures.
 - I. A list of traditional names suggested by tangata whenua for sites, developments, streets, neighbourhoods or sub-catchments in Rotokauri North.

- J. Details of any cultural protocols to be followed during the development process, including, but not confined to, protocols following accidental discovery of archaeological materials or sites. For clarity, this applies to the whole of Rotokauri North, not just to areas of open space.
- K. Evidence of engagement with tangata whenua in preparation of the landscape plan, including how the matters tangata whenua raised in that engagement have been addressed.
- L. Evidence of consistency with the Ecological Rehabilitation and Management Plan required by Rule 23.7.8h.

Appendix 1.3.3: Restricted Discretionary, Discretionary and Non-Complying Assessment Criteria

....

<u>O6</u>	<u>For any subdivision or development, the extent to which the proposal:</u>	
		<u>....</u>
	<u>b)</u>	<u>Restores, protects and enhances aquatic and terrestrial ecological values associated with springs, streams, waterways, wetlands and their margins in Rotokauri North.</u>
	<u>c)</u>	<u>Protects or enhances the natural character and ecological, cultural, heritage and amenity values of Rotokauri North's open spaces.</u>
	<u>d)</u>	<u>Provides sites for water-related activities and public access to them and to and alongside waterways and wetlands.</u>
	<u>e)</u>	<u>Recognises and provides for tangata whenua values and relationships with Rotokauri North and their aspirations for the area, including provision for cultural harvest, interpretation of the landscape's significance, protection, enhancement and commemoration of sites of significance, use of traditional tangata whenua names for sites, developments, streets, neighbourhoods and sub-catchments, and application of cultural protocols during the development process.</u>
	<u>f)</u>	<u>Reflects the area's character and heritage.</u>
	<u>g)</u>	<u>Has been planned with the active involvement of tangata whenua.</u>

16.12 Figure 2-9D – Modified Watercourses

Recommended Rule 1.2.2.24 d ii D above refers to a new figure, Figure 2-9D. It is recommended that the Tonkin & Taylor drawing¹⁰² showing watercourse classifications be adopted as Figure 2-9D and included in PC7. This figure is included as Appendix 1 to Attachment 11 to the Plan Change Request and is attached as Appendix 6 to this report.

¹⁰² Drawing 1008263.3000 – Figure 1 – Rev 1

17 Chapter 25 City Wide

17.1 Introduction

PC7 introduces to Chapter 25 - City Wide new standards for vehicle access, parking and loading spaces and manoeuvring areas.

Mr Black has reviewed the Request and the proposed plan change provisions and has commented on the transport-related provisions¹⁰³. Gillian Cockerell, Principal Planner in the Planning Guidance Unit, has reviewed these proposed changes and recommended amendments to achieve consistency with the ODP.

17.2 Rule 25.13.4.7

To improve clarity, brevity and consistency with the ODP, it is recommended Rule 25.13.4.7 be amended as follows:

25.13.4.7 ~~25~~Rotokauri North ~~Structure Plan Area~~

1. Any stormwater devices installed on private lots ~~as a means~~ to achieve the requirements of the ICMP (or sub catchment ICMP) must be maintained by the site owner(s) in perpetuity. A consent notice will be registered on the certificate of title to that effect at time of subdivision.
2. Where re-use is proposed/required the tank must be dual plumbed to non-potable uses such as toilet and washing machine in the ~~dwelling~~residential unit.

17.3 Rule 25.14.4.1 a) iv - Distance between vehicle crossings

PC7 proposes Rule 25.14.4.1 a) iv as set out below.¹⁰⁴

Separation Distances													
a) Distance between vehicle crossings on the same transport corridor frontage	i. Where the posted speed of the adjoining road is 60km/h or less the distance between vehicle crossings on the same side of the road shall be either: <ul style="list-style-type: none">• Less than 2m (provided no more than 2 vehicle crossings adjoin each other); or• More than 7.5m												
	ii. Where the posted speed of the adjoining road is more than 60km/h the distance between vehicle crossings on either side of the road shall meet the relevant separation requirements in the below table; or:												
	<table><tr><th>Posted speed limit of adjoining transport corridor</th><th>Minimum distance between vehicle crossings</th></tr><tr><td>60 km/h and under</td><td>7.5m</td></tr><tr><td>70 km/h</td><td>40m</td></tr><tr><td>80 km/h</td><td>100m</td></tr><tr><td>90 km/h</td><td>200m</td></tr><tr><td>100 km/h</td><td>200m</td></tr></table>	Posted speed limit of adjoining transport corridor	Minimum distance between vehicle crossings	60 km/h and under	7.5m	70 km/h	40m	80 km/h	100m	90 km/h	200m	100 km/h	200m
	Posted speed limit of adjoining transport corridor	Minimum distance between vehicle crossings											
	60 km/h and under	7.5m											
	70 km/h	40m											
	80 km/h	100m											
90 km/h	200m												
100 km/h	200m												
iii. On local roads with a posted speed of 50km/h or less where compliance with i. or ii. above cannot be achieved as part of any land use activity the													

¹⁰³ Black, A. 2020, pp11-12, s6

¹⁰⁴ The green text is the operative version of Plan Change 6.

	<p><i>proposed vehicle crossing shall be separated as far as possible from any other existing or proposed crossing.</i></p> <p>iv. <i>In Rotokauri North the minimum distance shall be 2m</i></p>
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The changes PC7 proposes for Rule 25.14.4.1 a) have the following problems:

- (1) It is unclear whether Rules 25.14.4.1 a) i, ii and iii would apply in Rotokauri North; and
- (2) The rule is unnecessary for the following reasons.

The PC7 s32 Report (p.22) asserts:

The modification to widths between crossings is a clarification only as the District Plan is unclear (provides two confliction options). Vehicle crossings will also largely be determined at subdivision design stage so as to not conflict with street furniture/lighting/planting parking bays etc.

However, there is no conflict between the alternative separation distances for vehicle crossings prescribed in the ODP. Currently, where the speed limit on the adjoining transport corridor is less than or equal to 60km/h, the width between crossings must be either “less than 2m” or “7.5m or more”. The width of 7.5m allows for a car to be parked on the street between the crossings.

Therefore, there is no reason for a specific provision under Rule 25.14.4.1 a) for Rotokauri North.

Accordingly, it is recommended that 25.14.4.1 a) iv be deleted¹⁰⁵:

~~iv. In Rotokauri North the minimum distance shall be 2m~~

17.4 Rule 25.14.4.1 c) – Distance between a vehicle crossing and an intersection

For the reasons set out below, it is recommended that proposed Rule 25.14.4.1 c) iii be deleted as follows.

c)

Minimum distance between any vehicle crossing and a transport corridor intersection

Vehicle crossings shall meet the following relevant separation requirements in the tables below. The distance should be measured in accordance with the figure below:

For vehicle access onto roads with a posted speed limit of 50km/h or less and serving a listed permitted activity where the separation requirements cannot be achieved the vehicle crossing shall be located as close as reasonably practicable to the furthest site boundary from the intersection (as relevant to the property boundary indicated in the figure below).

i.

Minimum distance between any vehicle crossing and transport corridor intersection – posted speed limit 60km/h or less.

Adjoining transport corridor hierarchy (posted speed limit 60 km/h or less)

Intersecting transport corridor hierarchy

Major arterial

Minor arterial

Collector

Local

Major Arterial

30m

30m

30m

30m

Minor Arterial

30m

30m

30m

30m

Collector

20m

20m

15m

15m

Local

20m

20m

15m

15m

ii.

Minimum distance between any vehicle crossing and transport corridor intersections – posted speed limit greater than 60km/h

Intersecting transport corridor hierarchy

¹⁰⁵ Black, A. 2020, p11, s6

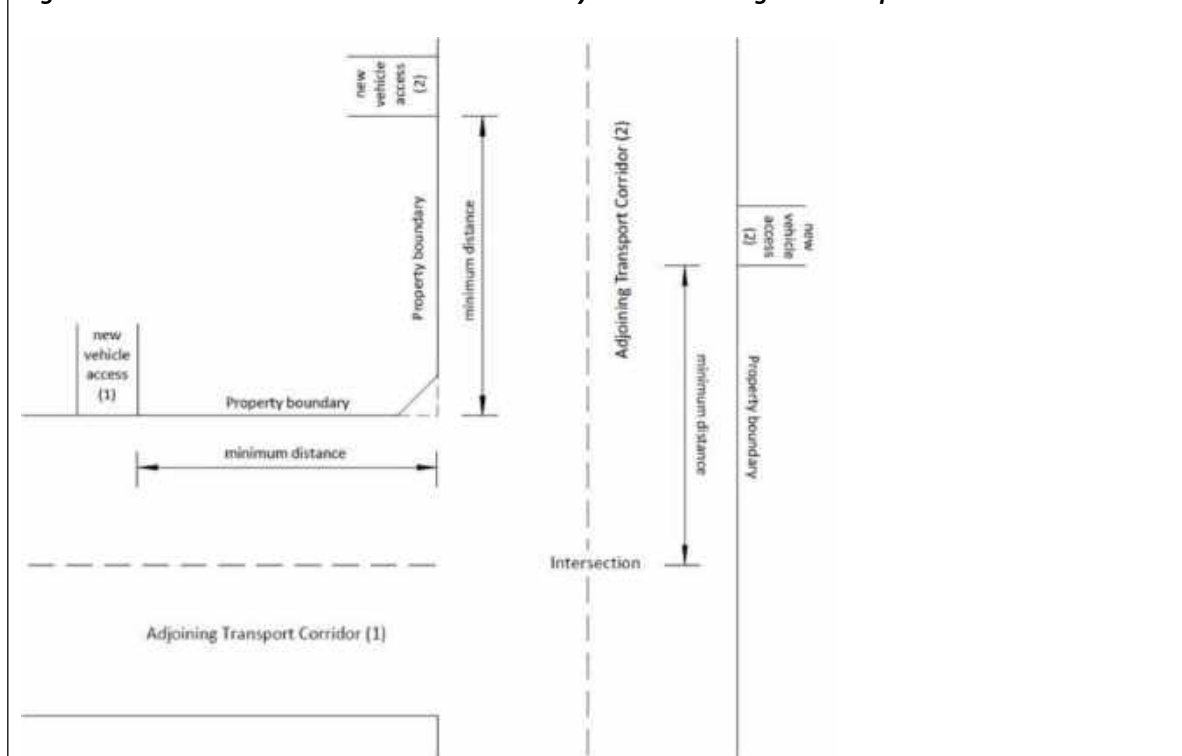
Adjoining transport corridor hierarchy (posted speed limit 60 km/h or less)	Major arterial	Minor arterial	Collector	Local
Major Arterial	100m	100m	100m	100m
Minor Arterial	100m	100m	100m	100m
Collector	45m	45m	30m	30m
Local	45m	45m	30m	30m

Note
The examples of exceptions can include where the property boundary frontage is less than 30m and there is no other available access point, or the topography would make it impractical to construct an access in a complying location.

~~iii. Except that in Rotokauri North the minimum distance applicable to a Local road to Local road intersection (where the posted speed limit is 60km/h or less) shall be 10m.~~

(see diagram below)

Figure 25.14.4.1a - Minimum distance between any vehicle crossing and transport corridor intersections



17.4.1 Reasons for amendments

PC7 proposes to exempt Rotokauri North from the part of 25.14.4.1 c) i that requires any vehicle crossing to be at least 15m from an intersection of two local roads where the posted speed limit is 60km/h or less. PC7 proposes this minimum separation be reduced to 10m in Rotokauri North.

It is understood and accepted that this rule aims to minimise the frontage length of corner properties to help achieve narrower lots and higher residential density. However, a different way of achieving this outcome is recommended.

Plan Change 6, which is now operative, amended 25.14.4.1 c) i as set out in green above. It provided for crossings to be located “as close as reasonably practicable to the further site boundary from the

intersection” where the separation distances specified in the rule cannot be achieved and the posted speed limit on the adjoining road is 50km/h or less. It is recommended that this provision should apply in Rotokauri North, as this would then achieve a consistent city-wide rule. Accordingly, it is recommended that 25.14.4.1 c) iii is deleted.

17.5 Rule 25.14.4.1 h – Design and Access Widths

It is recommended Rule 25.14.4.1 h be amended as follows for the reasons set out below.

h) *Vehicle crossing and internal vehicle access dimensions shall:*

i. *Comply with the relevant dimensions identified in the Tables below*

Vehicle Crossings	Width (m) ¹	
	Minimum	Maximum
Residential and Special Character Zones, <u>except as provided for below</u>	3.0	5.5
Rotokauri North Medium-Density <u>Residential</u> Zone – applies to a ‘combined’ vehicle crossing intended to serve two units (including a duplex)	5.5	6
All other Zones	5.0	7.5

1. Measured along the front boundary where it adjoins the Transport Corridor

Internal vehicle access widths, except for rear lanes in Rotokauri North

Internal Vehicle Access	Use of Access	Minimum Formation Width (m)	Minimum Legal Width
Residential units	1-6 units	3.0	3.6
	7 – 20 units (where access is to form common property under a unit title arrangement) or, 7 – 9 units (where access is part of a fee simple subdivision)	5.5	6.0
	10 – 20 units (where access to vest as road as part of a fee simple subdivision)	6.0	16.0
	More than 20 units (Local Road)	6.0	20.0
	More than 20 units (Collector Road)	9.0	23.0
Residential centres, visitor accommodation	1-12 occupants	3.0	3.6
	More than 12 occupants	5.5	-
Car parking facilities	Up to 15 spaces	3.0	-
	More than 15 spaces	6.0	-
	Up to 5 occupancies	6.0	-

All other sites used for industrial or business activities	More than 5 occupancies	8.0	-
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- ii. Be formed and drained with a permanent sealed or paved all weather, dust-free surface and in a manner suitable for the type and quantity of vehicles using the site.
- ~~iviii.~~ Except for rear lanes in Rotokauri North, B be designed and configured to meet the relevant requirements of Table 15-6a in Appendix 15.
- ~~iv.~~ Except for rear lanes in Rotokauri North, Oon fee simple subdivision any internal vehicle access serving 10 or more residential units will be required to be formed and vested in Hamilton City Council as a public road.
- ~~iv.~~ The aAccess requirements ~~of i., iv and v do not apply to for~~ rear lanes in Rotokauri North. Instead the following shall apply:

iA.	Minimum legal width of a t	Two-way rear lane:	7m
	<u>1.</u>	<u>Minimum legal width</u>	<u>7m</u>
	<u>2.</u>	<u>Minimum formation width</u>	<u>5.5m</u>
	<u>3.</u>	<u>Maximum number of residential units served</u>	<u>20</u>
iiB.	Minimum legal with of o	One-way rear lane where parking spaces accessed directly off the lane and/or any reverse vehicle manoeuvring into the lane are aligned between 0° (parallel parking) to 45° (angled parking) to the lane:	4m
	<u>1.</u>	<u>Minimum legal width</u>	<u>4m</u>
	<u>2.</u>	<u>Minimum formation width</u>	<u>3m</u>
	<u>3.</u>	<u>Maximum number of residential units served</u>	<u>6</u>
iiiC.	Minimum legal width of o	One-way rear lane where parking spaces accessed directly off the lane and/or any reverse vehicle manoeuvring into the lane are aligned between 46° (angled parking) and 90° (perpendicular parking):	7m
	<u>1.</u>	<u>Minimum legal width</u>	<u>7m</u>
	<u>2.</u>	<u>Minimum formation width</u>	<u>3m</u>
	<u>3.</u>	<u>Maximum number of residential units served</u>	<u>6</u>
iiid.	<u>Each rear lane shall be:</u>		
	<u>1.</u>	<u>Designed to provide access and egress for large rigid trucks such as fire, furniture removal, refuse and recycling-collection trucks.</u>	
	<u>2.</u>	<u>Connected to a transport corridor at each end.</u>	
	<u>3.</u>	<u>Privately-owned and its owners shall be responsible for its operation and maintenance.</u>	

	<u>4.</u>	<u>Common property under the Unit Titles Act when it serves more than 9 residential units.</u>
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Note

1. *Acceptable means of compliance for the design and construction of vehicle crossings is contained within the Hamilton City Infrastructure Technical Specifications.*
 2. *Council will apply the Local Government Act 1974 to require action to prevent damage to the berm from crossings being of inadequate width or construction.*
- i) *Any internal vehicle access shall*
- i. *Have a minimum obstructed width at vehicle entrances and between buildings of no less than 3.5m.*
 - ii. *Not be used for carparking or storage of materials, landscaping, fencing or other obstructions that would restrict access by emergency vehicles.*
 - iii. *Have a minimum height clear of buildings and other obstructions of 4.0m*
 - iv. *Have splays of 2m x 2m which are clear of structures higher than 1m at any vehicle entranceway or where vision of pedestrians or oncoming vehicles is restricted.*
- j) *A passing bay shall be provided along an internal vehicle access which serves more than one allotment or more than five car parking spaces, in cases where:*
- i. *The access is less than 5.5m wide and has a length greater than 70m, or*
 - ii. *Unrestricted visibility is not available over its full length.*

Assessment criteria for private rear lanes (Criteria O2) are discussed below at s19 and s19.1.2.

17.5.1 Reasons for amendments to Rule 25.14.4.1 h

- (1) Exceptions in relation to rear lanes in Rotokauri North: To make it clear to readers that those provisions do not apply to those rear lanes. Without these additions, readers may overlook the exception in 25.14.4.1.h v. Because of the additions, the exceptions in 25.14.4.1 h v can be deleted.
- (2) Addition of “Minimum formation width”: For clarity and certainty and to be consistent with the second table in 25.14.4.1 h i.
- (3) Maximum number of residential units served: See s16.8.1.
- (4) Addition of Rule 25.14.4.1 h v D 1: To ensure these trucks can access and exit all rear lanes.
- (5) Addition of Rule 25.14.4.1 h v D 2: To make it clear that culs-de-sac are to be avoided and to be consistent with Policy 23.2.7a iii – see s16.3 and s.16.8.
- (6) Addition of Rule 25.14.4.1 h v D 3: To ensure clarity and certainty.
- (7) Addition of Rule 25.14.4.1 h v D 4: To ensure there is a body corporate to manage the ongoing operation and maintenance of the rear lane and to be consistent with the decision of Plan Change 6 regarding Rule 23.7.3 f and Rule 25.14.4.1 h i in the ODP.
- (8) Changes to numbering: To provide consecutive numbering that is consistent with the numbering convention applied throughout the ODP.
- (9) Other amendments are to eliminate unnecessary words or improve clarity.

These amendments are related to those discussed at s16.8 and s17.7.

17.6 Rule 25.14.4.1 k – Vehicle crossing location restrictions

It is recommended that proposed Rule 25.14.4.1 k be amended as follows for the reasons set out below:

- k) **Vehicle Crossing** Location Restrictions in Rotokauri North
- i. No vehicle crossing(s) may be located over a **dedicated** cycle lane or **3m shared path** a path specifically designed as a shared-use walking and cycling path. When either of these facilities is on an allotment's Transport Corridor frontage, A legal mechanism (consent notice) shall restrict vehicle crossings and access to that allotment to rear lanes, access lots or side other roads ~~where a dedicated cycle lane or 3m shared path is on the allotments Transport Corridor frontage.~~
 - ii. No ~~new~~ vehicle crossing(s) may have direct access to or from State Highway 39.
 - iii. Vehicle crossing locations shall not adversely affect parking bays.

No vehicle crossing(s) may be located over a cycle lane or a path specifically designed as a shared-use walking and cycling path. When either of these facilities is on an allotment's Transport Corridor frontage, a legal mechanism (consent notice) shall restrict vehicle crossings and access to that allotment to rear lanes, access lots or side roads.

17.6.1 Reasons for amendments to Rule 25.14.4.1 k

- (1) Inclusion of "vehicle crossing" in the header clarifies what is restricted and helps readers locate relevant rules.
- (2) The amendments to the first sentence of 25.14.4.1 k i are to avoid vehicle crossings being located over any path specifically designed as a shared-use walking and cycling path regardless of its width. Also, the meaning of "dedicated protected cycle lanes" is unclear. In the future, it is likely that motorised transport devices, including e-scooters, will be allowed to use a cycle lane. In that case, the lanes would not be dedicated for cycle use. "Side roads" is replaced with "other roads" because the former term is not defined in the ODP.
- (3) The recommended amendments to Rule 25.14.4.1 k ii make it clear that, following urbanisation, no properties within Rotokauri North will have vehicle crossing access to or from SH39.
- (4) The explanations of the amendments to Policy 3.6A.2.4d also apply to Rule 25.14.4.1 k. See s11.4.2.
- (5) Rule 25.14.4.1 k iii is intended to avoid vehicle crossings being constructed where vehicles using them will prevent use of parking bays for parking. This rule replicates recommended Rule 23.7.8 e iii, which applies at subdivision.¹⁰⁶

Properties within Rotokauri North having direct access to SH39 will have existing use rights until they are urbanised. Once a property is subdivided, its existing vehicle crossings to SH39 would be closed and alternative access, other than from SH39, would need to be provided.

It is recommended that this provision is repeated in Chapter 23 as it needs to be applied at subdivision as well – see s16.9.

17.7 Rule 25.14.4.2 - Parking, Loading Spaces and Manoeuvring Areas - Design

To ensure clarity and certainty and help plan users negotiate the plan's requirements, the following new standard is recommended¹⁰⁷:

25.14.4.2 Parking, Loading Spaces and Manoeuvring Areas Design

- f) *Parking spaces, loading spaces and manoeuvring areas shall:*

¹⁰⁶ See s16.9 and s16.9.1 (4).

¹⁰⁷ See also sError! Reference source not found. and s17.5.

ia) Where access is from a rear lane in Rotokauri North, then parking shall also comply with the following standards.

<u>Type of rear lane</u>	<u>Rear lane legal width</u>	<u>Angle of parking space to the rear lane / property boundary</u>
<u>Two way</u>	<u>7.00m or more</u>	<u>Between 0° (parallel parking) and 90°</u>
<u>One way</u>	<u>Between 4m and 6.99m</u>	<u>Between 0° and 45°</u>
<u>One way</u>	<u>7.00m or more</u>	<u>Between 0° and 90°</u>

Other amendments to this rule are recommended above at s5.6.

17.8 Rule 25.14.4.3 – Integrated Transport Assessment Requirements

The following table summarises some (but not all) of the requirements in the ODP that will trigger preparation of a Broad ITA for activities in Rotokauri North.

Table 3: Some Broad ITA triggers for activities in Rotokauri North

Rule in the ODP	Activity requiring preparation of a Broad ITA
25.14.4.3 a	Any activity generating > 1,500 vehicles per day
25.14.4.3 c	A new school
25.14.4.3 c	A new transport corridor
25.14.4.3 g	A new vehicle access to a major arterial transport corridor (e.g., SH39)

To ensure any potential adverse effects of these (and any other relevant) activities in Rotokauri North on the transportation network are appropriately managed, and to ensure appropriate provision is made for public transport infrastructure, the following new provision 25.14.4.3 fa is recommended.

25.14.4.3 Integrated Transport Assessment Requirements

....

Rotokauri North

ja) In addition to the Broad ITA content specified in 25.14.4.3 m), any Broad ITA prepared in relation to development within Rotokauri North shall include, but not be limited to:

- i. Specific consideration of demand, levels of service and options for mitigation at the following intersections and transport corridors:
 - A. Exelby Road / State Highway 39 intersection;
 - B. Collector 1 / State Highway 39 intersection;
 - C. Te Kowhai Road / State Highway 39 / Burbush Road intersection;
 - D. Burbush Road; and
 - E. Exelby Road between Rotokauri North and the Rotokauri Road / Exelby Road intersection inclusive; and
- ii. Evidence of the following consultation and responses to the issues raised in that consultation:
 - A. Consultation with Waikato Regional Council and Hamilton City Council on the provision of public transport to service Rotokauri North. The consultation is to include:
 1. The location, alignment and corridor cross section dimensions of the collector road network;

2. Identifying locations for public transport infrastructure described in Rule 3.6A.4.6; and
 3. Opportunities to extend public transport services to and within Rotokauri North, including any prerequisite development thresholds and when and how these services will be funded and when and how these services will be funded;
- B. Consultation with Waikato District Council about effects, if any, on the parts of Exelby Road and Te Kowhai Road that are in that Council's jurisdiction.

....

18 Information requirements – Appendix 1.2.2.24

For the reader's convenience, Table 4 lists the sections of this report that recommend new or amended information requirements, and the recommended information requirements are reproduced after the table.

Table 4: Section of this report addressing information requirements

Recommended new information requirement	Section of this report where it is recommended
1.2.2.24 b)	16.8.3.1
1.2.2.24 c)	12.4
1.2.2.24 d)	16.11

1.2.2.24 Rotokauri North

- a) *Subdivision of a Duplex*
 - i) *For any restricted discretionary activity subdivision of a permitted activity duplex (which meets Rule 4.7.12(a)), applicants need not provide a site analysis (otherwise provided for in 1.2.2.2 c) above).*
- b) Subdivision creating a rear lane
 - i) Demonstrate that lots accessed from the rear lane are sized to accommodate a dwelling and the car parking orientation requirements of 23.7.8c.
- c) Any subdivision in Rotokauri North
 - i) Identify whether approval of the subdivision consent would exceed a development trigger listed in 3.6A.4.2 d) iii.
- d) Rotokauri North Ecological Rehabilitation Management Plan (ERMP)
 - i. The objective of the ERMP is to enhance aquatic and terrestrial ecological values where practicable within Rotokauri North and, if not, to avoid, remedy or mitigate potential adverse effects on those values.
 - ii. As a minimum, the ERMP is to include the following and the methods to implement them:
 - A. An indigenous fish management plan, including a summary of fish habitat and species present, a summary of planned works, permitting requirements, procedures for dealing with pest fish, biosecurity protocols, timing of works, procedures for recovering indigenous fish prior to and during works, roles and responsibilities of parties, reporting requirements and any specific mitigation measures.

- B. Planting of trees for bat habitat, including tall tree species such as Kahikatea and Totara, in areas where bat habitat utilisation is likely to be high.
 - C. Lighting design that is sensitive to bat habitat including minimal lighting in areas close to the Waikato River, avoidance of upward-facing lighting and UV lighting, and avoidance of lighting in wetland and riparian margin areas.
 - D. A specific ecological rehabilitation plan to restore, protect and enhance, as a minimum, the modified watercourses within Rotokauri North identified in Figure 2-9D. The plan shall incorporate as a minimum:
 - 1. Ensuring new stream habitat mimics natural systems.
 - 2. Provision of passage for indigenous fish while, if practicable, excluding exotic pest fish species.
 - 3. Creation of a diverse and variable habitat and channel complexity over time to allow for differences in flow velocities.
 - 4. A meandering channel.
 - 5. Creation of pool-riffle-run sequences.
 - 6. Avoidance of instream works during peak fish migration periods (August – December).
 - 7. Restoration planting, including wetland restoration, habitat enhancement and riparian buffer zones.
 - 8. Provision of vegetative cover, woody debris or other in-stream structures.
 - 9. Proposals for ongoing maintenance and management.
 - E. The establishment or enhancement of ecological corridors.
 - F. Evidence of engagement with tangata whenua during preparation of the ERMP including how the matters tangata whenua raised in that engagement have been addressed.
- e) Rotokauri North Landscape Concept Plan**
- i. The objectives of the Rotokauri North Landscape Concept Plan are to protect or enhance the natural character and cultural, heritage and amenity values of Rotokauri North's open spaces, to recognise and provide for tangata whenua values and relationships with Rotokauri North, and their aspirations for the area, and to reflect the area's character and heritage.
 - ii. The Rotokauri North Landscape Concept Plan shall include:
 - A. A landscape concept for any areas of open space, including details of landscape treatment for neighbourhood reserves, special purpose reserves, streets, footpaths, cycleways, stormwater swales, wetlands, detention basins, streams, riparian margins and the landscape buffer adjacent to State Highway 39.
 - B. Use of indigenous species and landscape design that reflect tangata whenua cultural perspectives including species that are valued as customary food or for traditional uses, and those that support indigenous biodiversity and provide habitat for mahinga kai, native birds and lizards.
 - C. Details of plant species and sizes at time of planting, including eco-sourcing of plants from within the Hamilton Ecological

- District and choice of species that reflect the history of the area.
- D. Details of ongoing maintenance to ensure the planting achieves the best possible growth rates.
- E. Details of any sites of significance for tangata whenua and how they will be protected, enhanced or commemorated.
- F. Details of how the landscape plan will support cultural harvest.
- G. Details of any proposed sites for water-related activities and proposed public access to them and to and alongside waterways and wetlands.
- H. Details of any interpretation materials communicating the history and significance of places and resources and any tangata whenua inspired artwork or structures.
- I. A list of traditional names suggested by tangata whenua for sites, developments, streets, neighbourhoods or sub-catchments in Rotokauri North.
- J. Details of any cultural protocols to be followed during the development process, including, but not confined to, protocols following accidental discovery of archaeological materials or sites. For clarity, this applies to the whole of Rotokauri North, not just to areas of open space.
- K. Evidence of engagement with tangata whenua in preparation of the landscape plan, including how the matters tangata whenua raised in that engagement have been addressed.
- L. Evidence of consistency with the Ecological Rehabilitation and Management Plan required by Rule 23.7.8h.

19 Appendix 1.3.3: Restricted Discretionary, Discretionary and Non-Complying Assessment Criteria

PC7 introduces to Appendix 1.3 of the ODP a new set of assessment criteria specific to Rotokauri North. Gillian Cockerell, Principal Planner in the Planning Guidance Unit has reviewed them.

It is recommended the Assessment Criteria be amended as follows for the reasons set out below:

O	Rotokauri North	
O1	For any subdivision adjacent to the SH39 network :	
	a)	Subdivison should establish a landscape buffer against SH39 (with a minimum width of 3m), and estsblish suitable legal mechanism for ongoing protection of the landscape buffer. The extent to which the landscape buffer and associated planting will provide visual amenity and screening between SH39 and Rotokauri North and contribute to indigenous biodiversity
	b)	The extent to which the proposed private legal entity that will own the landscape buffer will ensure the buffer's on-going protection and maintenance
O2	The creation of a private rear lane: <u>The extent to which:</u>	

	a)	The establishment of appropriate legal mechanisms for ownership and ongoing maintenance of the lane. proposed private legal entity established to own the lane will ensure the lane's on-going management and maintenance, enable indemnity for collection of solid waste and recycling, and provide for maintenance of any public assets installed in the rear lane.
	b)	The lane is designed to accommodate the passage of large rigid trucks such as fire, furniture removal, refuse and recycling-collection trucks
	c)	Lots accessed from the rear lane are sized to accommodate a dwelling and the parking orientation requirements of 23.7.8c
	d)	The rear lane's design, including its length and the number of lots it services, will promote slow vehicle speeds and safety, minimise trip distance, and make walking and cycling more attractive.
O3	All restricted discretionary, discretionary and non-complying activities	
	a)	The extent to which the proposal gives effect to the objectives and policies of the Rotokauri North Structure Plan. In the event that there is a conflict between the outcomes and objectives and policies of 3.6A and any other objective/policy in the District Plan or guidance set by the Design Guidelines in 1.4 the outcomes described in section 3.6A.1 and the objectives and policies in 3.6A.2 shall have greater weight.
	b)	The extent to which the proposal avoids, remedies or mitigates adverse effects on, or where possible enhances, any significant habitats of indigenous fauna
O4	For any subdivision of a duplex which meets Rule 4.7.12(a), Council will restrict its discretion to the following matters:	
	a)	Whether the sites can be appropriately serviced for infrastructure and access
	b)	Administration of the consent (i.e monitoring etc)
	c)	A restriction on the commencement of the subdivision until after the pre-line inspection stage of duplex building construction under the Building Act 2004.
O5	For any duplex complying with Rule 4.7.12.a i) and ii) but not the Rotokauri North Acceptable Solutions Code in Rule 4.14 Council will restrict its discretion to the following matter:	
	a)	Whether the alternatives provided will result in the same or a better <u>urban design</u> outcome than that envisaged by the Rotokauri North Acceptable Solutions Code.
O6	<u>For any subdivision or development, the extent to which the proposal:</u>	
	a)	<u>provides for, is consistent with, or could prejudice or foreclose options for, future development of the Structure Plan components described in 3.6A.1.</u>

	<i><u>b)</u></i>	<i><u>Restores and enhances aquatic and terrestrial ecological values associated with springs, streams, waterways, wetlands and their margins in Rotokauri North.</u></i>
	<i><u>c)</u></i>	<i><u>Restores and enhances the natural, cultural, heritage and amenity values of Rotokauri North's open spaces.</u></i>
	<i><u>d)</u></i>	<i><u>Recognises and provides for tangata whenua values and relationships with Rotokauri North and their aspirations for the area, including interpretation of the landscape's significance, protection and preservation of sites of significance, and use of traditional mana whenua names for streets, neighbourhoods and developments.</u></i>
	<i><u>e)</u></i>	<i><u>Reflects the area's character and heritage.</u></i>
	<i><u>f)</u></i>	<i><u>Has been planned with the active involvement of tangata whenua.</u></i>
<i><u>O7</u></i>		<i><u>3.6A.4.3 b) In determining the application for a resource consent for an activity not in accordance with Rule 3.6A.4.2, Council's discretionassessment shall include, but not be limited to, the following assessment criteriamatters:</u></i>
	<i><u>a)</u></i>	<i><u>i. Whether the works have been otherwise authorised, including by way of a resource consent.</u></i>
	<i><u>b)</u></i>	<i><u>ii. The extent to which alternative provision for water, wastewater or stormwater has been incorporated into development proposals that are in non-compliance does not comply with Rules 3.6A.4.1a or 3.6A.4.2, as but is supported by technical reports that demonstrate additional infrastructure provision is not required.</u></i>
	<i><u>c)</u></i>	<i><u>iii. The extent to which stormwater management proposals are consistent with the RNICMP sub-catchment ICMP submitted with the application and more broadly the Rotokauri Integrated Catchment Management Plan-ICMP and/or the Mangaheka Integrated Catchment Management Plan-ICMP (whichever is the relevant document for the Catchment).</u></i>
	<i><u>d)</u></i>	<i><u>iv. The extent to which additional traffic arising from development that is in non-compliance does not comply with Rules 3.6A.4.1a or 3.6A.4.2 will adversely impact on the efficiency and safety of <u>State Highway 39, Exelby Road and Burbush Road, including the following intersections:</u></u> <i><u>i. State Highway 39/Exelby Road;</u></i> <i><u>ii. State Highway 39/Collector 1;</u></i> <i><u>iii. State Highway 39/ Collector 2;</u></i> <i><u>iv. State Highway 39/Te Kowhai Road/Burbush Road;</u></i> <i><u>v. Exelby Road/Burbush Road; and</u></i> <i><u>vi. Exelby Road/ Rotokauri Road.</u></i></i>
	<i><u>e)</u></i>	<i><u>v. Mitigation works to ensure that development does not result in long term adverse effects on the efficiency, safety and functioning of the existing and planned transport network.</u></i>
	<i><u>f)</u></i>	<i><u>vi. Certainty of timing over the construction of the Rotokauri north-south minor arterial corridor and the extent to which this enables a departure from the provisions of Rule 3.6A.4.2.</u></i>

	<u>g)</u>	vii.—Where development has occurred outside of Stage One ahead of the lots/dwellings planned for this area, that this be considered as a relevant mitigating factor.
	<u>h)</u>	viii.—The timing of any other planned local transport network upgrades that would contribute to the offsetting of the transport effects of traffic generation the activity.
<u>O8</u>		<u>The creation or upgrading of all or part of a transport corridor that is described in Rule 3.6A.4.6 (a): The extent to which public transport infrastructure of the type described in Rule 3.6A.4.6 will:</u>
	<u>a)</u>	<u>Be included in the transport corridor.</u>
	<u>b)</u>	<u>Enable and encourage the use of public transport.</u>

19.1 Reasons for amendments to assessment criteria

19.1.1 Assessment criterion O1

The reasons for these amendments are set out in s11.12 above.

19.1.2 Assessment criterion O2

- (1) The amendments to O2a make it clearer and will enable conditions to be applied to the subdivision consent to ensure that an appropriate legal entity is established to own, manage and maintain each rear lane.
- (2) New criterion O2b will enable conditions to be applied to the subdivision and land use consents to ensure that large rigid trucks will be able to negotiate rear lanes. This issue is discussed in s16.8 above.
- (3) The reasons for new criterion O2c are set out in s16.8.3.1 above.

19.1.3 Assessment criterion O3

- (1) The amendments to O3 header correct spelling.
- (2) The first sentence of O3a is unnecessary, because it merely repeats the following assessment criteria in the ODP:
 - d) A3a (“Discretionary and Non-Complying Activities – General Criteria”: “assessment against relevant objectives and policies including Chapter 2 Strategic Framework”);
 - e) B17 (“Development within a Structure Plan Area”: “The extent to which the proposal is consistent with any relevant objectives of any structure plan or could prejudice or foreclose options for future urban development and in particular with the proposals shown on the relevant Structure Plan for the area”); and
 - f) C15 (“Subdivision”: “The extent to which the proposal is consistent with objectives of any relevant structure plan or could prejudice or foreclose options for future urban development and in particular with the proposals shown on the relevant Structure Plan for the area”).
- (3) Regarding the second sentence of O3a:
 - g) It is not an assessment criterion; it is more in the nature of a policy;
 - h) It is inappropriate to afford the objectives and policies in 3.6A.2 and the outcomes described in 3.6A.1 greater weight than any conflicting provision in the District Plan. Doing so will not necessarily promote sustainable management. Any conflicts need to be assessed and weighed on a case-by-case basis; and
 - i) Prioritising outcomes, objectives and policies in this way is inconsistent with the approach taken in the rest of the District Plan.

19.1.4 Assessment criterion O4

- (1) Assessment Criterion O4b is unclear and unnecessary.
- (2) Assessment Criterion O4c is not appropriate as an assessment criterion; it is included as a rule in Section 4.14.1. Furthermore, even without this provision, Council can, and currently does, impose conditions to this effect on duplex developments.

19.1.5 Assessment criterion 5

- (1) The addition of “urban design” clarifies the type of outcome to be assessed.

19.1.6 Assessment criterion O6

- (1) This criterion will enable Council to decline or approve consents (with or without conditions) depending upon whether it is consistent with the Rotokauri North Structure Plan and the planned Structure Plan components. See s9.5 and s16.11 above.

19.1.7 Assessment criterion O7

- (1) It is recommended in s13.1.2 above that the assessment criteria set out in 3.6A.4.3b of the notified plan change be included in Appendix 1.3.3, which is the section of the District Plan containing Restricted Discretionary, Discretionary and Non-Complying Assessment Criteria.
- (2) The amendments to the header of O7 are to achieve consistency with the ODP.

19.1.8 Assessment criterion O7 a

- (1) As any consented works would be part of the existing environment, the intent of this criterion is unclear. This criterion would potentially allow a developer to rely on works consented elsewhere as examples of good or best practice. This could potentially result in works within Rotokauri North being consented that are inappropriate for this location.

19.1.9 Assessment criterion O7 b

The recommended amendments are to provide subject/verb agreement, apply Council’s writing style, and to recognise the proposed new rule 3.6A.4.1a.

19.1.10 Assessment criterion O7 c

The recommended amendments improve readability and recognises that a sub-catchment ICMP relevant to the application must be submitted.

19.1.11 Assessment criterion O7 d

Mr Black has recommended the effects of development on State Highway 39 and the listed intersections should be assessed.¹⁰⁸ The other recommended amendments are to apply Council’s writing style.

19.1.12 Assessment criterion O7 e

Mr Black considers that the interim effects of staged development should be assessed, as well as long term effects, so has recommended deletion of “long term”.¹⁰⁹

19.1.13 Assessment criterion O7 g

It is recommended this rule be deleted because its meaning is unclear.

19.1.14 Assessment criterion O7 h

The amendments recognise that upgrades to the transport network that are not “local” may offset the transport effects of an activity and clarify that all transport effects are to be considered.

¹⁰⁸ Black, 2020, Table 3, p15

¹⁰⁹ Ibid

19.1.15 Assessment Criterion O8

The reasons for new assessment criterion O8 are discussed in s11.13.2 above.

20 Appendix 2: Structure Plans

Recommendations regarding amendments and additions to the figures in Appendix 2 are provided in s22.1.4.

21 Appendix 15: Transportation

21.1 Appendix 15-1 Parking, Loading Spaces and Manoeuvring Area

PC7 proposes to include in the District Plan a new standard for parking, namely: 1 carpark per duplex dwelling unit.

The *National Policy Statement on Urban Development 2020* came into effect on 20 August 2020. At Section 3.38 it requires that provisions requiring a minimum number of car parks to be provided for a development, land use, or activity to be removed from district plans. To comply with this requirement, it is recommended that the proposed new standard be deleted from PC7 and a new Table 15-1aa be included as follows:

Table 15-1a: Number of parking, loading and cycle spaces

Activity	Car parking spaces (except for Rotokauri North – see Table 15-1aa)	Loading spaces	Visitor cycle spaces	Staff cycle spaces
....				
i) Single dwellings and duplex dwellings (except for duplex dwellings in Rotokauri North see nn) below)	2 per household or dwelling			
....				
nn) Duplex dwelling in Rotokauri North	1 per unit			

Table 15-1aa: Number of parking spaces in Rotokauri North

Activity	Car parking spaces
All activities	There are no minimum car parking space requirements

21.2 Appendix 15 – Figure 15-4b Transport Corridor Hierarchy Plan

PC7 includes an updated Figure 15-4b that reflects the roading network proposed within Rotokauri North.

To reduce the effect of the development of Rotokauri North on the safety and efficiency of SH39, Mr Black opposes the connection of Collector Road 2 to SH39.¹¹⁰ He states there is likely to be sufficient capacity at the proposed Collector 1/SH39 Intersection and the existing Burbush Road/SH39 roundabout to accommodate the traffic that would otherwise use Collector 2. He recommends additional traffic modelling to test the transport effects of not providing the Collector Road 2/SH39 intersection.

It is recommended that Figure 15-4b be updated to reflect the revised roading network and that, in accordance with Mr Black's recommendation, this include only one Collector Road connection to SH39.

22 Recommendations

It is recommended that:

- (1) PC7 be amended as set out in the tracked changes presented in this report; and
- (2) Figures in the District Plan be amended as described in s22.1; and
- (3) Other recommendations, which are shaded grey in the report and consolidated in s22.2, be accepted.

22.1 Recommendations about Figures

For the reader's convenience, this section lists all recommendations relating to figures and includes cross references to the sections of the report where they are discussed.

22.1.1 Figures 3-6A -1 to 3.6A-5 – Indicative transport corridor cross sections

It is recommended (see s11.10) that, either:

- (1) The cross-sections are amended to address satisfactorily the issues set out in s11.10.1; or
- (2) The cross-sections are retained, and a set of criteria are included in PC7 for assessing the detailed cross-sections at the time of subdivision; or
- (3) The cross-sections be deleted from PC7 and then the ODP provisions relating to cross-sections will apply in Rotokauri North.

22.1.2 Figures 3.6A-6 and 3.6A-7

- (1) It is recommended that the cross-sections for the minor arterial (Figures 3.6A-6 and 3.6A-7) be deleted from PC7 and the future designation process be relied upon for including appropriate cross-sections for the minor arterial in the District Plan. See s11.10.2.

22.1.3 Figure to explain height in relation to boundary

It is recommended that a figure is developed and included in PC7 to assist the understanding and implementation of Rule 4.6.3.6 regarding height in relation to boundary – see s15.9.

22.1.4 Figures in Appendix 2

22.1.4.1 Figure 2-8A Rotokauri North Structure Plan

To provide certainty, clarity, consistency with the ODP or other parts of PC7, or for other stated reasons, it is recommended Figure 2-8A be amended as follows:

- (1) Once the Requester has confirmed the proposed roading network within Rotokauri North, amend the roading network shown on Figures 2-8A and Figure 2-9B accordingly and make them consistent.¹¹¹

¹¹⁰ Black, 2020, s4.5, p8 and s6, p12

¹¹¹ See s11.8 above.

- (2) Show the anticipated size and shape of the community park; make it the same as that shown on Figures 2-9A and show it as “Future Reserve”.¹¹²
- (3) Show proposed cycleways/walkways and ensure they connect with the indicative open space areas, including the SNA, and employment centres.¹¹³
- (4) If, prior to hearing PC7, the team preparing the notice of requirement for the minor arterial provide an updated alignment for the minor arterial designation, it is recommended that the updated alignment be used as the basis for Figure 2-8A. Otherwise, it is recommended Figure 2-8A be based on the alignment shown in Appendix 4.¹¹⁴
- (5) Label “Collector 1”.¹¹⁵
- (6) Show the full extent of the proposed green corridors.¹¹⁶ To be consistent with 3.6A.1.3, corridors should be shown along identified permanent streams, and major overland flow conveyance channels.¹¹⁷
- (7) Confirm whether a road associated with the Green Spine will intersect with Exelby Road.¹¹⁸
- (8) Change from grey to white the area outside the City boundary.
- (9) Add the symbol for “State Highway Intersection” to the Koura Drive / Te Kowhai Road / Minor Arterial Road intersection.
- (10) Add the symbol for “Road Connection” on:
 - a) Burbush Road at the southern boundary of Rotokauri North; and
 - b) The Minor Arterial Road at the south-eastern corner of Rotokauri North.
- (11) In the Legend:
 - a) Change the label on the red boundary line from “Rotokauri North PPC Area” to “Rotokauri North Structure Plan Area”.¹¹⁹
 - b) Add a hyphen between “Medium” and “Density” where this appears in 2 Zone Type descriptions, thus: “Medium-Density”.
 - c) Correct the spelling of Ohote Stream;
 - d) Remove “could include a road” from the label of the symbol for the Green Spine.
 - e) Change “Indicative Neighbourhood Reserve” to “Indicative Neighbourhood Park”
 - f) Add a symbology for “Future Reserve”.

22.1.4.2 Figures 2-9A and 2-9B

To provide certainty, clarity, consistency with the ODP or other parts of PC7, or for other stated reasons, it is recommended Figures 2-9A and 2-9B be amended as follows:

- (1) Show the indicative location for a future community park to be consistent with 3.6A.1.3 d (see s9.3 above).

22.1.4.3 Figure 2-9A – Water and Wastewater

- (1) Make Figure 2-9A consistent with Schedule 7 in the Private Development Agreement ([D-3066095](#)). Figure 2-9A in the notified version of PC7 does not recognise that a section of 150mm diameter pipeline exists along Ruffell Road west of Onion Road and does not need to be upgraded.¹²⁰
- (2) Ensure that the infrastructure descriptions in Rule 3.6A.4.2 and Figure 2-9A align – see s12.3.2.3.

¹¹² See s9.3 above.

¹¹³ Cycleways/Walkways are shown on the original Figure 2-8 in the ODP.

¹¹⁴ See 11.9 above.

¹¹⁵ Proposed Rule 3.6A.4.1a f refers to “Collector 1” – see s12.2 above.

¹¹⁶ See s5.3.2 above.

¹¹⁷ See s9.3 above.

¹¹⁸ See s11.7.2 above.

¹¹⁹ See s4 above.

¹²⁰ See Proposed Rule 3.6A.4.1a d) in s12.2 above.

22.1.4.4 Figure 2-9B - Staging, Transport Network and Reserves

It is recommended that:

- (1) See s22.1.1(1) above.
- (2) The proposed collector roads be numbered and labelled in Figure 2-9B as they are in Figure 6-1 of the updated Integrated Transport Assessment (“the Updated ITA”)¹²¹, which was attached to Greenseed Consultants Limited’s submission on PC7 (Submission 35) – see s12.2

22.1.4.5 Figure 2-9C – Proposed Public Transport Routes

It is recommended that a new Figure 2-9C showing proposed public transport routes in Rotokauri North is included in Appendix 2.

It is recommended that, prior to the hearing, the Requester, Waikato Regional Council and Hamilton City Council work together to determine which is the best public transport route option for Rotokauri North and show it on Figure 2-9C. See s11.13.1.

22.1.4.6 Figure 2-9D – Watercourse Classification

It is recommended that the Tonkin & Taylor drawing showing watercourse classifications, which is included as Appendix 1 to Attachment 11 to the Plan Change Request, be adopted as Figure 2-9D and included in PC7.¹²²

22.1.4.7 Other figures for inclusion in Appendix 2

It is recommended that Appendix 2 of the District Plan include:

- (1) A map showing as “future reserve” the sections of stream to be naturalised or vested as drainage reserve and that these include, at least, those lengths defined as “modified waterways” – see s5.4 and Appendix 6.
- (2) A drawing illustrating the stormwater management concept, either in the Structure Plan, Figure 2-8A, or separately, including indicative locations and footprints of the following – see s5.3.2 and s5.5:
 - a) Swales - A map of the swale network layout showing which roads and blocks are proposed to have swales;¹²³
 - b) Major overland flow conveyance channels;¹²⁴
 - c) Green Corridors (Streams and Stormwater Corridors) along identified permanent streams;¹²⁵
 - d) Stormwater wetlands; and
 - e) Off-line dry detention basins.¹²⁶

22.1.5 Appendix 15 - Figure 15-4b Transport Corridor Hierarchy Plan

It is recommended that Figure 15-4b be updated to reflect the revised roading network and that, in accordance with Mr Black’s recommendation, this include only one Collector Road connection to SH39 – see s21.2.

¹²¹ Seneviratne, 2020. *Rotokauri North Proposed Plan Change: Integrated Transportation Assessment Report*. Table 26, pp58-59.

¹²² See s16.12.

¹²³ See s5.3.2.

¹²⁴ See s9.3 regarding provision 3.6A.1.3 Open Space Network: c) Streams and Stormwater Corridor.

¹²⁵ Ibid

¹²⁶ Refer to 5.3.2 and p51 of the ICMP.

22.2 Other Recommendations

Table 5 Other recommendations

Item	Section in this report	Recommendations
1	5.1 5.3.2	<p>The ICMP</p> <p>That more detail is required to be included in the ICMP to define an acceptable stormwater management solution. This should address the matters identified in Mr Clarke's Stormwater Technical Assessment and include, inter alia, a concept plan showing the locations and footprints of the key stormwater infrastructure such as wetlands, dry detention basins, conveyance channels and swales. One or more tables should also be included setting out the nominal dimensions and key performance criteria for each of these infrastructure items.</p> <p>That this concept plan and these tables be included in Appendix 2 to the District Plan to guide future consenting of subdivision and land-use in Rotokauri North.</p>
2	5.3.3.1	<p>Discharge of private stormwater to kerbs</p> <p>That information on the extent of flooding that is expected to occur, on average, once every 10 years be sought from the Requester.</p>
3	5.3.3.3	<p>Sub-soil drainage for roads</p> <p>That the Requester be asked to confirm that the sub-soil drainage for roads will comply with the RITS.</p>
4	5.3.3.4	<p>Sub-soil drainage for swales and conveyance channels</p> <p>That the Requester be asked to confirm that any swales proposed to be constructed in road corridors will have under drainage that complies with the RITS.</p>
5	11.2	<p>Requests for further information</p> <p>That the information listed in Table 1, which Mr Black requires to assess the transport effects of PC7, be sought from the Requester to inform appropriate planning responses to the management of the effects of development of Rotokauri North on the transportation network.</p>
6	11.5	<p>Collector 2 / SH39 Intersection</p> <p>That additional modelling be undertaken to test the effects of not providing the Collector 2/SH39 Intersection.</p>
7	11.7	<p>Intersections with SH39</p> <p>That the Requester confirms the proposed staging of development of the roading network and the type of intersection to be constructed on SH39.</p>
8	11.7.2	<p>Exelby Road / Green Spine Intersection</p> <p>That the Requester confirms whether a road associated with the Green Spine will intersect with Exelby Road, and, if so, provides an assessment of the effects of that intersection on the roading network.</p>
9	11.7.3	<p>Effects of development on Exelby Road and Burbush Road</p>

Item	Section in this report	Recommendations
		That the Requester confirms the locations of all potential new road connections to Exelby Road and Burbush Road within Rotokauri North, quantifies the increase in traffic, the effects of developing Rotokauri North on Exelby and Burbush Roads, including outside Rotokauri North, and any measures necessary to mitigate those effects. (This recommendation overlaps in part with Item 5 above).
10	11.8	That the requester confirms the proposed roading network within Rotokauri North and assesses the effects of these roads and their intersections on the roading network.
11	11.11.2	That the Requester confirms, before or during the hearing, the nature and location of any proposed new intersections with SH39.
12	12.1.1	Triggers for new or upgraded infrastructure That the Requester be asked to provide an updated ITA, prior to the hearing, that identifies triggers for all necessary new or upgraded transportation infrastructure and that these triggers be included in PC7 provisions.
13	12.3.2.3	Consistent infrastructure descriptions That the infrastructure descriptions in Rule 3.6A.4.2 and Figure 2-9A align.
14	15.9	Rule 4.6.3 b) – Height in Relation to Boundary That the rule is clarified, and a diagram is developed and included in PC7 to assist with its understanding.

23 References

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- Fraser-Smith, R., 2019. *Assessment of Environmental Effects: Qualifying Development: Application for a qualifying development to Hamilton City Council pursuant to section 25(1) of the Housing Accords and Special Housing Areas Act 2013*. ([D-3071841](#)).
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- Hamilton City Council, 2017. *Hamilton City Operative District Plan*. <https://www.hamilton.govt.nz/our-council/council-publications/districtplans/ODP/Pages/Operative%20District%20Plan.aspx>
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- Nutsford, R., 2018. Letter report: Rotokauri North ICMP: Desktop Review of Hydrogeological Conditions Influencing Stormwater Design: Attachment I to the ICMP.
- Parkes, M., 2020. Email dated 9 October 2020. [D-3621426](#).
- Parma, K., McArthur, S., Surrey, J. and Yeates, R., 2018. *Rotokauri North Sub-Catchment: Receiving Environment and Rapid Erosion Assessment: Draft*.
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**Section 92 request for further information about
the Qualifying Development application¹²⁷**

¹²⁷ D-3094588

24 September 2019

Green Seed Consultant Limited
C/- Tollemache Consultants
PO Box 52015
Kingsland
Auckland 1352

Attn: Renee
Your Ref: 1693-01

Dear Madam

Resource Consent Application – Further information request

Application numbers: 010.2019.00010617.001 and 011.2019.00007046.001
Applicant: Green Seed Consultant Limited
Address: 350 Exelby Road RD 8
Proposed activities: SHA - Qualifying Development - land use and subdivision

In accordance with section 92 of the Resource Management Act 1991 (RMA), the following information is requested to enable me to make an accurate and informed assessment.

The following information is requested:

Three Waters & Transportation

The following should be read in conjunction with the attached minutes.

Private Developer Agreement (PDA)

1. Please provide a commentary on how the application is in line with the requirements of the Private Developer Agreement (PDA) signed on the 30th August 2019.

Waste management services

2. Current advice from HCC staff is that the HCC Waste Management Contractor cannot enter private property due to indemnity issues (i.e. 100% indemnity in perpetuity). Please provide information on how the applicant can provide 100% indemnity for all properties serviced by private accesses in perpetuity. We understand that this may be achieved via a covenant in gross on the title of the affected Lots.
3. If in the event that the HCC Waste Management Contractor will not enter private lanes/property, please indicate how you will manage the waste management requirements of lots on the private access (i.e. presentation points within the road reserve taking into account the updated bin sizes in the new contract or private service).

Waste Water

4. Please detail how the Wastewater pump station footprint will accommodate the required storage for the wider ultimate catchment given that the plans provided show the pump station surrounded by stormwater infrastructure (swales and wetland).
5. Given the high water table please detail the methodology as to how infrastructure will be designed/constructed to ensure the required design life of 100yrs is achieved.
6. The plans show WW lines connection to future stages – please detail the extent of the wider ultimate catchment that will be served by these lines to ensure the receiving depths comply to HCC RITS.
7. The submitted plans don't detail WW connections and therefore the reason for duplicated WW lines on some roads and WW mains in Private access lots is not apparent. To minimise the number of assets please detail how Lots will be serviced with strong preference that all Lots be serviced via one main in the road reserve (not via the rear over private property).

Water

8. The current plans detail the layout of the pipes for water services (as well as the layout of stormwater and wastewater pipes) which do not meet RITS standards. As required by the RITS, the water pipes will need to be 150mm in diameter.

Pavement

9. Given the high water table please detail the methodology that will ensure that the all road and access pavements will remain dry through their design life. Note: All road pavement to be kept dry at all times with the 2 & 10yr events to be 100mm below subbase/subgrade interface.

Transportation

10. Given that the proposed access lots don't meet the District Plan requirements for number of Lots accessing the access lots and the widths, please detail the ownership model and how long term maintenance/renewals and parking (potentially restricting access) will be accounted for given that they will be privately owned. Note: The exploration of a covenant in gross to give permanent access to the access lots.
11. The District Plan requires each duplex Unit to have a minimum of 2 carpark spaces available – please provide additional information as to how this will be achieved on each duplex unit (HCC have concerns given the absence of existing public transport options, absence of external walking and cycling connections and distance to education facilities/shops etc.)
12. Given the potential storm water requirements please detail how the proposed collector roads and local roads will accommodate all required function/assets/services and required separation distances between services. Note: The District Plan requires Collector Roads to be 23m wide.
13. Evidence that the Regional Council would commit to funding or provide a public bus service to cater for the transportation needs of the future residents at the site.

ITA Review – the key points are as follows along with the additional engineering matters detailed in the attached ITA Review:

14. Revise the ITA and Sidra modelling to take into account that the WRTM has a two-hour peak period (i.e. conversion factors need to be applied to convert the WRTM outputs to hourly flows).
15. The ITA (Section 5.6) states that all vertical curves comply with minimum K values. However, two crest curves do not (Road 1, CH0-23m has K = 5; Road 3, CH32-42 has K = 4). Please review this assessment and the relevant engineering drawings.
16. Provide an assessment to support the proposed upgrade to the two existing vehicle crossings to SH39 (Sheet 309). They appear to be rural residential properties that are unlikely to be accessed by heavy vehicles.

17. Provide NZ Transport Agency acceptance of the SH39A/ Road 1 intersection layout and walking/cycling connection along SH39.
18. Provide evidence of consultation with Waikato Regional Council, including whether they accept the proposed public transport services and facilities. Please provide additional information on the location and installation of Public Transport/Buses infrastructure in accordance with the RITS along the Collector Road in this stage of the development and the adjoining bus route.

Stormwater

19. **Primary conveyance network.** In accordance with pre-application feedback provided on the design, the general reliance on discharge of primary private stormwater runoff to road drainage infrastructure of subsoil drains and kerb and channels is not acceptable.

The stormwater management approach of discharging from private lots to JOAL slot drains, to detention tanks, to road subsoil drains for long flowpaths, with frequent overflows to kerb, has significant asset management risks such as pavement saturation and failure, subsoil network blockage that council is not prepared to accept. The Waikato Regional Infrastructure and Technical Specification (RITS) does not allow for kerb discharges for greenfields (section 4.1.9.4) and road subsoil drainage may not be used as the primary discharge point for stormwater from private lots JOALs and Roads.

Please provide a revised stormwater conveyance network design that does not utilise road subsoil drains or kerb discharges as a primary stormwater connection from residential lots and JOALs. It is noted that the following options could be considered in varying parts of the development to make it work:

- Extension of Swale Network upstream will more culverts beneath intersections (Roads 5, 6 and 2 as a minimum would require swales to pick up JOALs and Road 7 may require a JOAL and swale to be added)
- Primary pipe network (with appropriate protection if at shallow depths are required)
- Extension of slot drain systems downstream to link up with swales (subject to detention/retention sizing)
- Increasing earthworks levels where required to provide fall.

20. **Swale culverts.** We note that the swale culverts have several unsatisfactory issues. With additional culverts likely subject to the above item, please provide an updated culvert design that allows for the following:

- a) Lower culverts outlet to at or below normal water level within wetland while still maintaining self-cleansing velocities for the two year ARI storm at ED level.
- b) Provide Maintenance Access to culvert inlets/outlets without needing to change the normal operating conditions of the road.
- c) Indicative services layouts showing where services are avoiding culverts as indicated in Section 6.9 of the Infrastructure and SC ICMP implementation report.
- d) Where services cannot avoid culverts provide for services trenches to pass over the culverts.

21. **Retention/Detention** – Please provide up to date calculations to indicate the quantity and resultant flow rates provided by the separate retention and detention components

- a) Private Rain Tanks
- b) Permeable Paving
- c) JOAL Detention Tanks
- d) Extended detention in wetland,

e) *Flood Storage in Wetland and downstream impoundment area.*

If software modelling (MUSIC, EPA SWMM or other has been used, please provide the electronic version of the models and all input calculations.)

- 22. Swale inlets.** *Plan 1693-01-430 shows Sediment Traps at Swale inlet on intersection Radii. There is a concern that vehicle tracking mounting this kerb could drop a wheel into this sediment trap. Please provide a detail showing swale inlets off the radius, upstream of the intersections (This may help to address item 5 below).*
- 23. Raised Pedestrian Thresholds.** *The chequer plate kerb cover detail at full width raised pedestrian thresholds indicated on Plan 1693-01-393 has a small cross section that will easily block. Subject to the revision of swale layouts this should be removed in favour of a swale outlet on the upstream side of the crossing or alternatively a revised detail with improved maintainability.*
- 24. Soil Storage Capacity.** *Please confirm measure that will be used to maintain infiltration and soil storage capacity following earthworks or else confirm downstream conveyance and devices are sized for the increase in runoff from soil compaction associated with development.*
- 25. Wetland MUSIC Assessment.** *Please confirm the extended detention orifice design used in the Music model assessment wetland contaminant removal. It is our understanding that the default sediment performance is based on a 48-72 hr detention time and an orifice sized for 24 hours will overstate the volume treated within ED and the treatment performance for that fraction of the hydrograph.*
- 26. Contaminant loading rates.** *It appears from table 1 that the contaminant loading rates have been converted to concentrations assuming 100% runoff. Some portion of the hydrograph is likely to be lost through evapotranspiration or deep infiltration, or experience altered concentrations through shallow groundwater interflow processes. Please comment on the applicability of the process in table 1 and the sensitivity / impact on the design if these were to change for example to the default Music rates. A more appropriate approach considering Item 7 and Item 8 may be to use the removal rates within the Waikato Regional Council Stormwater Management Guideline Table 6-10.*
- 27. Wetland Dimensions.** *Please provide the footprint area of the Wetland at ED and 100 year ARI water levels. Please annotate reduced levels for water levels shown on drawings for 100 year ARI flood levels*
- 28. Regional Council Assessment.** *Please confirm the basis for scores or modify scores for the following aspects of the WRC Water Sensitive Design assessment:*
- *Existing Streams and gullies located on site (including Ephemeral) are protected and enhanced.*
 - *Riparian Corridors are protected, enhanced or created*
 - *Protection and future preservation of existing native bush areas.*
 - *Bioretention*
 - *Swales and Filter Strips*
 - *Tree pits*
 - *Detention Ponds (normally Dry)*
- 29. Subsoil drainage.** *Council is concerned at the capacity of subsoil drainage to convey and reduce the existing high groundwater levels and protect pavement subgrade from degradation, especially with unusually long lengths between free discharge, and design for surcharge of the subsoil drain outlets in a 10yr event. Section 5.8 also indicates swale subsoils will connect and*

drain to road subsoils whereas typically road subsoils would discharge into the primary conveyance channels. Subject to revised conveyance network considering Item 1, please provide an assessment of the subsoil network conveyance capacity, maintenance requirements and resultant intermittent and normal groundwater levels through the site.

- 30. Hydrogeological Assessment.** Please provide a summary of how the design has addressed the hydrogeological and geotechnical constraints for stormwater design and recommendations of the Beca Memo entitled Rotokauri North ICMP: Desktop Review of Hydrogeological Conditions Influencing Stormwater Design dated 17th July 2018.
- 31. Road secondary conveyance.** Section 3.3.14.10 of the RITS requires ponding during a 2% AEP Storm to be no more than 150mm deep. Please confirm that this is met or provide an alternative design. It is noted that extended swales under Item 1 may reduce the depth sufficiently.
- 32. Use of MUSIC for sizing infrastructure.** The MUSIC Modelling report indicates that, swales, wetlands and Flood Storage infrastructure for Large events has been sized utilising MUSIC hydrographs. It is understood that MUSIC is designed primarily for frequent storm hydrology and continuous water balance analysis and is therefore not an appropriate tool for sizing of flood infrastructure. Please provide calculations to confirm flows for the QD area using an accepted method such as Clause E1 Acceptable Solution or TP 108.
- 33. Flood Assessment:** It is unclear as to the basis for sizing of flood detention areas and the resultant water levels. Section 5.14 of the Infrastructure and SC-ICMP Implementation report indicates ~18,000m³ of storage but presumably in error indicates this will be dry in greater than 10 year events. Please provide clarification of the method and input data including electronic copies of any models used to determine the 1% water level long sections shown in Appendix 4 of the Infrastructure and SC-ICMP Implementation report. Please also provide the missing drawing 1693-01-479.
- 34. Permeable Surfaces Minimum.** The proposed development controls state 20% minimum Permeable Surfaces as per existing rule 4.6.5, However the Infrastructure and SC ICMP implementation report states that private paving will be permeable. Please increase the proposed permeable surface minimum to line up with the SC ICMP.
- 35. Regional Consents.** Please confirm what consents are required from Waikato Regional Council and the program for these to be lodged.
- 36. Stormwater System invert levels.** Please provide an assessment of opportunities to lower the invert of the Stormwater system and thereby create more fall through the system by:
- a) Lowering the invert level of the Excelby Road Culvert
 - b) Bringing the realigned watercourse channel on line as part of the QD work
 - c) Deepening culverts as indicated in Item 2a
 - d) Any other opportunities to improve primary system and subsoil invert and hydraulic grades.
- 37. Confirmation of downstream infrastructure provision.** It is unclear as to exactly what infrastructure from the wetland downstream will be constructed, to mitigate effects from the development and convey upstream flows coming into the QD, when it will be constructed, and who will own and operate the infrastructure and the land that it sits on. This is a very important

consideration for the QD to proceed independent from the wider PPC area. HCC would need to be satisfied that all public stormwater could be conveyed with adequate legal status, responsibility and maintenance access for the interim situation, which could potentially be of indefinite duration.

38. Downstream existing farm drain. Notwithstanding Item 19 above, as shown by the plans the existing downstream farm drain will need to be cleared and brought up to an acceptable standard with an appropriate easement for maintenance to be functional as an urban drain without risking backing up through the wetland and damaging the green infrastructure asset. Please provide adequate information to show this can be undertaken.

39. Permanent Stream Realignment. AEE Section 11.59 indicates that the future main stream will be constructed but allowed to pond in the interim. Please provide a description of the effects on aquatic environments of the interim ponding, disconnection of upstream habitats and an assessment of alternatives to make the new stream channel live such that that downstream conveyance for the QD is optimised.

40. Wetland Liner. Please provide more information to confirm the feasibility of anchoring the wetland liner or the alternative of duckbill relief valves and the impact of groundwater flows on wetland hydraulics and ecology.

41. Subdivision Related Matters

- a. Please provide an amended scheme plan showing the sixteen 'duplex' allotments – include memoranda for party wall easements. You may wish to consider delineating the 16 'duplex' allotments in grey scale on the scheme plans. Please delineate shape factor circles for all 135 vacant allotments.
- b. Please provide a copy of Notice 10031739.1 and Encumbrances B327195 and B523642.1
- c. An overall site plan that clearly demarcates the actual QD site (as gazetted), the overall subject site (as per Title boundaries) and the subdivision scheme plan area (encompassing all three Stages).
- d. Further explanation is requested with regards to purpose (and interim use) of creating vacant Lot 701 and locating the stormwater wetland partially outside the QD area. Further consideration should be given to the alignment of the southern boundary of Proposed Lot 701 – particularly with reference to the proposed stormwater wetland straddling the common boundary with Lot 6 DPS 15123. It is recommended that the stormwater device be wholly contained within either existing or proposed castral boundaries.
- e. Parts of the proposed stormwater device extends from Proposed Lot 701 into Lot 6 DPS 15123. Please provide commentary about access arrangements (or other mechanism such as easements) to secure and enable on-going management of the device.
- f. Lot 600 needs an updated label – such as 'LP Reserve (wastewater)'.
- g. Consideration should be given to changing the 'purpose' of ROW 'A' to 'pedestrian access only'. The purpose of notating proposed Lot 87 as a benefitted parcel under ROW 'A' is unclear. ROW 'A' seems to be located outside the QD boundary.
- h. Please append a full list of existing easements on the scheme plan (including Area A DP 485743).
- i. Commentary about whether the existing east-west farm drain running through Lot 702 needs an easement (in gross).

42. Landuse Related Matters

- a. An itemised response to the individual matters raised in the pre-application meeting minutes (copy attached) is requested.

- b. Commentary about reasons for deviation away from the height to boundary standards (3m + 28deg along southern boundary, etc) in the Hamilton City District Plan. The winter solstice (21 June each year) is used as a general guide to limit the height of buildings with the aim to minimise shading of adjoining sites that are likely to fail to receive mid-day sunlight/daylight.
- c. Outcome of consultation with NZTA is requested.
- d. Council requires rendered examples (including the provision of on-site amenities such as outdoor living and service areas and carparking) of the resulting housing typologies and outcomes to allow for the assessment of the development on the proposed vacant allotments as part of the application. The expected built form is a key design consideration for each allotment frontage widths, lots less than 300m², and for each distinct frontages - for example allotments that about a Duplex dwelling/Collector Road/Local Road/ JOAL/Wetland or State Highway 39A.
- e. The AEE references two options for duplex unit designs while the architectural plans offer three options. Please identify which particular design option is intended for each of the 16 duplex allotments.
- f. The access and use of the proposed vehicle parking space associated with the duplex sites appears to require encroachment into an adjoining allotment upon subdivision. Please provide a revised parking design to avoid this encroachment.
- g. No formal assessment of construction noise and vibration has been provided, other than statements implying compliance and the invitation to impose relevant conditions. Significant earthworks are proposed as part of the activity, with the potential for noise and vibration effects. Without a proper assessment of construction noise the nature of the construction and the likely adverse effects of construction noise is unknown. A draft Environmental Management Plan has been provided as an attachment to the Infrastructure & Sub-Catchment ICMP Implementation Report. However, it needs to be reviewed and updated to include certain elements. In particular, the construction noise standards used in the draft plan are outdated and do not come from NZS6803 construction noise standard.
- h. It is not immediately apparent which component parts of the overall development fall outside the specific area identified as the 'Qualifying Development (QD)'. Preliminary assessment seems to indicate that the only works outside the QD are a small portion of the south western edge of the SW wetland and the southern loop of the maintenance path around the SW wetland area. Please provide update plans to clearly identify the QD, earthworks, drain re-alignment works, existing subdivision cadastre and proposed allotment boundaries. Please include all memoranda and schedule of easements.
- i. Comment (even if it is preliminary in nature) is required from WRC to confirm that diverting of existing drains is acceptable.
- j. The ecological report is the subject of an external technical review. Any further information matters arising from this review will be requested as soon as possible.
- k. Commentary about the need for pedestrian bridge connections across the swales to facilitate refuse collection (should refuse collection via JOALs be considered not a practical option – see comments about refuse collective options above).
- l. Written approval has been submitted from certain land owners (321/329/335/350/383/415 Te Kowhai Road). An explanation is requested about why approval has not been sought from all adjacent land owners – including NZTA, Waikato District Council and infrastructure providers. Please include specific commentary about adverse effects of the future alignment of a Stage 1 Local Road (Lot 1000) on the owners of Lot 1 DPS 72047 (349 Te Kowhai Road). This includes land owners of the existing SW drain that runs between the QD site and Exelby Road culvert – which is expected to experience a change in character, volume and flow rate.
- m. The submission of an overall landscape development plan drawn up by a suitably qualified landscape professional, is requested. Apart from providing further detail on the landscape elements proposed for the entire QD, these should deal with and provide further detail

regarding the design, materiality, planting and lighting proposed within the rear lane environment.

- n. For further clarity, the submission of a number of rendered perspective images that illustrate the typical expected urban environment along parts of these rear lanes, is also requested.*
- o. Please advise if there are any proposed street planting species along State Highway 39A (along the adjoining corridor segments of Lots 700 and 703) and if NZTA supports the proposed planting plan and on-going maintenance of such planting.*
- p. A future Neighbourhood Park is delineated (on MAP TWO, Page 43 of the PDA) in an area that might lie partially (or wholly) within Proposed Lot 702. Please provide commentary about how the current subdivision layout, including road connectivity, would not impact or otherwise restrict the future development of such a neighbourhood park area.*
- q. Please provide commentary in regard to the degree of agreement and compliance with Schedules 2 to 7 in the PDA agreement dated 29 August 2019 and Sections 5.1, 5.2, 5.4, 5.5, 5.6, 5.7 and 12.6 of the PDA.*
- r. A compiled list of all proposed consent notice conditions is requested. This is necessary as various sections of the submitted AEE makes references to consent notice conditions that are intended to ensure on-going compliance with proposed developmental standards covering a variety of matters.*

43. General Commentary

Please note that as part of normal processing of applications, where appropriate and necessary, Council will subject technical reports such as ICMPs, ITAs, WIAs, UD, Ecological Reports for external reviews, peer reviews, independent assessments, etc. Council advises that the actual and reasonable costs associated with such reviews will be borne by the applicant. Council intends to invoice the applicant on a monthly basis.

Upon the receipt of the above information, reviews may trigger the need for further clarification. For the avoidance of doubt, the overall further information request is considered to be satisfied after Council has reviewed all further submitted information and is satisfied that all relevant matters have been adequately addressed.

Please note that all three applications (land use, subdivision consent notice cancellation request) will remain on hold until all the above matters have been addressed to Council's satisfaction.

Next Steps

Within 15 working days from the date of this request you must either:

1. Provide the information requested, or
2. Advise Council in writing of the alternative date that you will provide the information by, or
3. Advise Council in writing that you refuse to provide the information requested.

A response is due from you no later than: 17th October 2019 (subject to Sec 37 requests by the applicant).

Please be advised that the statutory timeframes for processing both your applications have been put on hold until the further information requested has been received.

When all of the information requested has been provided I will review it to make sure it adequately addresses all of the points of this request. Please note that if Council has to seek clarification on

matters in the further information you provide, then this will be considered as information required under this letter. As such the application will remain on hold.

If you do not provide, or refuse to provide the information, council is required to notify your application under section 95(C) RMA. If this happens, you will be required to pay the notification fee as per Planning Guidance fees and charges (less any deposit already paid) in full before we proceed with the notification of your application.

Once all the information requested is received and assessed a determination will be made on whether the application will be processed on a notified or non-notified basis.

Please note that if you are dealing directly with other units in Council in regard to the further information, the further information must still be sent to me.

If you are not sure how to respond, please call me on 07 8386674 and we can discuss your options.

Yours sincerely,



Rajiv Raman
Senior Planner

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Garden Place, Hamilton
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Email: rajiv.raman@hcc.govt.nz
Website: www.hamilton.co.nz

On behalf of:
Sam Le Heron
Acting Planning Guidance Unit Manager

Appendix 2

Additional amendments to the ICMP

Appendix 2 Additional amendments to the ICMP

1 Introduction

The ICMP has been prepared to inform the development of PC7. In the process of reviewing PC7 and the ICMP, Council has identified some amendments that are necessary to ensure the ICMP complies with the requirements of Rule 1.2.2.6 in Appendix 1 of the ODP. Some of those amendments are set out in the body of this report; others are recorded in this appendix.

This appendix does not represent a comprehensive review of the ICMP. Council may require more amendments to the ICMP, or any later or alternative versions submitted in support of resource consent applications for the development.

2 Soakage

Nutsford¹²⁸ concluded there is likely to be limited potential for larger scale infiltration of stormwater¹²⁹, and “It may be necessary to restrict groundwater infiltration in areas with shallow depths to water and limited freeboard”. Refer to the discussion 5.6 of the report¹³⁰. Accordingly, it is recommended Table 15 Implementation/Mean of Compliance in the ICMP to be amended by:

(1) Adding the following note below the table:

Note 1: *Permeable pavement shall be acceptable only where soil hydraulic conductivity, the water table depth and freeboard requirements make this an appropriate stormwater disposal device for the site.*

(2) Amending the right-hand column header as follows:

Recommended Device Options [\(see Note 1\)](#)

3 Flood storage on road reserves

Table 10 of the ICMP¹³¹ sets out the design parameters and targets that development within Rotokauri North is expected to meet.

The following is recommended: Inclusion in Table 10 of the requirement set out in the RITS (s3.3.14.10) that roads that are designed to accommodate secondary stormwater overland flow do not result in ponding within the carriageway greater than 150mm deep in the 2% ARI event.

4 Missing information

This section identifies gaps in the ICMP. Council seeks for the ICMP to be amended to fill these gaps.

4.1 Figure 16

The paragraph immediately below Figure 16 states: “see indicative wetland inlet locations indicated in Figure 16”. However, Figure 16 shows no such locations.

¹²⁸ Nutsford, 2018. Letter report: Rotokauri North ICMP: Desktop Review of Hydrogeological Conditions Influencing Stormwater Design: Attachment I to the ICMP.

¹²⁹ Ibid, p7, s24.2.3, second paragraph

¹³⁰ Ryan, 2020, *Report on technical planning and infrastructure matters relevant to Hamilton City Council*.

¹³¹ Tollemache Consultants Ltd, 2019, p48

**RITS provisions relevant to consideration of using road carriageways as
primary stormwater conveyance**

Appendix 3 RITS provisions relevant to consideration of using road carriageways as primary stormwater conveyance

In this appendix, red text is used for emphasis.

RITS Provision	Comment
<p>Section 1 – General</p> <p>1.3.2 Abbreviations (p11)</p> <p>ARI Average Recurrence Interval, sometimes known as ‘return period’. It is the average number of years that it is predicted will pass before an event of a given magnitude occurs. For example, a 50 year ARI event would on average happen every 50 years.</p>	<p>This abbreviation is used in provisions quoted below.</p>
<p>1.3.3 Definitions (p15)</p> <p>Primary System (Stormwater) The primary stormwater system is to accommodate a specified design rainfall event appropriate for the zone as defined in Section 4: Stormwater, Clause 4.2.3. It may include (but not limited to) wetlands, ponds, lakes, rain gardens, swales and filters, pipelines, inlet/outlet structures and soakage areas.</p> <p>Secondary Flow Path (Stormwater) The path taken by stormwater runoff in excess of the primary design flow. Capable of providing protection to the surrounding buildings for a once in 100 years return period rain event for commercial, industrial, and habitable residential floor levels.</p>	<p>This definition implies that some form of infrastructure is required to convey stormwater flow. It does not mention the road surface as an acceptable method of primary stormwater conveyance.</p> <p>This definition implies that overland flow, including over road carriageways, is only expected to occur once the design capacity of the infrastructure provided to convey primary stormwater is exceeded.</p>
<p>Section 3 - Transportation (p86)</p> <p>3.2 General</p> <p>3.2.1 Objective</p> <p>The objective is to provide a hierarchical network of transportation corridors that respond to land use and land form, provide safe and convenient transport for all road user modes, provide access to adjacent property, travel choices, are well connected, safe to use and provide corridors for utility services. They must be consistent in their design standards to provide uniform guidance to users and be designed and built to provide the least whole of</p>	<p>Stormwater flowing on the road carriageway does not meet the objective; it is not safe for all users to have surface water ponded or flowing on road carriageways.</p>

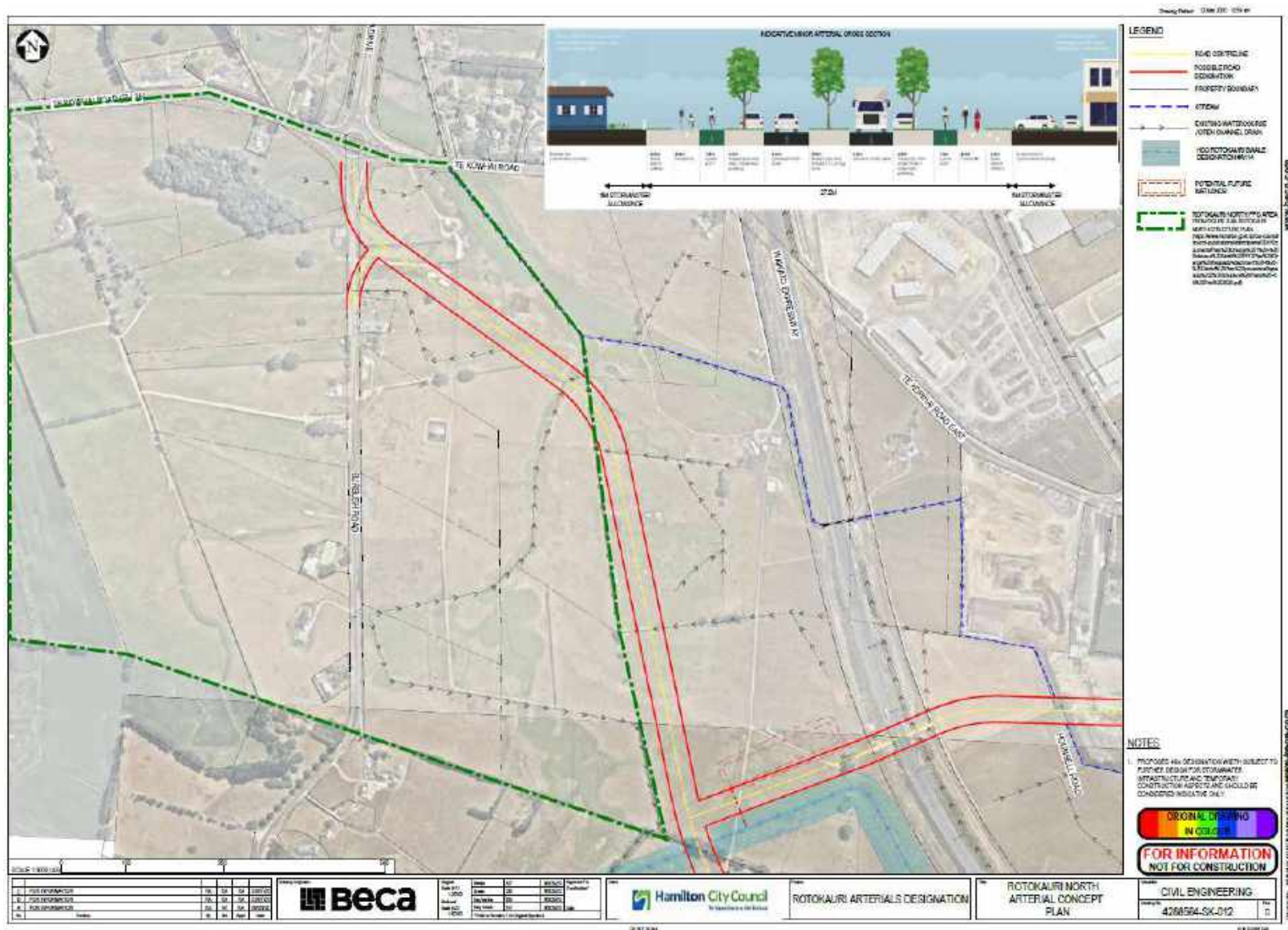
life cost to the community, consistent with the desired level of service.	
3.2.3 Guidelines (p89) In designing the layout of a Transportation Corridor the following issues must be considered: <ul style="list-style-type: none"> k) Pedestrian needs l) Cyclist needs m) Needs of mobility or visually impaired persons n) Stormwater collection, treatment and disposal o) Access by vehicles needing to service the area e.g. refuse collection, street cleaning p) Risk, reliability and redundancy 	Having surface water flowing on road carriageways every time it rains means no, or insufficient, consideration has been given to these needs and design requirements.
3.3.14 Road Drainage (p104) 3.3.14.1 General All roads shall be provided with facilities for the collection and disposal of both stormwater and subsoil water suitable to cope with the stormwater level of service for the area. Refer Stormwater Section 4 Table 4.7. Designs shall consider the following factors: <ul style="list-style-type: none"> f) Public safety g) Minimising of future maintenance i) Cyclists k) The depth of water in secondary flow paths should not exceed the flotation depth of vehicles of 150mm (see Clause 3.3.14.10). 	<p>The first sentence sets out an expectation that infrastructure other than the road carriageway itself will be provided to convey primary road stormwater.</p> <p>Using the road carriageway as the primary stormwater conveyance is likely to result in a lack of a suitable outlet for the road's subsoil drainage. The failure of road subsoil drainage to function will result in saturated pavements and the need for on-going road maintenance.</p> <p>Having water flowing along road carriageways and across intersections will not provide for public safety or for the needs of cyclists.</p>
3.3.14.10 Secondary Flow Provisions (p107) At all points where sump blockage may occur or where design capacity may be exceeded, which could lead to overflow into private property, the provision of designed secondary flow paths protected by public ownership or easement shall be made. Refer to Stormwater Section. <p>The design of roads that facilitate stormwater overland flow within the carriageway require a design methodology that does not result in ponding areas greater than 150mm deep in a [50 year] ARI [Average Recurrence Interval]. For more information on overland flow path design, refer to Stormwater Section, clause 4.2.3.4.</p>	The first sentence assumes that infrastructure other than the road carriageway itself will be provided to convey primary stormwater discharged from the road.

<p>The stormwater design for developments may use the road as a secondary flow path and therefore requires to be designed for 1% ARI.</p>	<p>While the RITS explicitly allows use of the road as a secondary flow path, nowhere does it explicitly allow use of the road as a primary flow path.</p>
<p>Section 4 Stormwater 4.1.9.4 Discharge to the Road Kerb (p295) Stormwater discharge to a road kerb as a primary means of disposal is not an acceptable solution for stormwater disposal from new developments in 'Greenfield' areas. The use of kerbed roads as an overland flowpath may be acceptable if it is in accordance with the maximum depth and velocity requirements.</p> <p>In some areas there is a public stormwater drainage system which serves the road network and some properties currently discharge their stormwater onto the road and ultimately into the road drainage system. This system was generally not designed for the additional stormwater flows and there is no right to utilise the road for primary drainage purposes. As a principle, all sites must minimise discharges of stormwater onto urban roads.</p>	<p>This provision allows use of kerbed roads as an overland flow path, provided maximum depth and velocity criteria are met. It does not allow use of kerbed roads for primary drainage.</p>
<p>4.2.3 System Design (p295) Stormwater systems shall be considered as the total system protecting people, land, infrastructure, and the receiving environment. A stormwater system consists of:</p> <ul style="list-style-type: none"> a) A primary system designed to accommodate a specified design rainfall event appropriate for the zone, appropriate treatment of pollutants and ensure the effects from the primary system are managed; and b) A secondary system to ensure that the effects of stormwater runoff from events that exceed the capacity of the primary system are managed, including occasions when there are blockages in the primary system. 	<p>This requires provision of some form of infrastructure of specified capacity to convey stormwater flow.</p> <p>This implies that overland flow, including over road carriageways, is only expected to occur once the design capacity of the primary stormwater system is exceeded or that system is blocked.</p>
<p>4.2.3.2 Design Considerations (p299) The following needs to be considered and where appropriate included in the design:</p> <ul style="list-style-type: none"> a) Quality and quantity requirements of any discharge 	<p>The red text implies an assumption that infrastructure other than the road carriageway itself will be provided to convey primary road stormwater</p>

<ul style="list-style-type: none"> b) How the roading stormwater design is integrated into the overall stormwater system c) The type and class of materials proposed to be used d) System layouts and alignments including: <ul style="list-style-type: none"> (i) Route selection for pipes and conveyance e) Hydraulic adequacy section 4.2.4.1 	
<p>4.2.4 Hydraulic Design Criteria (pp303-304) Table 4-7: Design Level of Service The table specifies primary stormwater systems for transport corridors are to be designed for the 5 year ARI rainfall intensity and secondary stormwater systems for Local and Collector Roads are to be designed for the 100 year ARI rainfall intensity.</p>	<p>This indicates that secondary flow, including flow over road carriageways, is not expected to occur in rainfall events that occur more frequently than once in every 5 years, on average (unless the primary stormwater system is blocked).</p>

Appendix 4

Draft plan of the proposed minor arterial



Draft Plan of the Proposed Minor Arterial (D-3361662)

Appendix 5

Maps of the Possible Public Transport Route Options in Rotokauri North

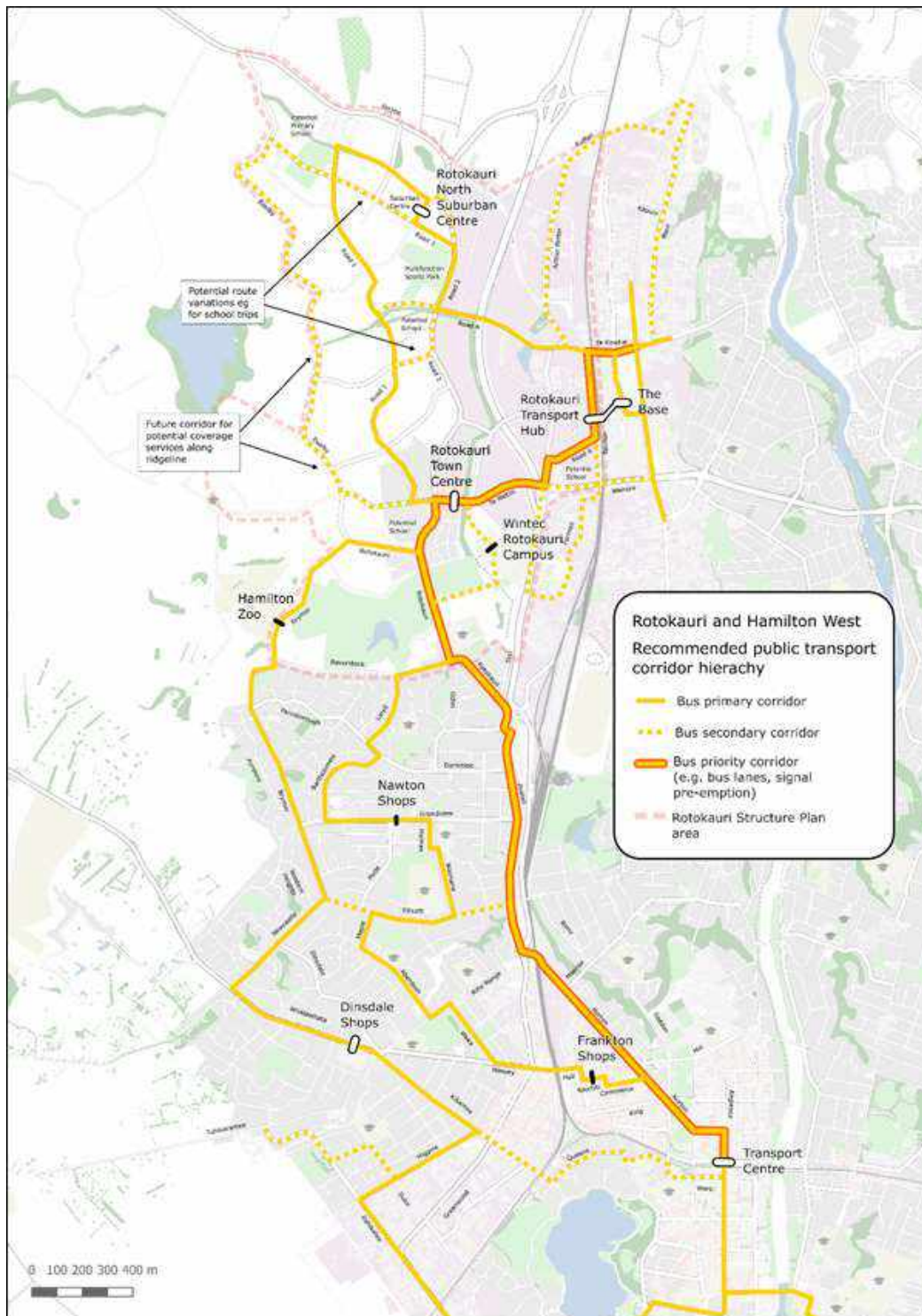


Figure 3 Possible public transport routes to service Rotokauri and Hamilton West

Option 1

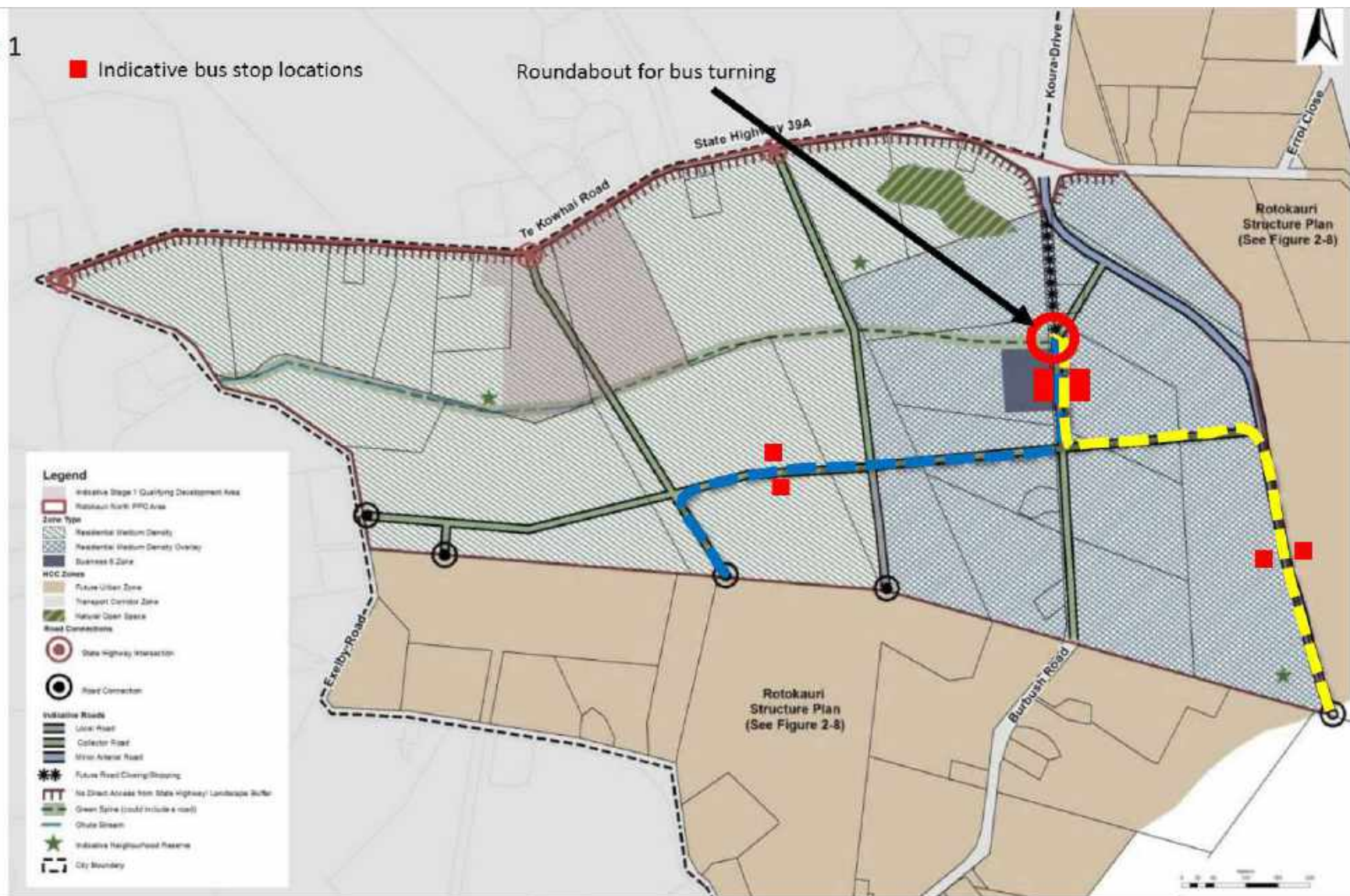


Figure 4 Possible public transport routes through Rotokauri North - Option 1

Option 2

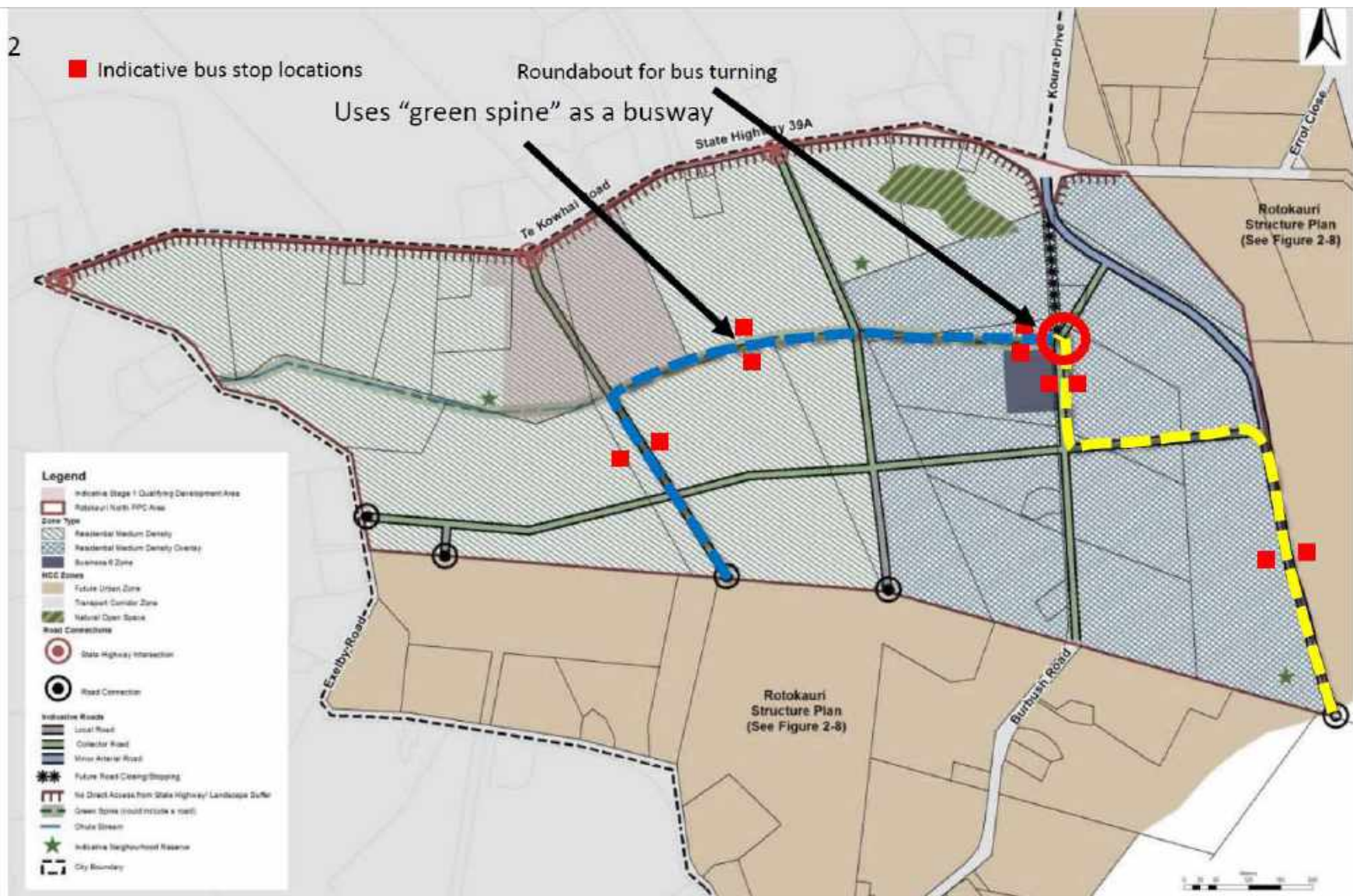


Figure 5 Possible public transport routes through Rotokauri North - Option 2

Option 3

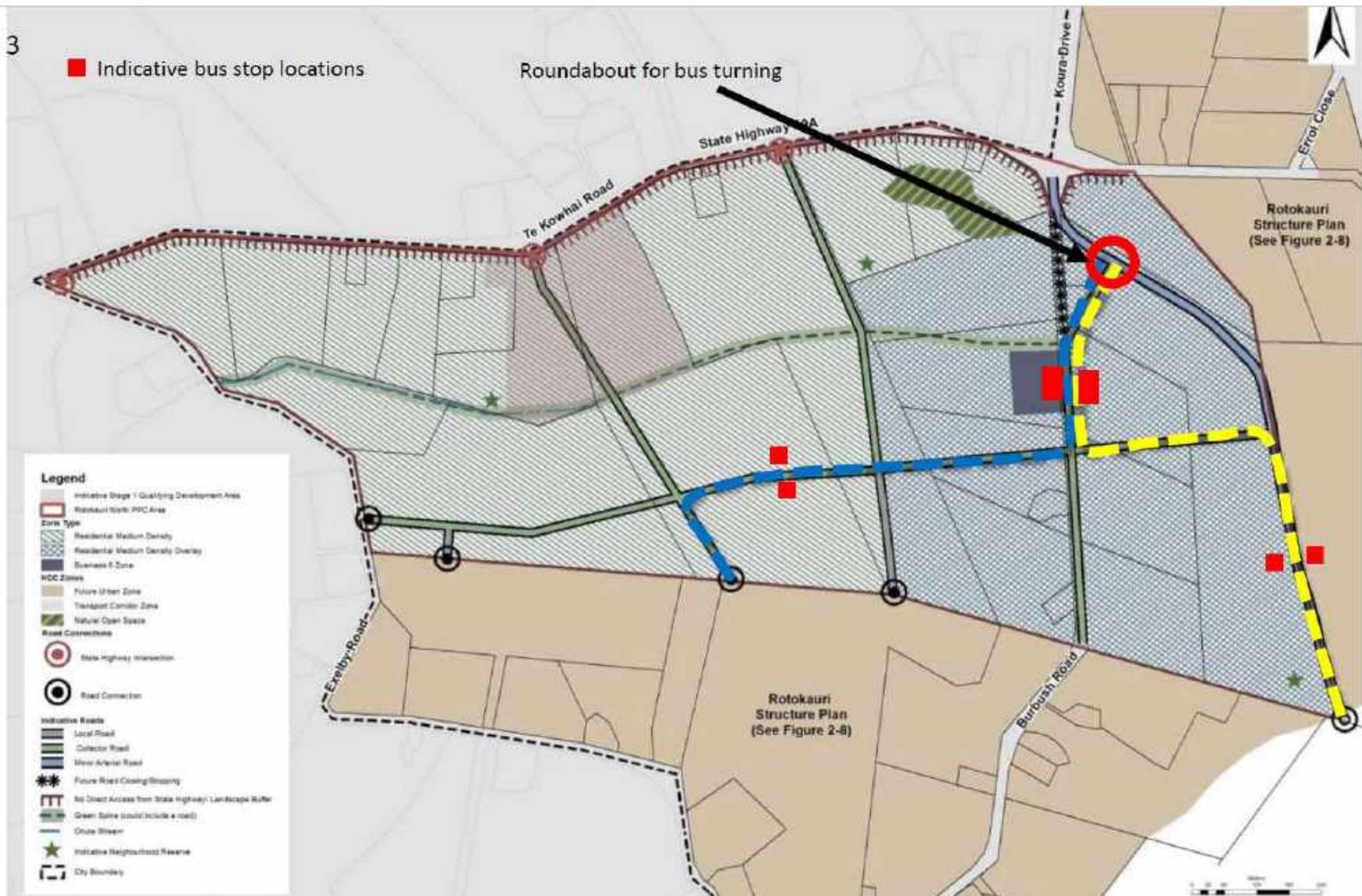


Figure 6 Possible public transport routes through Rotokauri North - Option 3

Option 4

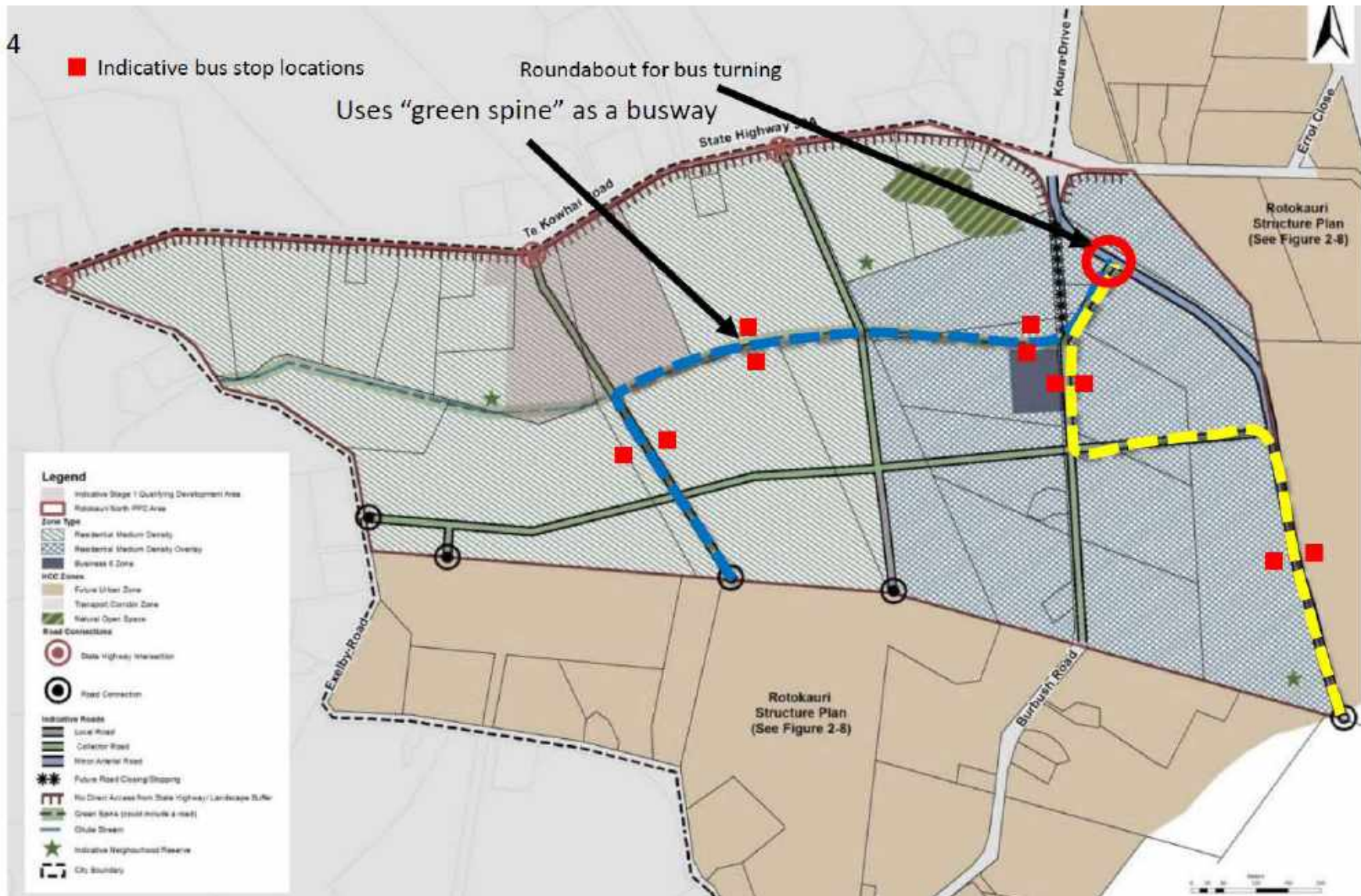
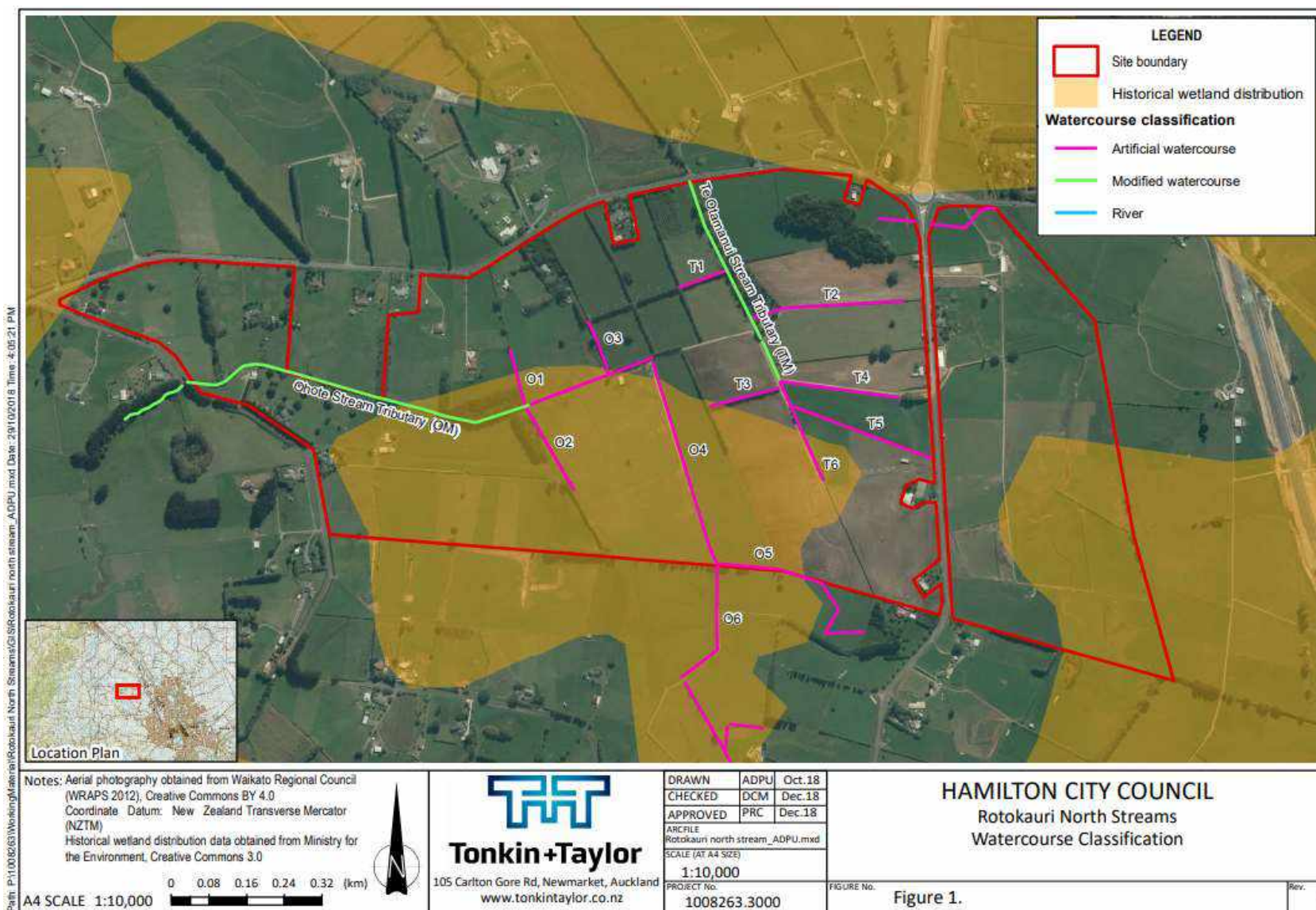


Figure 7 Possible public transport routes through Rotokauri North - Option 4

Proposed Figure 2-9D - Watercourse Classification



Proposed Figure 2-9D - Watercourse Classification