

Te Rapa North Private Plan Change 17

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1.0

Introduction

1.1 Project Description

The purpose of Plan Change 17 ('PC17') is to rezone approximately 91ha of land (the 'Plan Change Area') surrounding the Te Rapa Dairy Manufacturing Site, in Te Rapa, Hamilton to Te Rapa North Industrial Zone. PC17 does not seek to change any of the land within Te Rapa Dairy Manufacturing Site or planning provisions relating to the Manufacturing Site.

The extent of the Plan Change Area is set out within **Figure 1** below.

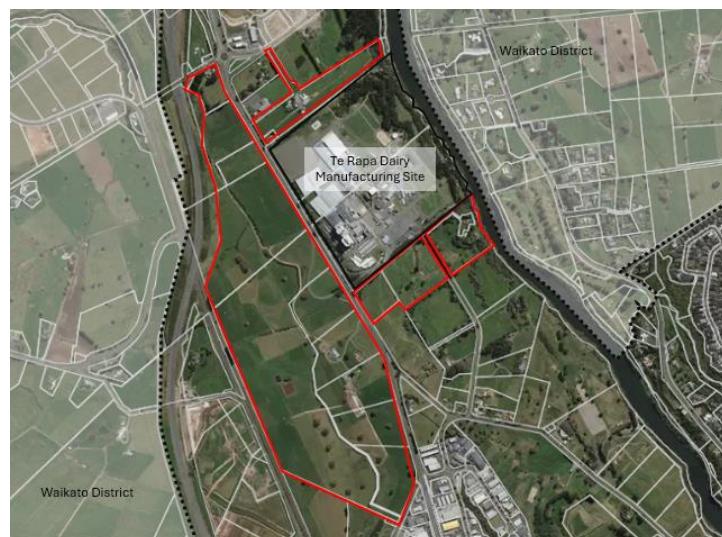


Fig. 1. The extent of the Plan Change Area is shown in red outline

The report includes a summary of the technical and design work undertaken by our urban design team and provides an assessment of the urban design aspects of the proposal.

This Urban Design Assessment has been broken down into the following sections:

- Section 2 provides a Context Analysis of the Plan Change Area characteristics and surrounding context, including the urban design-related policies that are relevant to the proposal.
- Section 3 provides an outline of the Masterplan design process that we undertook for the Plan Change Area and which informs the proposed Te Rapa North Industrial Structure Plan ('Structure Plan').
- Section 4 provides our urban design assessment of the anticipated outcomes enabled by PC17.
- Section 5 provides our concluding comments on the urban design outcomes that will be enabled by PC17.



Fig. 2. Plan Change Area (facing toward the North Island Main Trunk Railway Line)

1.2 Purpose

This Urban Design Report is prepared on behalf of Fonterra Limited to support the PC17 request. The report includes a summary of the technical and design work undertaken by our urban design team and provides an assessment of the urban design aspects of the proposal.

The following disciplines have each prepared technical reports that support the proposal and which should be read alongside this report.

- Infrastructure Assessment (Harrison Grierson)
- Assessment of Landscape Effects (KPLC)
- Planning (Harrison Grierson)
- Ecological Values and Effects Assessment (RMA Ecology)
- Integrated Transport Assessment (BBO)

1.3 Project Objectives

Fonterra have provided inputs to the design process through refining the scope of the Plan Change Area and confirming the key requirements for a Structure Plan to achieve suitable outcomes, including the protection of the Te Rapa Dairy Manufacturing Site.

The objectives of the private plan change are to:

1. Rezone all Fonterra-owned land to Te Rapa North Industrial zone.
2. Protect the Te Rapa Dairy Manufacturing Site from reverse sensitivity risk.
3. Future proof rail access on the North Island Main Trunk Line.

1.4 Our Involvement

Our urban design team's key role in this project was to review and amalgamate the technical investigations by others into an Illustrative Masterplan. The key steps in this process were:

- We reviewed existing zoning and other background information pertaining to the Plan Change Area and surrounding context.
- We identified and recorded key urban design issues, opportunities, and constraints to future site development.
- We prepared plans, diagrams and other material as required for public and key stakeholder (including Council and Mana Whenua) consultation processes. This material was used to inform and run the various meetings, open days, and hui undertaken as part of the consultation to inform and refine PC17.
- We reviewed and synthesised relevant technical investigations and reporting undertaken by project team specialists.
- We prepared a draft Illustrative Masterplan to identify urban design 'Key Moves' and design principles. These were workshopped with technical specialists, particularly the project transportation engineer, stormwater engineer, and land development engineer.

We then worked with the planners to distil the Illustrative Masterplan into the proposed Te Rapa North Industrial Structure Plan and proposed planning provisions for PC17.

2.0

Context assessment

This section provides a description of the Plan Change Area's local, site and regulatory contexts. These have been informed through research, site visits and technical assessments prepared for this project. Our understanding of the Plan Change Area has informed the design process through identification of design opportunities and constraints.

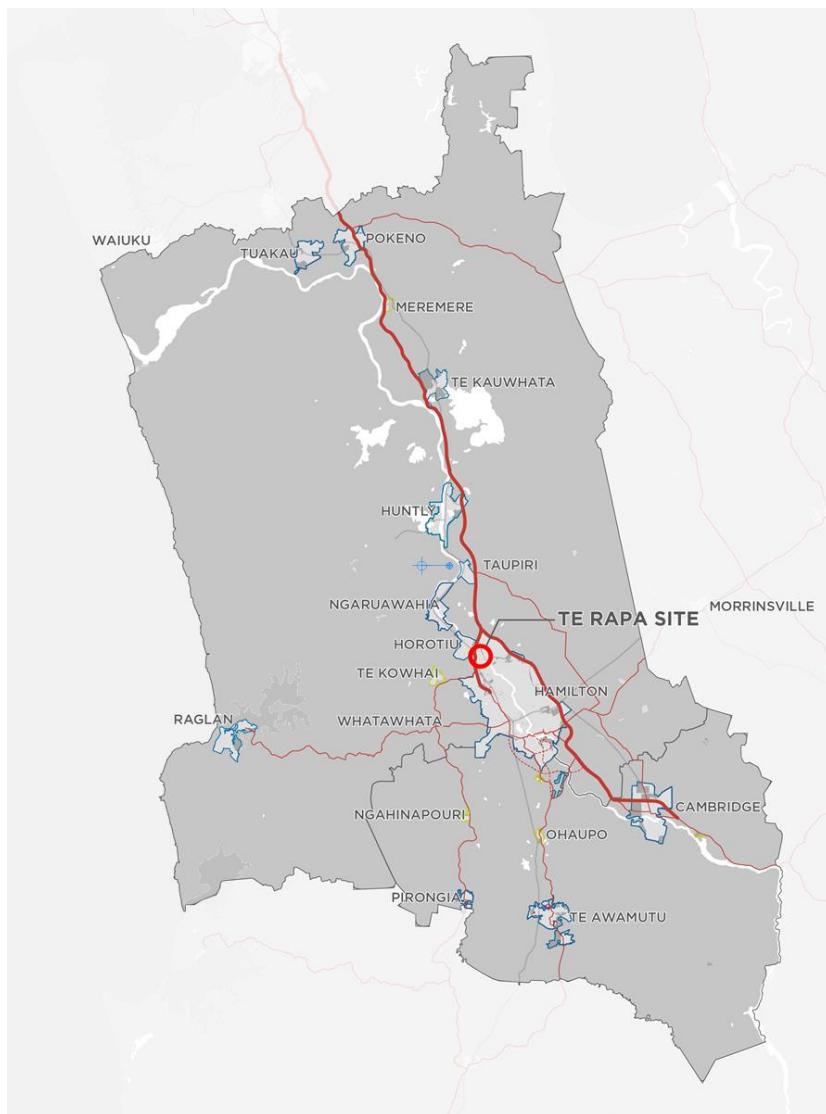


Fig. 3. Site Location (not to scale)

2.1 Local Context

As shown in Figure 4 below, the Plan Change Area is located within the northern extent of the Hamilton City District, at its border with the adjoining Waikato District extent. It is approximately 9.5km north of the Hamilton CBD, with access via Te Rapa Road. The township of Horotiu is located 4km to the north and Ngāruawāhia is located a further 5km north (being 9km in total). Cambridge is 35km away to the southeast and Te Awamutu is 42km away to the south.

Apart from these townships, the surrounding land to the north, east and west is rural. The Te Awa Lakes development is located north of the PC17 Plan Change Area and, once constructed, will deliver a hub of residential, recreational and business activities. Horotiu (pop. 750) is identified as a Growth Centre in the FutureProof Strategy.

South of the Plan Change Area, sections of land are being developed for industrial use along the Te Rapa Road and Old Ruffell Road area, and within the newly created industrial development around Arthur Porter Drive.

The Waikato River to the east of the site is a highly significant ecological and cultural corridor that connects the region. The Waikato Awa and the waterbodies forming its catchment are a core aspect of the region's identity and the contribution to blue-green networks are a priority in regional policy and strategies.

On the eastern banks of the Waikato River lies a rural-residential area around River Road, and the Horsham Downs golf course.

A proposed major arterial road (the Northern River Crossing, 'NRC') has been identified in the Council's longer term infrastructure strategy ¹ as passing through the Plan Change Area that, when established, will connect a long term residential growth area (HT1; 800 hectares) east of the river to State Highway 1C ('SH1C').

Te Awa / The Base is a commercial hub and retail development which is a 6 minute drive from the Plan Change Area and an 18 minute drive from Hamilton CBD. The Rotokauri Transport Hub provides rail and bus access and is located beside 'The Base'.

¹ Waikato Northern River Crossing is a "Potential regional road corridor"; 2018 Regional Land Transport Plan Update.

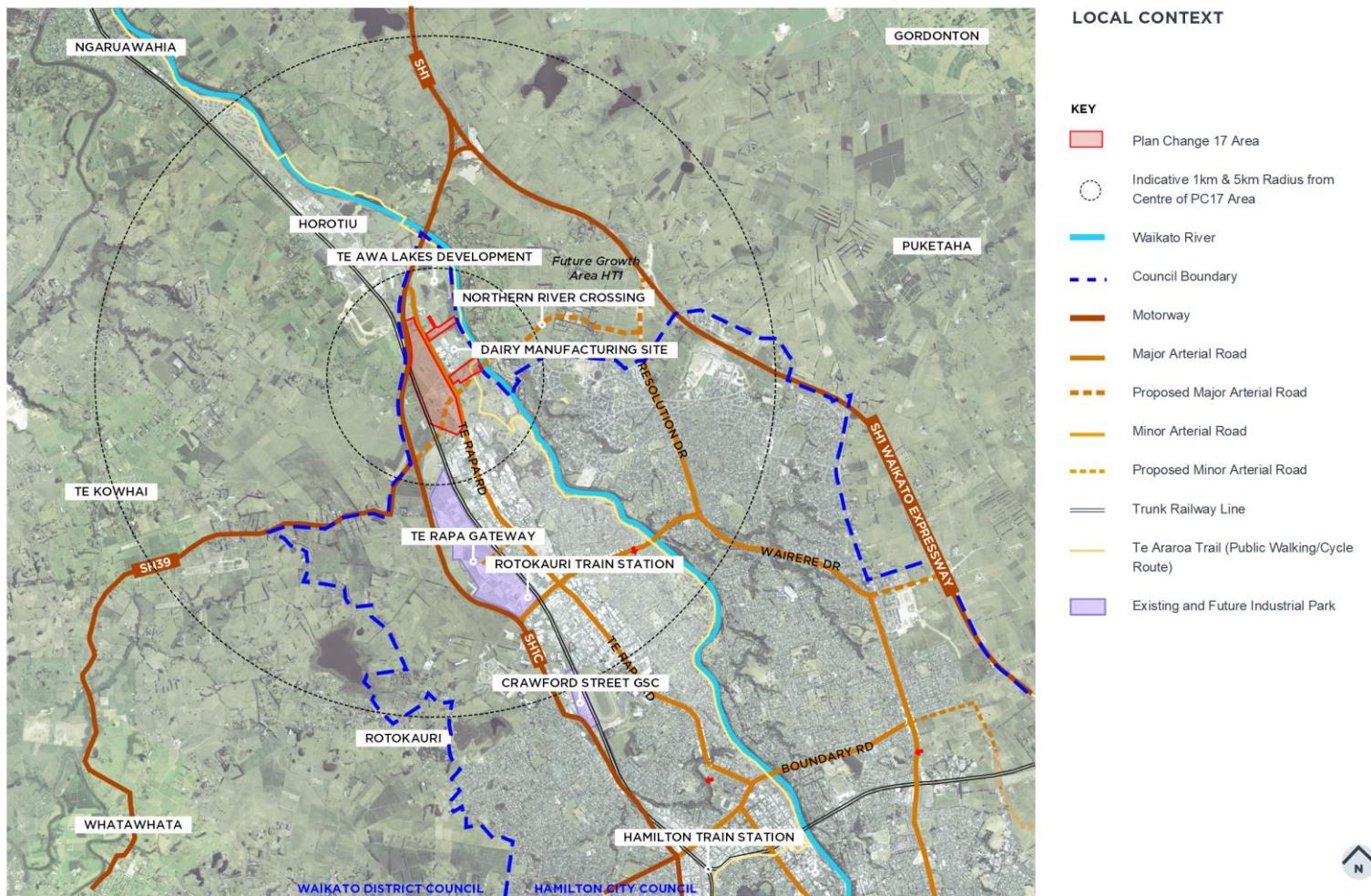


Fig. 4. Local Context Plan

2.2 Site Context

The Plan Change Area comprises a total of 91ha land that surrounds the Fonterra Te Rapa dairy manufacturing Site.

The land use of the Plan Change Area is rural/pastoral grazing, with dwellings associated with the rural activities. The Fonterra landholdings surrounding the Dairy Manufacturing Site are primarily held to buffer the manufacturing site, by preventing sensitive activities (such as residential development), from locating nearby that would create reverse sensitivity effects and impact the efficiency of the operation as well as long term security and viability.

To the north of the Plan Change Area are a number of other activities, including residential dwellings on rural lifestyle lots, a temple and a service station complex with between four and seven small retail outlets. A small community park is also located adjacent to the retail outlets.

South of the Plan Change Area, sections of land are currently being developed for industrial uses along the Te Rapa Road and Old Ruffell Road area, and within the newly created industrial development around Arthur Porter Drive.

The Fonterra Te Rapa Manufacturing site is the most prominent land use within the immediate surrounds. The large complex is a local landmark, having been established in 1968. It consists of several buildings, up to a height of approximately 20m, grouped around internal accessways and hardstand areas. The manufacturing site is 41.8ha and includes a significant margin of vegetated riparian edge to the Waikato River. Despite its large scale, the frontage of the complex along Te Rapa Road is lined with mature trees, and is aesthetically unobjectionable.

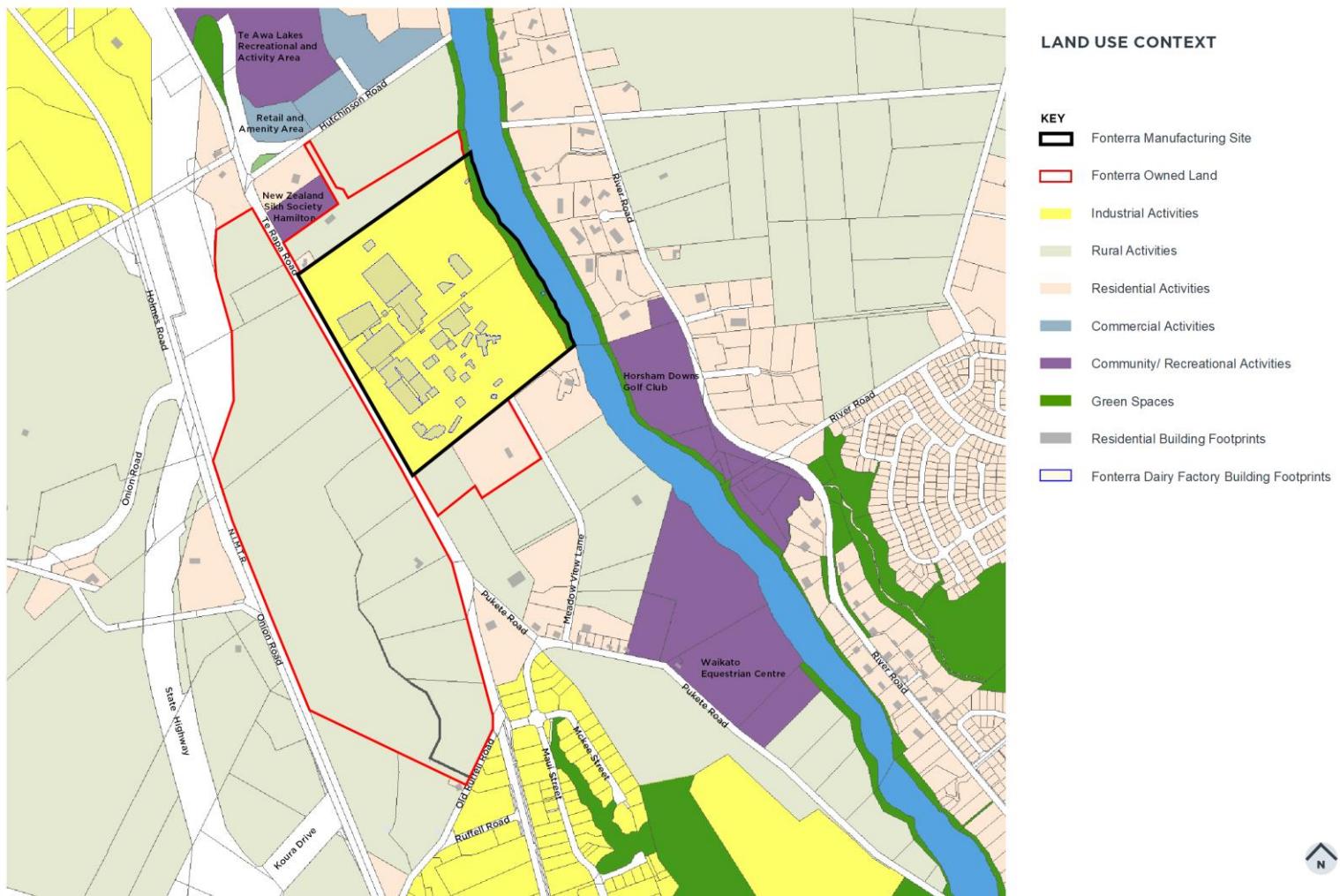
Access to the Plan Change Area is available via existing road network infrastructure, including Te Rapa Road, Bern Road, Hutchinson Road, Old Ruffell Road and Meadow View Lane, noting that Bern Road and Old Ruffell Road are no exit roads. The future transport connection, the NRC, is indicated as crossing the southern part of the Plan Change Area, connecting Koura Drive (Waikato Expressway) to the eastern side of the Waikato River. The North Island Main Trunk Line ('NIMTL') forms part of the western boundary of the Plan Change Area.

The Te Awa River Ride portion of the Te Araroa Trail walking/cycling rail forms part of the eastern boundary and adjoins the Waikato Awa (see figure 5 below). The land use and transport context of the Plan Change Area is depicted in figures 6 and 7 below.

Notable cultural features near the Plan Change Area include the Waikato River, Mangaharakeke pā, located adjacent to the Waikato River, and the Sikh Society Temple located at 1426 Te Rapa Road, as highlighted in figure 11 below.



Fig. 5. Te Araroa Trail along the edge of the Waikato River



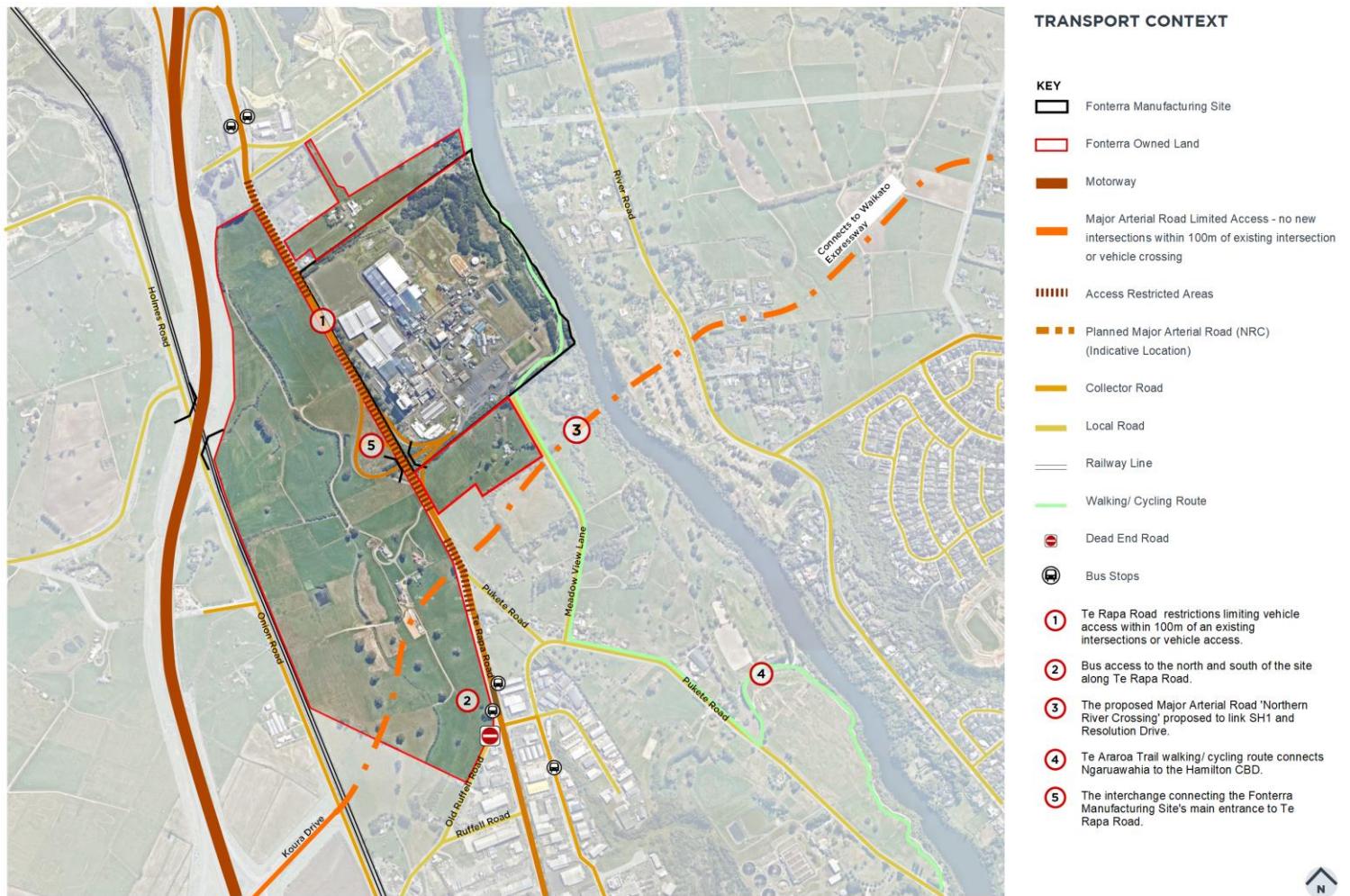


Fig. 7. Transport Context Plan

2.3 Natural Context

Part of the Plan Change Area sits adjacent to the Waikato River to the east and some areas of land have natural drainage patterns that lead into the river through its tributaries.

The Te Rapa Stream sits centrally within the Plan Change Area and flows to the north. It has historically been modified for farming purposes and connects to several artificial ephemeral watercourses that are used for drainage. There is some riparian planting located along the banks of the stream as located within the northern part of Fonterra's farm (see Figures 9 and 10). The natural context of the Plan Change Area is depicted in Figure 8 below.

There are several existing vehicle crossings of Te Rapa stream, that use culverts and are used for farming purposes.

Flood hazard areas have been identified over some of the low lying areas adjoining the Te Rapa Stream (see Figure 8 below). The area surrounding the stream reflects the apparent remnants of river terraces and flood plains, which give the Plan Change Area an undulating topography. One smaller watercourse in the eastern area of the Plan Change area flows into the Waikato River. Three other watercourses flow into the Te Rapa Stream and these are modified and appear to have changed alignment over time (based on historical aerial photography).

There are several large trees dotted around the Plan Change Area, but there are no significant areas of natural vegetation, other than along stream banks. The most well-established of the vegetation is present in areas closer to the Waikato River and along the edges of the Fonterra manufacturing site, including amenity planting fronting Te Rapa Road.

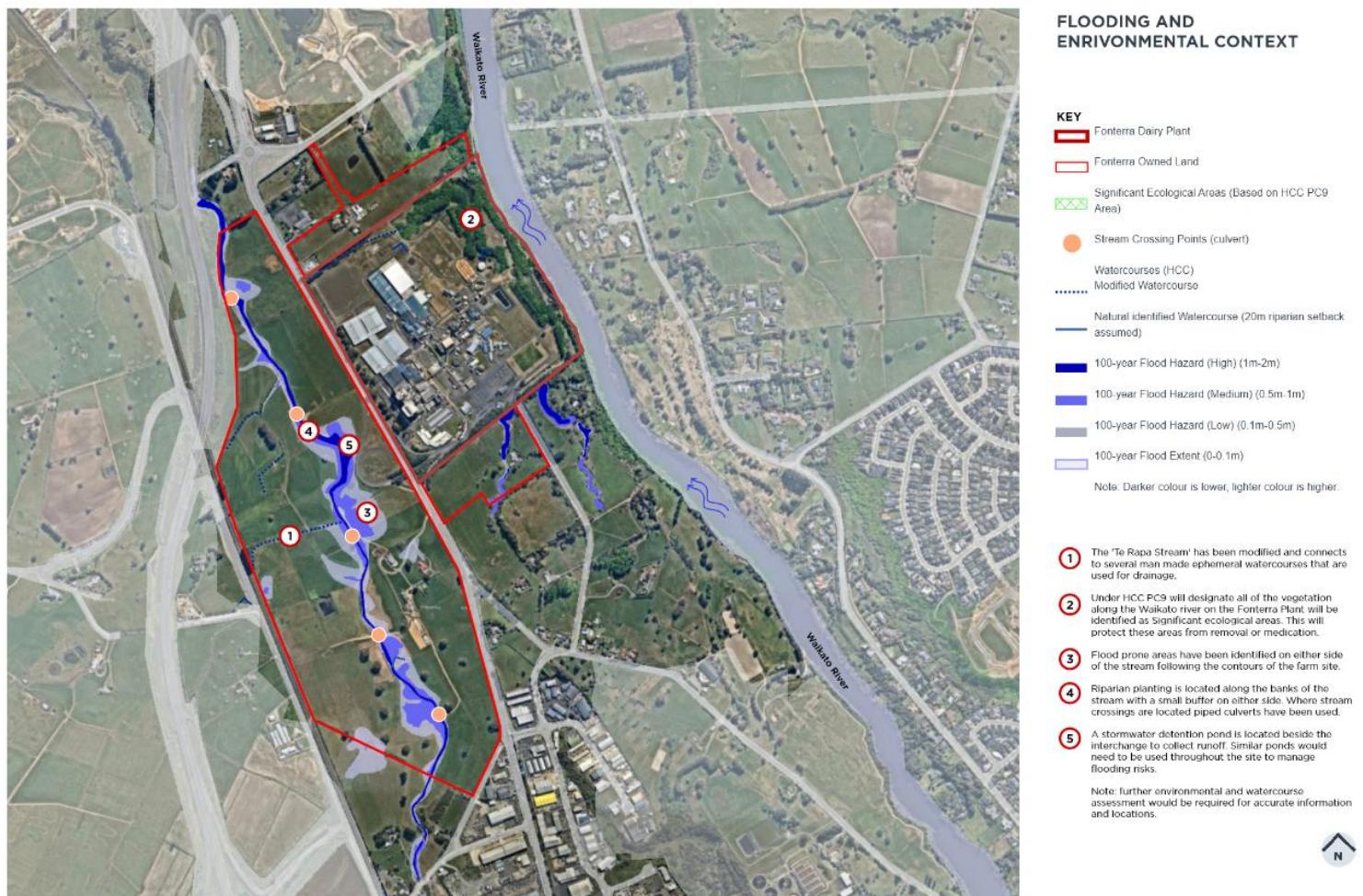


Fig. 8. Environmental Context Plan

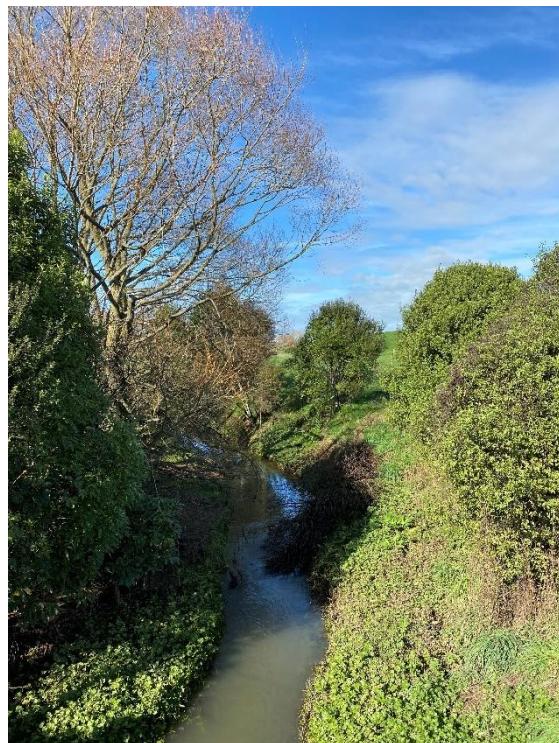


Fig. 9. Te Rapa Stream, within the Fonterra Farm



Fig. 10. Photo of the northern part of the Fonterra Farm showing the topography (facing north)

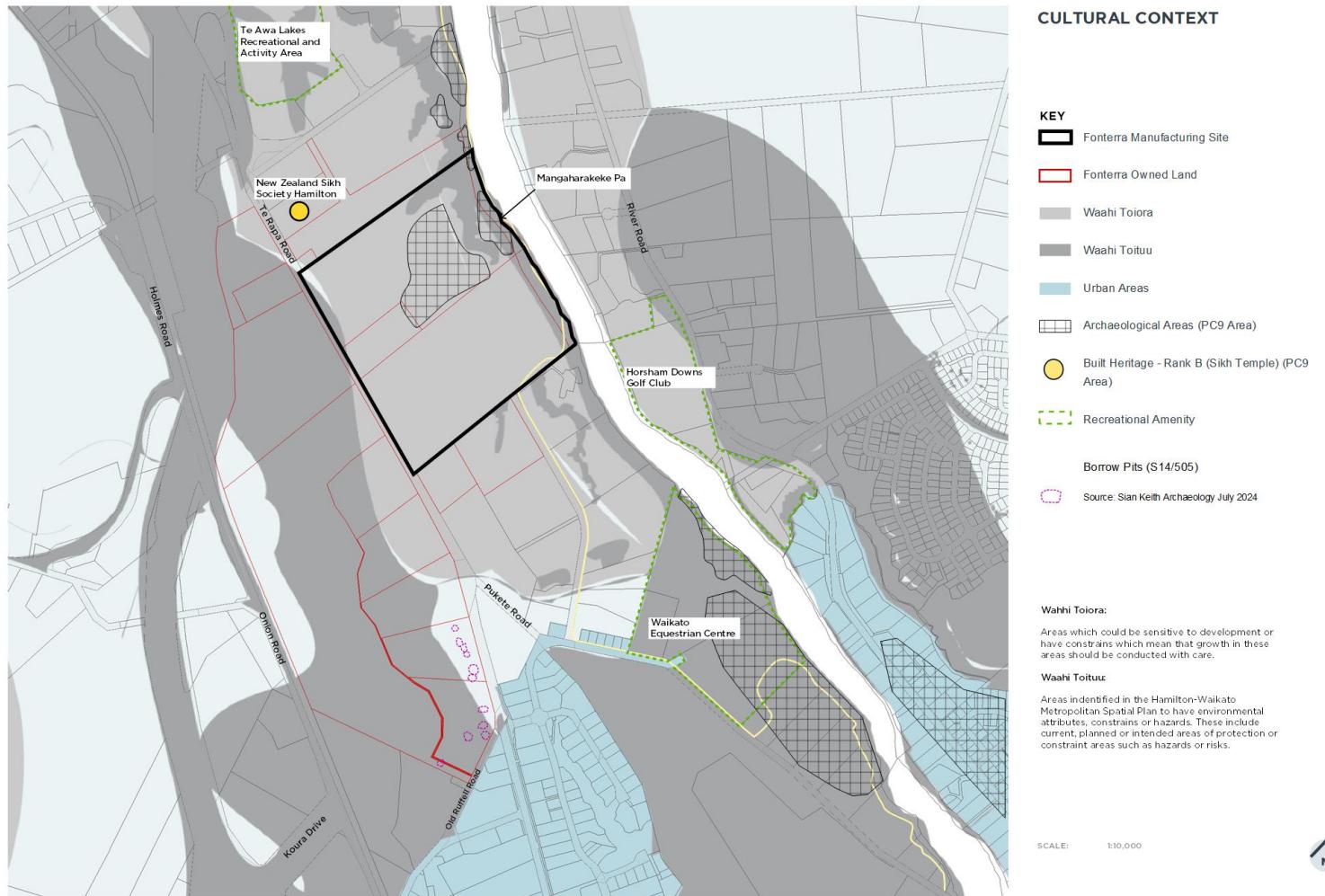


Fig. 11. Cultural Context Plan

2.4 Regulatory Context

The following regulatory documents have been reviewed with respect to matters most relevant to urban design. The key objectives, policies or directives listed below have informed the urban design inputs to this proposal and contribute to the assessment topics (covered under Section 4 of this urban design report).

2.4.1 National Policy Statement on Urban Development (NPS-UD)

The purpose of the NPS-UD is to support adequate opportunities for land to be developed to meet community business and housing needs. It recognises the national significance of:

- Having well-functioning urban environments that enable all people and communities to provide for their social, economic, and cultural wellbeing, and for their health and safety, now and into the future.
- Providing sufficient development capacity to meet the different needs of people and communities.

2.4.2 Future Proof Strategy: Future Development Strategy Update 2024-2054

Te Rapa North is identified for 'Long-Term Development' between 2031-2050. Te Rapa continues to be identified as a metro-economic corridor and a location to be developed as a 'primary sub-regional centre' over the next 30 years.

The Future Proof Strategy ('FPS') provides a number of Directives. The most relevant of these to Urban Design is Topic B7: Current and Future Growth Areas:

- Directive 7.1: Support compact urban development across the sub-region, focused within the key urban enablement areas set out in table 6 and the Future Proof Current and future urban areas map 6, providing for well-functioning urban environments and enhancing competitive land markets through a range of development opportunities.
- Directive 7.3: Focus on compact urban form and increased densities enabled in a way that accommodates long-term growth and provides high quality social, cultural, economic and environmental outcomes.
- Directive 7.4: Use defined urban enablement areas to encourage a more compact urban form, to integrate land-use with infrastructure and to send clear signals to the community about the preferred settlement pattern and the scale and extent of urban development.
- Directive 7.7: All growth areas at scale are connected to and supported by rapid and frequent public transport networks, as well as effective road and active mode connections.
- Directive 7.9: Build upon and strengthen local characteristics to create a sense of place.
- Directive 7.11: Integrate land use, funding and infrastructure through tools such as Structure Planning.
- Directive 7.12: Development is planned in a way that minimises land use conflicts, including avoiding or minimising potential for reverse sensitivity issues.

Topic B10: People, Places, Communities and Growth Management is also relevant, particularly;

- Directive 10.6: Supporting thriving towns and villages to work towards embodying the multi-functional concept of “live, work, play, invest and visit”.

2.4.3 Hamilton-Waikato Metropolitan Spatial Plan

The Hamilton-Waikato Metropolitan Spatial Plan ('HWMSP')² identifies Te Rapa North as a 'Strategic Industrial Area' which is to be developed for industrial purposes in the medium to long-term. This is due in part to its proximity to Te Rapa Road and SH1C which are considered key 'national' and 'metro area' freight and movement routes.

The HWMSP is aligned with the NPS-UD.

2.4.4 Hamilton City Operative District Plan

Hamilton City Operative District Plan ('HCODP') was made Operative in 2017. The plan contains objectives, policies and rules to guide development in the district including the Te Rapa North Industrial Zone.

The Te Rapa North Industrial Zone ('TRNIZ') applies to the entire Plan Change Area, with an approximate total zone area of 230ha. A Deferred Industrial Zone area overlay applies to the entirety of the TRNIZ with the exception of the Te Rapa Dairy Manufacturing Site. The Deferred Industrial Zone limits permitted activities and informs rules making the land similar use to a Future Urban or Rural Zone.

² Hamilton Waikato Metropolitan Spatial Plan Approved by Future Proof Implementation Committee, 10 September 2020
<https://www.futureproof.org.nz/assets/Future-Proof/Resources/HamiltonWaikatoMetropolitanSpatialPlan.pdf>

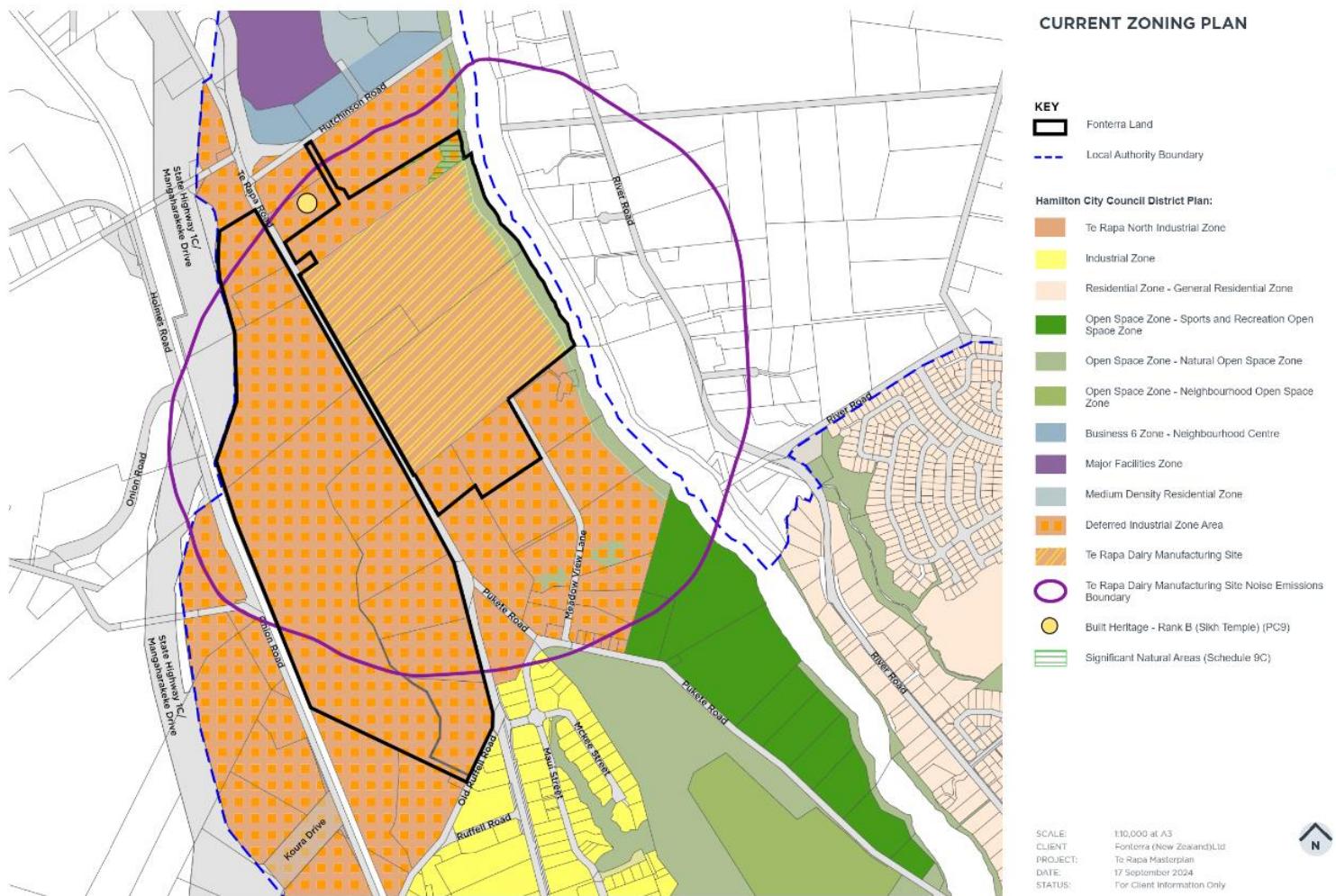


Fig. 12. Current Zoning Plan

Other District Plan provisions that apply to the Plan Change Area include:

- The TRNIZ includes rules for setback, activity, and landscaping. Land use in the zone is controlled through the Deferred Zone.
- The Te Rapa Dairy Manufacturing Site Noise Emissions Boundary limits the ability for noise sensitive activities to establish within its extent and requires an internal noise level to be achieved for any such activity.
- The Te Awa Lakes development north of the site was rezoned to a mixture of residential and business zones. The development is set to be completed in stages.
- Te Rapa Road includes access restrictions limiting vehicle access within 100m of an existing intersection or vehicle access.

2.4.5 Relevant HCODP Objectives and Policies

The following existing objectives and policies have been identified as being of relevance to the urban design process undertaken for this project. They also contribute to the assessment of the proposal provided under Section 4 of this report.

Chapter 3.3 – Objectives and Policies: Structure Plans

Objective 3.3.1

Optimised, long-term, positive environmental, economic, social and cultural effects of greenfield development.

Objective 3.3.5

Compatible buildings and activities.

Policy 3.3.5a

Adverse effects of activities near zone boundaries are managed through setbacks, building design, and landscaping.

Objective 3.3.6

Development responds to land suitability including topography, landscape, natural features, soil type, natural hazards, heritage features, adjoining land uses.

Policy 3.3.6c

Road layouts adjacent to identified natural features recognise and retain their natural form where practicable.

Policy 3.3.6d

The scale and quantum of development and land use type recognises land characteristics and suitability and adjoining land uses.

Objective 3.3.7

A range of well-connected, functional public open spaces.

Policy 3.3.7b

Recreational activities are considered for co-location with:

- i. Multifunctional stormwater management.
- ii. Walkways and cycleways.
- iii. Cultural and heritage sites.
- iv. Significant Natural Areas.
- v.

Chapter 12 - Te Rapa North Industrial Zone³

Purpose: Industrial development in Te Rapa North has the potential to support regionally important infrastructure and industries. The existing Te Rapa Dairy Manufacturing Site and the proposed interchange at the junction of the Te Rapa and Ngāruawāhia sections of the Waikato Expressway,

³ We note these are the existing objectives and policies of Chapter 12: Te Rapa North Industrial zone and are not the objectives and policies proposed by PC17.

provides opportunity for limited industrial activity to develop in an integrated, efficient and co-ordinated manner.

Objective 12.2.1

Industrial land uses are able to establish and operate within the zone in an efficient and effective manner.

Policy 12.2.1a

Industrial land is used for industrial uses.

Policy 12.2.1b

Non-industrial uses establish and operate only where they are ancillary to industrial activities, supporting industrial activities, or are consistent with industrial land uses.

Policy 12.2.1c

Non-industrial uses do not adversely affect the industrial use of the Te Rapa North Industrial Zone, or impact adversely on the strategic role of the Central City as the primary office, retail, and entertainment centre, and the other commercial centres in the City.

Objective 12.2.2

The amenity levels of greenfield areas (including Stage 1A) are to be enhanced. The amenity levels of the existing Te Rapa Dairy Manufacturing Site are to be maintained.

Policy 12.2.2a

Amenity levels within the Te Rapa North Industrial Zone are improved through the use of landscaping, screening and setbacks within the interfaces between the zone and the Waikato Expressway and Te Rapa Road.

Objective 12.2.3

Industrial development is consistent with the long-term land use pattern for the Te Rapa North Industrial Zone and occurs in an integrated, efficient and co-ordinated manner.

Chapter 25.5 – Landscaping and Screening

Objective 25.5.2.1

To maintain and enhance amenity values within and around development, while contributing to local ecology and cultural connection where possible.

Policy 25.5.2.1

To maintain and enhance amenity values within and around development, while contributing to local ecology and cultural connection where possible.

Policy 25.5.2.1a

Minimise visual impacts of developments in part by providing appropriate screening and planting around activities and between zones.

Chapter 25.15 - Urban Design

Objective 25.15.2.1

Urban environments that promote the retention and enhancement of urban amenity values, i.e. pleasantness, aesthetics, coherence, cultural and recreational values.

Objective 25.15.2.2

Urban environments that promote a positive sense of place and are reflective of the characteristics of the surrounding local environment.

Objective 25.15.2.4

Subdivision and development which is well connected, legible and promotes sustainable energy use.

Objective 25.15.2.5

Urban environments that integrate land use with transport planning to provide permeable, highly connected and sustainable transport networks.

2.5 Consultation

The development of the Masterplan involved substantial consultation with Fonterra's operation and strategy teams to understand the short, medium and long terms needs of the Te Rapa Dairy Manufacturing Site.

Once the initial Masterplan was developed both Fonterra and the planning team for PC17 undertook significant engagement with mana whenua, the community, Hamilton City Council and other stakeholders and landowners, that has continued to shape and refine the Masterplan. Details of stakeholder engagement are set out within the plan change request.

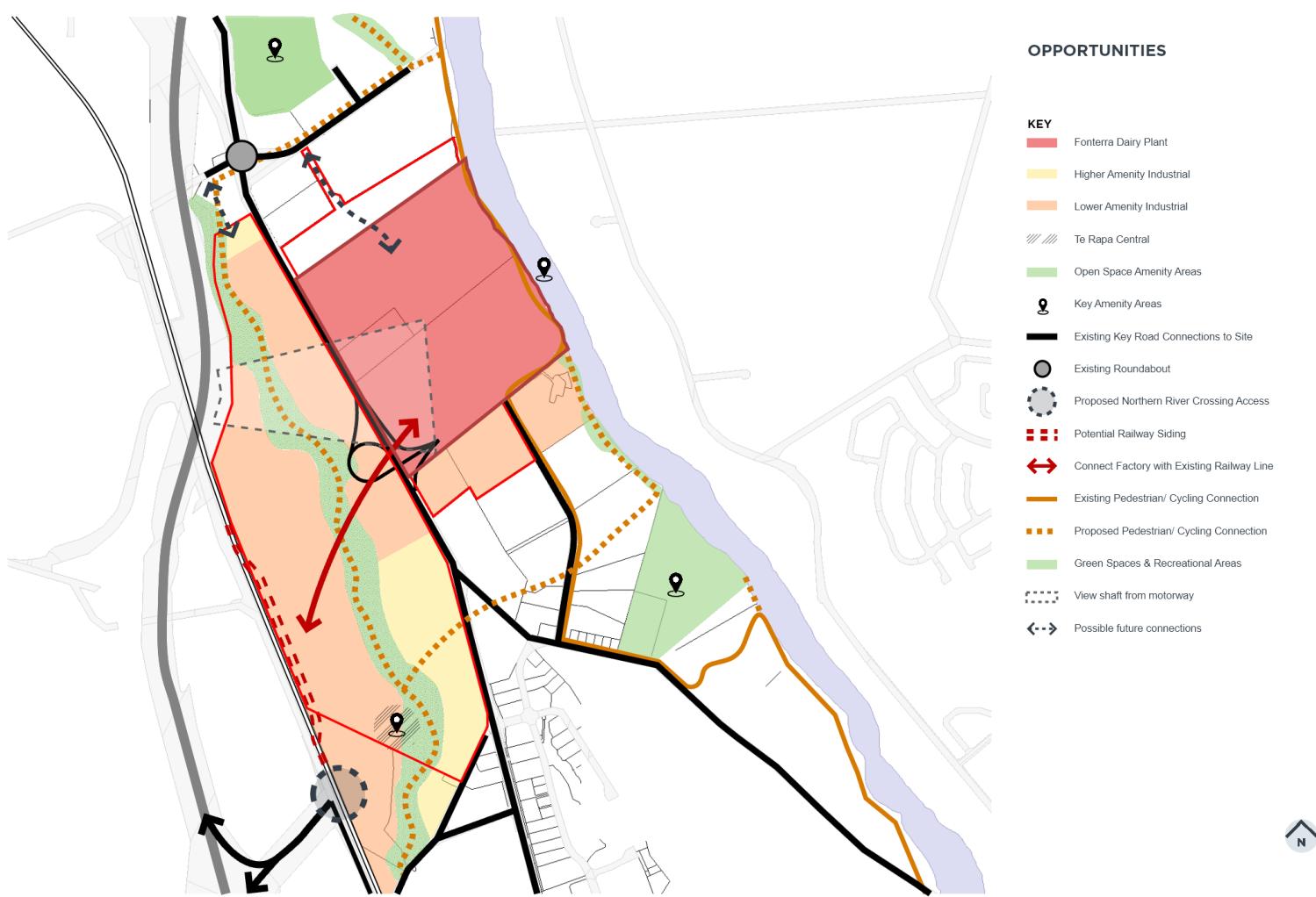
2.6 Summary - Design Opportunities and Constraints

Summarising the findings of the Context Assessment, the following urban design opportunities and constraints were identified and agreed in consultation with the project team. These are mapped at figures 13 and 14 below.

2.6.1 Urban Design Opportunities:

- The Plan Change Area is a large enough area to enable large-format industrial development, including activities with a regional focus.
- The Plan Change Area comprises rural land and has been zoned as Deferred Industrial for a number of years, so would not require removal of significant buildings or existing infrastructure. The land is generally unconstrained with respect the integration of neighbouring land or activities.
- Excellent transport connectivity to SH1C via Te Rapa Rd could be enhanced through an extension to Koura Drive in the future.
- Strong identity and profile for business activities is possible from Te Rapa Road and SH1C (which is elevated and has views across the site).
- Visual and recreational amenity opportunities both existing with the Waikato River and to be developed and enhanced in the future within the site along with future development at Te Awa Lakes.

- Future pedestrian and cycle connections to link with the existing recreational network along the Waikato River.
- Site location, boundary length along Onion Road, and flat topography are favourable for the provision of a North Island Main Trunk Railway siding.
- Integration and protection of watercourses provide a character defining element for the Structure Plan area.
- Ecological and stormwater functions can be preserved and enhanced through development and regulatory mechanisms such as zoning or overlays.
- The large size of the Structure Plan area enables a new amenity area to be included. This could comprise open space and convenience food outlets for the well-being of workers in the area.



2.6.2 Urban Design Constraints

- Existing district plan provisions requiring building setbacks from Te Rapa Road and SH1C. NB, these provisions can be modified through the private plan change process.
- Access must be limited to Te Rapa Road, due to it being an arterial road and future rapid transit corridor. The Te Rapa Manufacturing site interchange also is an important existing access point to service the site from Te Rapa Road.
- Access is currently limited to Onion Road due to the closure of the NIMTL level crossing, and would likely remain limited until grade separation occurs, particularly in the instance of increasing traffic volumes.
- Flood hazard areas (refer Infrastructure Assessment report) within the Plan Change Area surrounding Te Rapa Stream and its tributaries limit developable areas along with the requirement for stormwater detention areas in the form of artificial wetlands.
- The need to retain and buffer Significant Natural Areas associated with the Waikato River on the Plan Change Area's eastern extent.
- Limited street connectivity at Old Ruffell Road and Bern Road, both being no exit roads.
- The Dairy Manufactory Site Noise Emissions Boundary falls across a large portion of the site and limits development of noise-sensitive uses, including residential.
- The NRC's indicative location in strategic documents shows the future road cutting across the Plan Change Area.

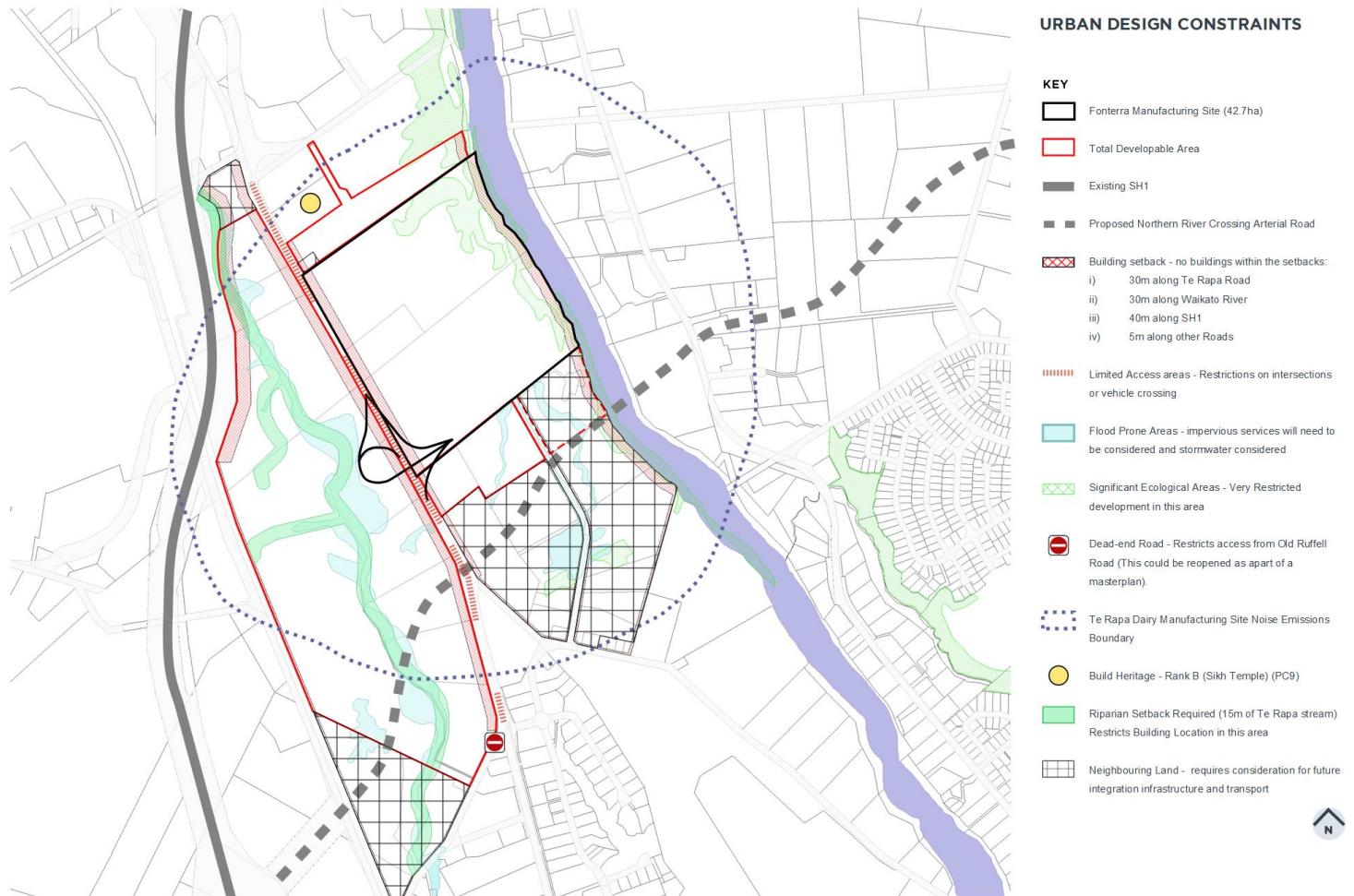


Fig. 14. Existing Site Constraints Plan

3.0

Masterplan Design Process

3.1 Vision and Urban Design Brief

The vision shared by Fonterra to inform the initial Masterplanning process was:

"Our vision is to form an enhancement to Hamilton's northern industrial sector whilst supporting the viability and regional significance of the Te Rapa Dairy Factory. Our goal is to create a social, economic and environmentally sustainable industrial park and to protect the existing Te Rapa stream and enhance its natural amenity and connect with surrounding built form".

Our design process considered and highlighted the following objectives to guide the design of the Masterplan and Structure Plan:

- Unlock underutilised Fonterra-owned land while protecting the Te Rapa Dairy Manufacturing Site against land use incompatibility and reverse sensitivity.
- To achieve a quality industrial precinct within Hamilton City which reflects the legacy of Fonterra, promoted through quality development, cultural identity and a unique character.
- The protection and enhancement of the Te Rapa Stream and its ecological function.
- Achieve high environmental performance through efficient and resilient development that utilises water sensitive design principles.
- To create an industrial precinct that has unique offerings in terms of character and development options, and does not compromise existing commercial centres in Hamilton's urban areas.
- Maintaining high quality interfaces that respect the existing rural environment and public realm.

3.2 Background to the Illustrative Masterplan

The Te Rapa Masterplan process began in 2022, when initial technical assessments and feasibility studies were first undertaken by Fonterra. This included Urban Design Assessments.

During the past two years our urban design team has worked alongside technical specialists (particularly stormwater, ecology and transport) to gain a thorough understanding of the site's potential for industrial development.

Several masterplan iterations were created to investigate potential outcomes, including yield capacity studies (to inform transport modelling, earthworks requirements, transport routes, and stormwater management), concept plans and visualisations.

The outcomes of this process are reflected in the Illustrative Masterplan. The plan has been a living document that provides a hypothetical, though realistic, view of future development potential, character and layout. This allows us to predict some of the finer-grained urban design outcomes that may be experienced beyond the Structure Plan phase.

The Masterplan is considered as a viable and positive interpretation of the site once developed.



Fig. 15. Illustrative Masterplan (not to scale)

3.3 Key Urban Design Moves

The following key urban design moves have been developed and incorporated to the Illustrative Masterplan and Structure Plan. They have been informed through the assessment of the site's context

and consideration of the anticipated future environment following rezoning and amendments to provisions.

- The operational efficiency of the Te Rapa Dairy Manufacturing Site is maintained now and into the future. This includes transport connections and ensuring that development that occurs within adjacent and surrounding land is compatible.
- The Waikato River edge is maintained as natural open space and is protected through zoning and provisions to protect and enable ecological, recreational and cultural functions that exist currently and in future. This includes public access via the Te Araroa Trail network and the Mangaharakeke Pa Site.
- An efficient and integrated road network extension will serve the Plan Change Area and the East-West Road is to protect part of the future NRC project route, including connection to Koura Drive. The development of the area shall not compromise the ability to realise the NRC project.
- Te Rapa Road is maintained as an arterial route and compatible with future bus and cycling facilities. New industrial activity will be unlikely to gain access directly to Te Rapa Road, and is provided with alternative access via a collector road, parallel to Te Rapa Road. A quality frontage (built form and landscaping) is encouraged for the Te Rapa Road corridor and could be delivered through a combination of planning provisions and design guidelines/review.
- The Structure Plan establishes a loop road configuration within the western block, and this supports an efficient industrial transport network. This pattern also minimises crossings of the Te Rapa Stream and provides opportunities for industrial sites to front the public road network.
- A wide corridor surrounding Te Rapa stream will accommodate all flood plains, stormwater management and ecological management functions within one area. This will enhance the ecological functions of the space.
- The rail corridor along Onion Road will be reflected on the Structure Plan with a potential siding which has been investigated, found to be feasible and KiwiRail is supportive of this proposal. Its recognition in the Structure Plan will encourage future industrial activity to integrate and connect with it.
- The Plan Change Area supports block pattern that enables large-scale (and large-format) industrial activities (such as warehousing, logistics/distribution). These activities should be enabled as they would complement and expand the range of existing industrial and business use at Te Rapa and Horotiu. “Wet” industries such as manufacturing or processing plants are not anticipated, as they may conflict with the Te Rapa Manufacturing site and contribute to capacity constraints.
- A Focal Area has been identified as an appropriate location to enable and beverage outlets and other small-scale convenience shops to support the day-to-day needs of industrial workers. The Focal Area, defined on the Structure Plan, is located in the south part of the Structure Plan area because there is a similar existing facility located at Te Rapa Road. The Focal Area includes sufficient land for some recreational open space, and is located next to the Te Rapa Stream where good amenity and natural character can be appreciated.
- Provide for a phased approach to roading, stormwater and industrial development of the Plan Change Area. Multiple areas for stormwater management are proposed (within the Integrated Catchment Management Plan) at various points along the Te Rapa stream corridor. The Manufacturing Site’s main access (underpass) is maintained in the medium term with options to

replace it in the future with a more efficient layout (roundabout or traffic lights), following the development and upgrade of Te Rapa Road.

3.4 Design Guidelines

Design principles will be further explored through Design Guidelines and other mechanisms (such as review panels, covenants and private agreements) to encourage development of quality open spaces, infrastructure and development. The guidelines document and review process will encourage development within the Structure Plan area to maintain amenity values, appropriate built form, and will address reverse sensitivity in relation to the Te Rapa Dairy Manufacturing Site.

These mechanisms will sit outside the District Plan and will be developed after the PC17 process is completed.



Fig. 16. An Artist's impression of future development on the site.

4.0

Assessment of the Proposal

The proposal consists of a Structure Plan, a Proposed Zoning Plan, and the Planning Provisions to support them. Please refer to Section 6.0 and Appendix 12 of the Planning Report for a full description of the proposal and accurate plans.

4.1 Proposed Structure Plan and Provisions

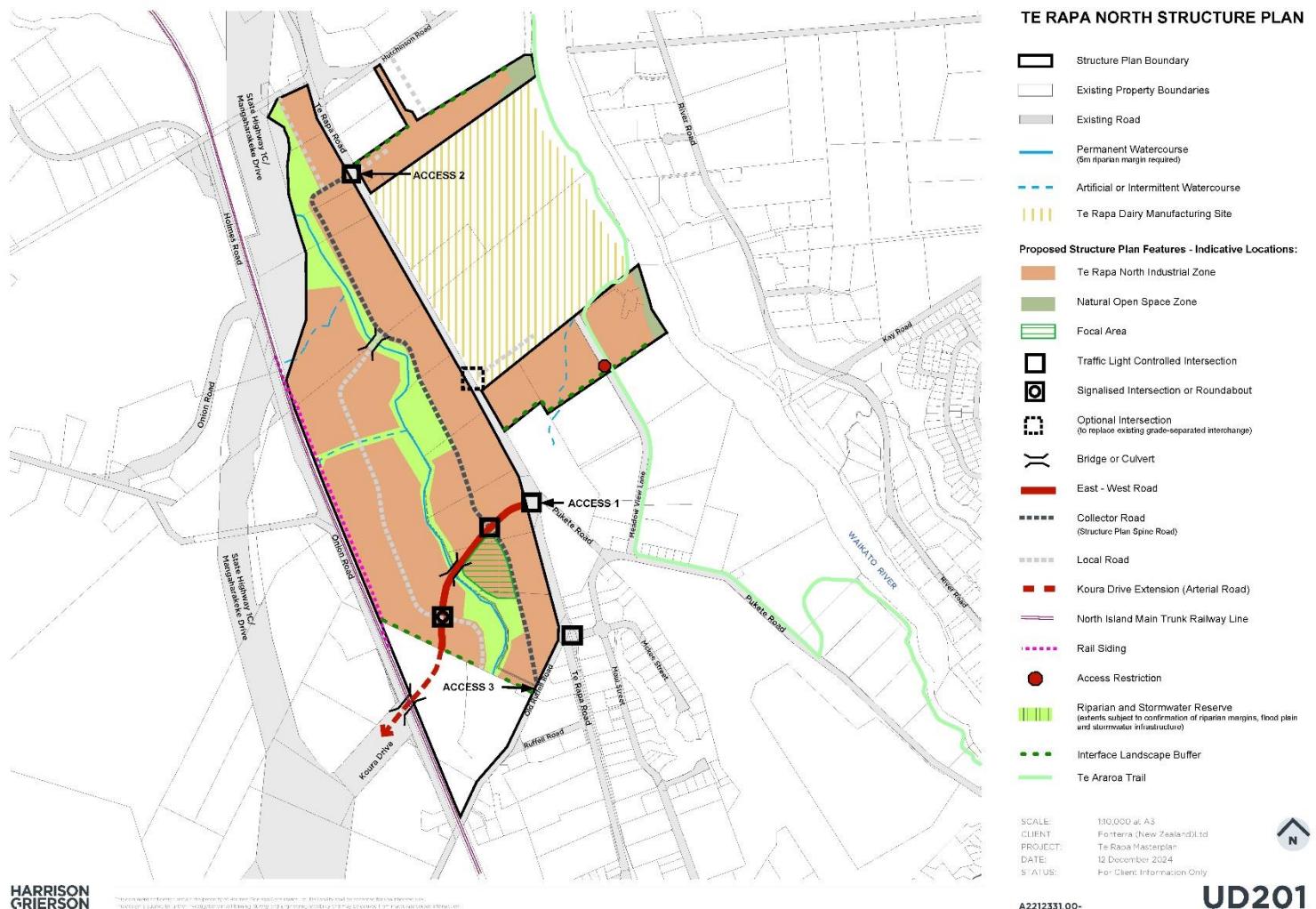


Fig. 17. Proposed Draft Structure Plan (not to scale)

The proposed amendments to planning provisions would deliver the following outcomes:

- Enable 91ha of deferred industrial zoned land to be developed for industrial purposes to address medium-term demand.
- Protect the Te Rapa Dairy Manufacturing Site from land use incompatibility and reverse sensitivity by rezoning the nearby properties and those that share boundaries with the site to industrial to limit incompatible and sensitive activities establishing.
- Enable food and beverage retail to be delivered as a permitted activity within the Focal Area.
- Replace references to the Comprehensive Development Consent process and Stages 1:A and Stage 1:B within the HCOPD and replace these provisions with a Structure Plan, provisions and development triggers, that have been informed by a multi-disciplinary Masterplanning process that considered the Te Rapa Dairy Manufacturing Site, the Plan Change Area and its surrounds holistically. This also enables development and infrastructure to be integrated, which was the objective of the prior CDC process.
- Enable development in accordance with the delivery of infrastructure upgrades and connections, to ensure the function of the area and its surrounds is not compromised.
- Enable the ability to apply specific landscaping and building setback requirements to riparian margins and external boundaries of the Plan Change Area, including sections of boundaries that adjoin the Deferred Industrial Zone Area, the Waikato River and roads.
- Include requirements for specific roading infrastructure upgrades to be constructed prior to certain stages of development of Te Rapa North.
- Include a requirement for an Ecological Management Plan (EMP) to be developed as part of the first land use consent or subdivision consent application in the Northern Precinct.

New provisions are proposed for the TRNIZ (refer the PC17 Te Rapa Draft Objectives, Policies & Rules). The most relevant of these are as follows:

Objective 1) Industrial land uses are able to establish and operate within the zone in an efficient and effective manner.

Policy a. Require the Te Rapa North Industrial zone land to be used for industrial uses.

Policy b. Non-industrial uses shall establish and operate only where they are ancillary to or supportive of industrial activities.

Policy c. Non-industrial uses do not adversely affect the industrial use of the Te Rapa North Industrial Zone nor impact adversely on the strategic role of the Central City as the primary office, retail, and entertainment centre.

Policy d. Subdivision and development are undertaken in general accordance with the Te Rapa North Industrial Structure Plan.

Typical road cross sections were developed by Urban Design and Transportation Engineers. They reflect future development of the key road corridors shown on the Structure Plan. A sample is provided below (the full set sits within the Transport Assessment Report by BBO).

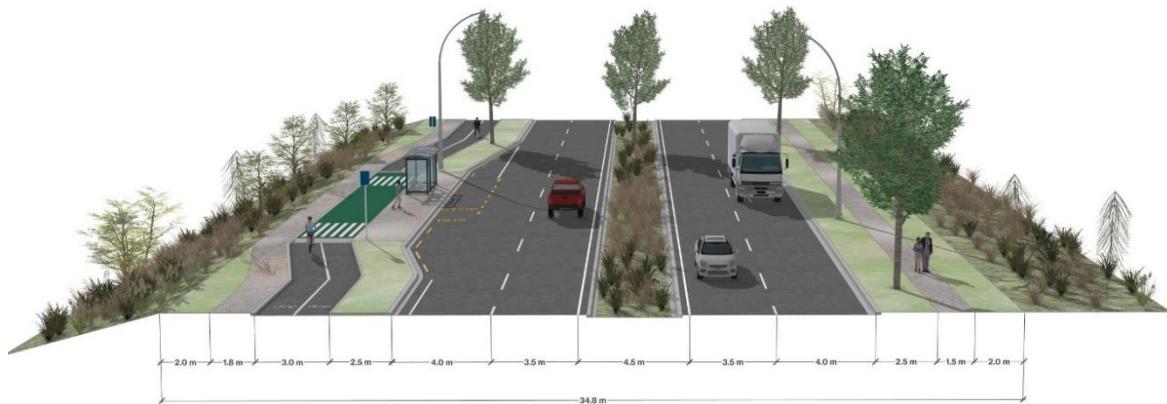


Fig. 18. Proposed Arterial Road typical cross section (East-West Arterial)



Fig. 19. Proposed typical cross section for the Collector Road, showing the alignment adjacent to the Te Rapa Stream Riparian and Stormwater Reserve.



Fig. 20. Proposed Local Road Typical Cross Section

4.2 Assessment Framework

The following assessment addresses the proposal in relation to good urban design practice, and in relation to the key topic areas identified within the site's regulatory context that are relevant to urban design. The topics covered herein are specific to this project's scale and level of detail.

As the Plan Change Area is zoned TPNIZ with the overlay 'Deferred Industrial Zone' and PC17 seeks to enable industrial development in accordance with that zone (once the deferral is removed), it is not considered necessary to address the validity of the zoning that has been applied. The anticipated future environment (post-development), like that illustrated in the masterplan, is being considered as a basis for our assessment however PC17 is "enabling" and there are no physical elements that would be delivered as a direct result of PC17 being approved.

4.3 Assessment of PC17 Outcomes

4.3.1 Structure Plan area extents and integration

Good urban design aims to define a Structure Plan boundary that is practical, legible and efficient from the perspective of future development as well as the integration of future urban land outside of the boundary in the short and longer term.

The PC17 Area boundary is defined largely by the extents of landholdings of Fonterra, which have been expanded over time to include land that is geographically contiguous and that forms a suitable reverse-sensitivity buffer area for the Dairy Manufacturing Site (helping to meet the purpose of Chapter 12 of the HCOPD). The Structure Plan land represents an area that can be planned and delivered with a high degree of certainty while avoiding development outcomes from being determined within neighbouring land. All parts of the Plan Change Area are suitable and likely to be utilised for general industrial development and no other activities are required to be provided within the Structure Plan Area (aside from enabling infrastructure and riparian land).

The tract of rural-residential land that sits outside of the PC17 Area to the south-east (between Te Rapa Road and the Waikato River) is not proposed to be re-zoned, but is able to be planned and developed in future by the landowners without triggering any significant cross-boundary urban design constraints. There is sufficient land in that area for it to be the subject of a future Structure Plan process.

Land directly to the north of the Structure Plan Area is part of the Te Awa Lakes development, with existing planning documents already in place to guide its future growth.

Land to the south and south-west of the PC17 Area, (adjacent to Onion Road and Old Ruffell Road) is mostly owned by Empire Corporation who is able to undertake a rezoning of its landholdings independent of PC17 or support any publicly initiated rezoning (through either a Public Plan Change or District Plan Review). Therefore, this land does not need to be contained within the PC17 Structure Plan extents (and it would fall outside of the scope of this project).

Future integration between the PC17 Area and the Empire owned land in the south is enabled on the Structure Plan through the local road connecting to the East-West arterial road, which is a positive

urban design response. The boundary of this Structure Plan is also treated with a Landscape Buffer, that is intended for the interim protection of amenity values of the few dwellings that currently occupy the land, near Old Ruffell Road.

Other boundary extents for the Structure Plan Area are defined by the NIMTL, SH1C, and the Waikato River, which are logical physical boundaries to urbanisation.

Overall, the boundary and extents of the Structure Plan are a positive urban design outcome.

4.3.2 Transport connections

Koura Drive Extension and the future NRC are identified as a key strategic transport route in the long term, and supplement the existing connection to SH1C interchange to the north. This choice of connection points to the new industrial area provides some resilience and efficiency for future development.

Te Rapa Road is a major arterial road and the primary access point to the Te Rapa Dairy Manufacturing Site currently. Access into the Te Rapa Dairy Manufacturing Site via the existing off-ramp (loop and tunnel) intersection is maintained within the Structure Plan through the proposed transport network both as an interim option (maintaining the current entrance) as well as providing for future upgrades (a potential traffic light-controlled intersection), and a proposed intersection further north. This is therefore consistent with Chapter 12 of the HCOPD.

The Structure Plan does not indicate a road form or function for Te Rapa Road as this will be addressed by HCC as part of future roading upgrades (that are understood to cater for public transport and cycling facilities to cater to industrial and general traffic).

Rail integration has been provided through the identification of the Rail Siding on the Structure Plan. This siding would be delivered through development of industrial lots, and each lot would need to enable it through land allocation and, potentially, through easements. The rail siding offers resilience and choice with respect to freight, and could provide sustainability benefits (helping to achieve Objective 25.15.2.4).

Walking and cycling are provided through the design of road cross sections that include footpaths (on both sides of all roads) and cycling facilities (on the Collector and Arterial roads). These are supported by street trees for amenity and a bus route on the Arterial Road. The main cycle route through the development follows the Collector Road and is aligned north-to-south, which allows users to connect to Te Awa Lakes development. The Collector Road network has been designed (where practicable) to follow the edge of the Te Rapa Stream (Riparian and Stormwater Reserve), so could become an attractive route for commuters to use.

New connections to the Te Araroa Trail are not specifically provided for by Structure Plan elements, but are possible through connections to Meadow View Lane, or further south (outside of the Structure Plan Area), where the NRC will be delivered in future.

4.3.3 Layout and urban block pattern

The Structure Plan contains the essential transport elements that are required to achieve an efficient network (meeting Objective 25.15.2.5). These could be further enhanced through minor roads/connections in future.

Apart from Te Rapa Stream and Waikato River margins there are no specific existing landform features that are considered necessary to incorporate within future development and the site is expected to be earth-worked to a reasonably flat contour. Most of the PC17 area is of a gentle gradient and can be readily developed through minor earthworks into large, flat industrial sites.

The Te Rapa Stream corridor sits at a low elevation relative to Te Rapa Road, so it is anticipated that industrial development on the western edge of the road will ultimately sit slightly (2m+) below the level of the road; at least within the northern half of the PC17 Area.

The wide area shown for the Te Rapa Stream Reserve is inclusive of the stormwater management and ecological requirements that were identified through technical reports. The layout of the Structure Plan roading places bridge crossings at locations where they best fit the landform and its existing ecology. Detailed design consideration was tested through the Illustrative Masterplan and has informed the location of roads and the bridge crossing within close vicinity of the Te Rapa Stream.

An efficient, rectilinear block structure is generally achieved through the Collector and Local Road network proposed; except in the south, where the site is slightly constrained by the geometry of Old Ruffell Road. The flexibility portrayed within the indicative alignments of the roads on the Structure Plan may allow the lot boundaries to be optimised in future, to meet the specific needs of proposed development.

Each block within this pattern of roading is at least 80m in depth, which is a large and flexible size for industrial development. Development adjacent to the rail siding is of a large size (block depth 120m) to provide for internalised siding or loading facilities associated with rail freight if such activities locate there.

Development within the Fonterra owned land near Meadow View Lane is constrained in that it will need to be accessed from internal local roads or minor accessways, since direct access to Te Rapa Road or Meadow View Lane is not possible. The block sizes at this location are of a large size, so can provide multiple options for the layout of future industrial development.

The Focal Area is indicated on the Structure Plan at a size of approximately 2.0 hectares and is located adjacent to a wide area of Stream and Riparian Reserve. This size provides a general location that provides for a smaller-scale development to locate within. The anticipated development (supported through Planning provisions) includes food and beverage outlets as well as associated car parking and outdoor recreation opportunities. The location in the southern part of the Plan Change Area is be a suitable distance away from the existing retail and amenity offering at Te Awa Lakes (1.6km away) and facilitates a walkable/cycle catchment for both. The Focal Area's location is close to key arterial roads, but not directly on them since that might invite passing trade from the general public, which is not the intention of the Focal Area.

Overall, with the proposed activity types consisting of industrial (excluding wet industry, but including logistics and distribution centres) and a Focal Area, the road layer establishes urban block sizes that are appropriate and will not restrict the efficient operation of those activities. The proposal therefore meets Objective 3.3.6 of the HCDOP.

4.3.4 Key interfaces with future development

The Waikato River edge will be maintained through the formalisation of the Natural Open Space Zone on the Structure Plan. A 15m landscaped setback and 30m building setback are proposed and can be as part of future industrial development. This is both a positive and practical urban design outcome that will protect the amenity of the Te Araroa Trail and open space along the western bank of the Waikato River.

Land adjacent to Te Rapa Road on both sides will be occupied by industrial development. Direct access to properties (due to access restrictions and sightlines) is not available via Te Rapa Road, therefore this interface will present as the “back” of the industrial lots. A 2m wide landscaping buffer strip is required along this edge (through existing Rule 25.5.3.1) to mitigate visual effects on the public, which is supported in the assessment of Landscape Effects. The Structure Plan therefore does not need to show a specific landscape buffer strip along the Te Rapa Road edge. The edge is also addressed through a large setback to buildings (10m on the west edge and 5m on the east which is a proposed reduction from the 15m setback currently in the HCOPD), and by proposed Rule 12.4.9 that restricts outdoor service yards or storage. Finished levels for building sites on the western edge are likely to sit lower than Te Rapa Road itself (based on existing topography), potentially helping to visually soften the interface.

Amenity values of the Te Rapa Road corridor will be affected as a result of development, but the combination of elements outlined above will result in an acceptable interface. Detailed design of amenity elements, including fencing, signage, landscaping, building colour and form could be further addressed through design guidelines (outside of the Plan Change process). While direct vehicular access to industrial sites is not envisaged along Te Rapa Road, pedestrian and cycle access is possible and would be positive, if provided.

SH1C – A Portion of SH1C where it crosses Onion Road is elevated (by approx 8m) with views across the Structure Plan Area to the Te Rapa Dairy Manufacturing Facility and the treeline along the Waikato River. Development will modify this landscape, through buildings with heights of up to 20m and shipping containers stacked to 25m in height. Following development, views to the River environment, and the Te Rapa Stream, may be possible through gaps in built form or across roof tops (since a typical roof height of large-format industrial building is closer to 9m).

At the NIMTL Railway Corridor and Onion Road edge, the area would become industrialised as a result of the proposal, including through the development of the rail siding (discussed at Section 4.3.2 and 4.3.3 above). The landscape strip requirements (including planting to 2.0m depth) required by Rule 25.5.3.1 are applicable along the boundary and will help to soften the visual impact of development in the short term. In the long term, it is anticipated that the majority of the land between the NIMTL and SH1C (most of which is owned by Empire Corporation) would be developed as industrial, and if so, would be spatially contained by the Highway.

Rural-residential properties adjacent to the south-west boundary of the Structure Plan Area are within the Deferred Industrial Zone area. The Structure Plan shows a landscape buffer strip (5m in depth) along this interface that will protect residential amenity values in the short to medium term (and applying until such time as the deferred zone area is removed). Access into, and development of this residential land is enabled through existing connections such as Meadow View Lane.

The northern edge of PC17, adjacent to Te Awa Lakes development, is proposed to be treated with a landscape buffer strip of 2m in width. The development north of the PC17 Area is anticipated to be commercial in nature. A single road connection is provided through this land, which is adequate to enable connectivity while allowing an appropriate amount of separation between land uses, further supported by a landscaped buffer strip.

The East-West Arterial Road (and part of the future NRC) is proposed to be a major thoroughfare for future users and they will experience the development when travelling along its elevated carriageway (crossing Onion Road, and then Te Rapa Stream). The elevation of the road is likely to result in wide vegetated batters on each side, that may help to provide amenity for road users. Industrial activity will not directly access the route, but will do so through multiple intersections shown on the Structure Plan. The views available from the elevated Arterial Road would encourage high-value/high-quality industrial activity (the front façade) to face towards this route (although design guidelines on advertising signage and building colour may be beneficial in future). The alignment is also likely to provide clear views to the Fonterra Te Rapa Manufacturing site, which is a character-supporting element and local landmark.

4.3.5 Te Rapa Stream environment

The riparian corridor surrounding the Te Rapa Stream (and tributaries) represents a significant swathe of land that has been scaled and designed to contain the primary stormwater management, ecological and other functions for the PC17 Area west of Te Rapa Road all within one centralised location.

Development of this space will be subject to resource consent processes and will establish the future ownership and detailed design aspects such as footpaths and amenity features. Two bridge crossings over the Te Rapa Stream are depicted on the Structure Plan, and their locations have been designed for suitable construction gradients, connectivity benefits, and while avoiding unnecessary modification to the stream or wetlands.

The Collector Road is proposed to sit adjacent to on section of the Te Rapa Stream and the road and adjacent development would benefit from the significant amenity values provided within the riparian corridor, as well as supporting a quality walking and cycling experience. Industrial development adjacent to the stream may also include elements of integration through staff rooms and active building edges fronting the stream. The wider extents of riparian and stormwater area make this outcome more likely.

The riparian corridor is able to be expanded south as part of a future development (outside of the PC17 Area) when development of 68 Old Ruffell Road occurs.

Overall, the development of PC17 will increase the formalised extents of the riparian corridors and enable upgrades along the edges and through the large stormwater basins activated for the site. As has occurred within other development near the PC17 Area, these elements will contribute to the overall character of the site, and the appreciation of the natural environment from within the development.

Access to the riparian land by the public is not precluded but is best understood in context of specific industrial activities at the time of detailed design

4.3.6 Detailed design, urban form and character

The potential building height of 20m is generally unlikely to be achieved by most industrial development but it is not out of context with the scale and the interfaces surrounding development and is therefore supported from an urban design perspective. The increased permitted height allowance (25m) for shipping containers is helpful to support and encourage development for regional-scale logistics, especially rail-based freight activity.

Proposed reductions in building setbacks are not likely to have a negative effect on the urban form of the future development, though will improve the efficiency and flexibility of use in specific circumstances such as multi-unit development (supporting compact urban form in alignment with Directive B7 of the Future Proof Strategy). It is noted that building setbacks are also governed by fire rating and other factors determined through the Building Act 2004, in addition to planning rules.

Early discussions on design guidelines have taken place with Fonterra and are anticipated to form part of a future development framework undertaken after the PC17 process. The guidelines would, following the approval of PC17, be implemented with the purpose of encouraging individual industrial developers/activities to provide quality amenity and interfaces through landscaping and built form (architectural) controls.

The guidelines will be more detailed in the District Plan provisions and provide examples of best practice site design and built form outcomes that would meet urban design best practice as well as ensuring optimal protection to the Te Rapa Dairy Manufacturing Site from reverse sensitivity.

4.3.7 Timing and phasing of development

Although the HWMS's timeframe does not anticipate development until 2035, PC17 proposes to bring the timeframe forward, from long-term to medium-term supply. Physical development and occupation of the industrial site would occur gradually in the years following rezoning. Higher demand for large-format industrial land, and anticipated market uptake is the key justification given (within the Economic Assessment) for bringing forward the planning timeframe from the HWMS estimate.

Sound urban design includes consideration of potential phases or stages within a development. Flexibility and resilience are provided for within the Structure Plan through interim and long-term solutions for the key roading upgrades (including Koura Drive/NRC route identification, the upgraded entry to the Te Rapa Dairy Manufacturing Site and the Te Rapa Road corridor upgrades by HCC). Required infrastructure upgrades are well-documented and are proposed to be coordinated with development (refer to the PC17 Objectives Policies & Rules).

The road layout shown on the Structure Plan provides for development to be undertaken originating at either the north or south of the PC17 Area. The Plan also offers a phased approach to the delivery of the riparian and stormwater reserve on a sub-catchment basis and in association with adjacent development.

The Focal Area overlay on the Structure Plan aligns with where the development is likely to begin; from the collector road in the south. This enables the Focal Area to be established early and provide for workers' needs.

5.0

Conclusion

The Structure Planning process undertaken for this project represents an appropriate degree of urban design input for a proposal of this scale and nature. It combines the technical inputs from multi-disciplinary design workshops and investigations.

The Illustrative Masterplan depicts a positive and practicable development proposal that responds positively to its context and the design opportunities and constraints identified during the design process.

Specific stakeholder feedback has been sought on the proposal at various stages, including at a public open day. Fonterra has led stakeholder discussions to date, including with tangata whenua. Input by stakeholders has been informative and productive in terms of design issues and outcomes.

The design outcomes, in summary, are positive. The key features that will enable a well-functioning urban environment in future are:

- The Structure Plan land is highly suitable for development of industrial activity, meeting HCODP Objective 3.3.6. This is due to the presence of the Te Rapa Dairy Manufacturing Site, the strong strategic transport linkages, the topography of the site, and the extent of the Structure Plan Area forming a logical expansion to the existing industrial development further south. Future development will achieve a compact urban form with distinct boundaries that may be expanded in future. The Focal Area overlay provides for some additional amenities for workers within the future development.
- The proposed transport connections to/from and within the PC17 Area are based on a clear hierarchy of movement functions, supported by appropriate cross sections that cater for all transport modes, including rail. This network can achieve HCODP Objective 25.15.2.4 and FPS Directive 7.7 (of Topic B7: Current and Future Growth Areas).
- The Structure Plan's proposed urban block pattern is simple, highly legible and efficient. It also provides a layout and block depth for industrial lots that offers flexibility. This layout is an excellent urban design response and will meet Objectives 25.15.2.5 and 12.2.1.
- The interfaces between future industrial development and the surrounding activities will vary across the PC17 Area. The majority of the Structure Plan boundary is provided with a landscaped buffer and will achieve a suitable level of amenity protection in accordance with Policy 25.5.2.1a, when considered against the background context of this location being earmarked for future industrial development.
- The Structure Plan incorporates the Te Rapa Stream as a central character-defining element. The Te Rapa Stream Riparian and Stormwater Reserve has been designed to support all important ecological and stormwater functions, meeting HCODP Objectives 3.3.6 and 3.3.7.
- Character within the development is supported by the existing Te Rapa Dairy Manufacturing Site, and the Waikato River, which underpin unique sense of place attributes. The protection of

these elements within the proposal contributes to it achieving Objective 25.15.2.2 and Directive 7.9 (of Topic B7: Current and Future Growth Areas).

- The Structure Plan and proposed provisions offer sufficient detail to inform development over time, in a positive manner, while maintaining an appropriate degree of flexibility.

Overall, this proposal reflects sound urban design practise, is well-aligned to FPS Directive 10.6 (of Topic B10: People, Places, Communities and Growth Management) and Objective 1 of the NPS:UD and would establish the fundamental elements that enable a well-functioning environment to be delivered.

6.0

Limitations

6.1 General

This report is for the use by Fonterra only, and should not be used or relied upon by any other person or entity or for any other project.

This report has been prepared for the particular project described to us and its extent is limited to the scope of work agreed between the client and Harrison Grierson Consultants Limited. No responsibility is accepted by Harrison Grierson Consultants Limited or its directors, servants, agents, staff or employees for the accuracy of information provided by third parties and/or the use of any part of this report in any other context or for any other purposes.