



# SECTION 7A: GREENFIELD RESIDENTIAL AREAS

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# 7A. GREENFIELD RESIDENTIAL AREAS

## 7A.1 Introduction

Subdivision is a process to enable the separate ownership of land and the registration of interests in land. Subdivision of land is defined by the Resource Management Act 1991.

This section enables greenfield development within:

- The Whakarongo Residential Area (Map 7A.1)
- The Kikiwhenua Residential Area (Map 7A.2)
- The Whiskey Creek Residential Area (Map 7A.3)

These areas were identified for residential growth in the Palmerston North City Development Strategy 2017.

The provisions within this section require well designed, attractive and functional communities within the Greenfield Residential Areas. The Structure Plans for each Greenfield Residential Area will direct subdivision and provides for neighbourhood centres and public open spaces. A mix of activities and densities are provided for which will assist with achieving a variety of living choices and diverse communities.

## 7A.2 Resource Management Issues

The following resource management issues were identified with regard to subdivision within the Greenfield Residential Areas and apply in addition to the overarching issues identified in Section 7.2:

1. The need for subdivision to create a pleasant, attractive and safe residential neighbourhood.
2. The need to ensure that appropriate mitigation measures are put in place to support residential development in areas affected by natural hazards.
3. The risk of uncoordinated residential development.
4. The need for connectivity between staged development and adjacent urban neighbourhoods.
5. The need to cater for an aging population and changing housing demand through a variety of housing forms and densities.
6. The importance for well-located and accessible local services and community facilities within the neighbourhood centre.
7. The need for high-quality and coordinated streetscapes and public open space.
8. The effects of residential development on sites of significance to Rangitāne o Manawatū.
9. The effects of residential development on stormwater quantity and quality.
10. The effects of development on the Lower Manawatu Drainage Scheme.



## 7A.3 Objectives and Policies

### Introduction

This section contains specific objectives and policies for the Greenfield Residential Areas that apply, in addition to the overarching objectives and policies in Section 7.3. These provisions recognise the importance of well-planned and coordinated greenfield residential growth in the City.

### OBJECTIVE 1

**Subdivision and development in the Greenfield Residential Areas occurs in a coordinated and integrated manner.**

#### POLICIES

- 1.1 To ensure that subdivision and development proceeds in a manner that provides for a logical, planned and integrated extension of the urban boundary within the Greenfield Residential Areas that have been specifically identified as suitable for that purpose and that achieves high quality urban design outcomes.
- 1.2 To ensure that subdivision and development is undertaken in general accordance with the area's relevant Structure Plan including setting aside at the earliest stage of subdivision those areas identified in the Structure Plan as public open space.
- 1.3 To require a Comprehensive Development Plan at each stage of development to ensure that the subdivision design, layout and servicing is in general accordance with the Structure Plan and does not restrict future development opportunities.
- 1.4 To ensure that all new lots have safe and adequate vehicle access from the roading network.
- 1.5 To require a safe interconnected transport network that provides a variety of routes for walking, cycling, passenger transport and motor vehicles.
- 1.6 To control the use of cul-de-sacs within the local roading network.
- 1.7 To provide for the installation of pressure sewer systems in Pressure Sewer Areas.

#### **Explanation**

*Subdivision and development within each Greenfield Residential Area is guided by a Structure Plan, which identifies where infrastructure, services, public open space and neighbourhood facilities should be located.*

### OBJECTIVE 2

**Subdivision and development in the Greenfield Residential Areas create a high-quality and diverse living environment.**

#### POLICIES

- 2.1 To ensure subdivision and development meets the reasonable needs of future users whilst achieving the following design principles:
  - Street design contributes to attractive and safe neighbourhoods
  - Housing diversity and variety is achieved
  - Visual dominance is avoided



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- Allotments are shaped and designed to enable dwellings with good solar access and sufficient outdoor amenity and sunny private outdoor space
  - Convenient and safe access for residents is provided to nearby public open spaces, neighbourhood centre and public transportation routes
  - Intended building scale and form contributes to a distinctive sense of place that complements other subdivisions or developments
  - Takes advantage of connections and significant views to the wider landscape
  - The natural characteristics and contours of the site are worked with
  - Safe walking and cycling is facilitated
  - A high degree of connectivity within the local roading network is provided, and
  - Crime Prevention Through Environmental Design (CPTED) ensures all streets and public spaces are overlooked or visible from adjacent activities.
- 2.2 To enhance and restore the natural features of the site, through sensitive integration of stormwater design.
- 2.3 To enhance the amenities of the natural and built environment following earthworks by requiring that road berms, new allotments, and public open spaces are formed, landscaped and planted to a level commensurate with the intended use and consistent with delivering a coordinated and coherent streetscape.
- 2.4 To ensure public open spaces meet the needs of the community by ensuring that these areas:
- are of a high quality
  - have sufficient road frontage so that users are visible to the general public for safety reasons
  - are located so that they are easily accessible to the general public, and
  - have a terrain and are of a type and size that is useable for a number of active and passive recreation activities.
- 2.5 To ensure neighbourhood centres meet the needs of the community by ensuring it:
- has sufficient road frontage so that users are visible to the public
  - is located to ensure ready access by all users, and
  - is designed to create a high-quality environment and community focal point.
- 2.6 To control the development of land near roads and the railway line to ensure noise from transport infrastructure does not cause adverse effects on the amenity of noise sensitive activities, and that subdivision design prevents adverse impacts on the efficient use of roads and railway lines.
- 2.7 To ensure that subdivision in the Kikiwhenua Residential Area:
- Responds positively to and minimizes adverse effects on identified wahi tapu sites
  - Facilitates pedestrian and cycle connections to the Longburn Shared Pathway and Manawatu Bridle Track
  - Ensures any significant areas, such as Kikiwhenua, urupa, and current Rangitāne owned land are protected and safe public access to those areas are facilitated
  - Creates a high amenity interface between the Kikiwhenua Residential Area, Pioneer Highway, Mangaone Stream, and Te Wanaka Road



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- Public open space design is site specific, responding to vegetation and cultural significance.

#### 2.8 To ensure that subdivision and development in the Whiskey Creek Residential Area:

- Avoids, remedies or mitigates adverse effects on the Manawatu Drainage Scheme and minimizes any increased flood risk to adjoining properties.
- Provides for restoration of the ephemeral tributary of Whiskey Creek as recreational reserve with quality recreational links.
- Provides appropriate setbacks of buildings from the natural gas pipeline that traverses part of the area and locates the pipeline within a public service corridor.
- Provides for vehicle access to both Benmore Avenue and Rangitikei Line.
- Has regard for the existing residential subdivision boundaries where it abuts Meadowbrook Drive.

#### 2.89 In addition to Policy 1.2, subdivision in the Whiskey Creek Residential Area shall be in general accordance with the following Structure Plan design principles:

##### 1. Stormwater and Flooding

- Avoid any more than minor adverse effects on the Manawatu Drainage Scheme.
- Flooding risk on adjoining residential properties shall not be exacerbated.
- Water Sensitive Design either within the street network or within the reserve are provided.
- Design of the stormwater detention pond positively contributes to visual amenity and ecological values whilst achieving hydraulic neutrality.
- Supplementing flows within Whiskey Creek with stormwater or groundwater discharges.

##### 2. Open Space and Reserves

- The design provides for:
  - Ecological restoration of the ephemeral tributary of Whiskey Creek.
  - A dry formal equipped play area and a flat open space for informal recreation.
  - Consultation outcomes with Rangitāne o Manawatū in relation to the design and preparation of a Management Plan for the reserve regarding whanau ora values.

##### 3. Gas Pipeline

- Appropriate setbacks of buildings from the natural gas pipeline are provided and the pipeline is located within a public service corridor.

##### 4. Streets and Linkages

- To provide safe transport access to Benmore Avenue/ Meadowbrook Drive intersection and a left in/left out access to Rangitikei Line.
- All streets shall interconnect with no cul-de-sacs.
- The cycle and pedestrian links shown on the Structure Plan are provided.



- (iv) Street design and planting shall be in accordance with the Council Engineering standards for appropriate road hierarchy.

#### 5. Subdivision Design and Integration

- (i) For lots adjoining existing Meadowbrook Drive properties:
  - The subdivision design shall maximise alignment with existing lot boundaries for Nos. 7 to 31 Meadowbrook Drive.
  - A 1 storey height standard shall apply.
- (ii) A positive city edge is achieved by ensuring all lots adjoining the reserve enable dwellings fronting the reserve.
- (iii) Layout of the multi-unit housing area will achieve active frontages to road 1 and the flood plain reserve.
- (iv) Lots enabling dwellings fronting streets.
- (v) The street and block layout provides for a fine grain walkable block structure and a predominant generally orthogonal street alignment as shown on the Structure Plan (Map 7A.3).
- (vi) The location, dimensions, and size of lots shall provide for a mix of conventional suburban lots, multi-unit residential development, open space, recreation, and commercial activities that is generally consistent with mix of housing density and uses shown on the Structure Plan (Map 7A.3).

#### 6. Typology and Density

- (i) Medium Density Housing is provided for in the location shown on the Structure Plan, allowing for development up to 11m in height while ensuring reasonable sunlight access to adjacent properties is maintained.
- (ii) Commercial activities are provided for in accordance with the Structure Plan (Map 7A.3) that provide:
  - A positive relationship to the reserve and attenuation area
  - Amenities and services for the local neighbourhood
  - An active frontage at the street edge.

#### 2.9 Subdivision and land development in the Whiskey Creek Residential Area that is not generally in accordance with the Structure Plan design principles identified in Policy 2.8 shall achieve the following:

- (i) The same or similar level of connectivity into, out of and within the Whiskey Creek Residential Area.
- (ii) The same or similar street hierarchy and layout.
- (iii) The opportunity for commercial activities is maintained.
- (iv) Stormwater detention, which does not compromise the delivery of other Structure Plan features.
- (v) A positive active edge to the Conservation and Amenity Area and vegetated edge to Rangitikei Line / State Highway 3.
- (vi) A mix of housing types and densities.



## OBJECTIVE 3

**Subdivision and development in the Greenfield Residential Areas occurs in a manner that recognises the risk and effects of natural hazards.**

### POLICIES

- 3.1 To control the subdivision of land that is affected by natural hazards and to ensure that any necessary mitigation measures are in place prior to development.
- 3.2 To improve land utilization to safeguard people, property and the environment from the adverse effects of unstable land by ensuring that:
  - Disturbance to the natural land form, existing vegetation and habitats, natural drainage and significant natural features is minimised.
  - Each lot is designed in a manner that ensures:
    - (i) technically appropriate building platforms exist
    - (ii) foundations are designed and implemented to mitigate risk associated with subsurface conditions
    - (iii) sites are identified where roading and access is suitable for its intended use/activities.
  - Earthworks are to be designed and constructed to:
    - (i) provide safe and adequate building platforms and foundation for roads and services
    - (ii) provide for the adequate control of stormwater
    - (iii) prevent erosion and instability
    - (iv) remain safe and stable for the duration of the intended land use
    - (v) not necessarily rely on artificial or human-built structures for stability; and where such structures are employed these shall remain safe and stable for the duration of the intended land use
    - (vi) avoid contamination of groundwater and surface water, and
    - (vii) avoid or mitigate the diversion of ground water flows.
  - Earthworks and the re-contouring of land are to be the subject of specific design by a chartered professional engineer experienced in soil mechanics or geotechnical matters and shall take into account the predicted improvements to soil slope and stability which will be achieved and the impact on existing vegetation and landscape values.
- 3.3 To restrict development or require additional geotechnical investigations prior to the future use of land where appropriate.

## OBJECTIVE 4

**Stormwater management in the Greenfield Residential Areas is carried out in an integrated manner.**

### POLICIES

- 4.1 To have stormwater management measures in place in advance of residential

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- 4.2 To demonstrate an integrated approach to the provision of stormwater management that recognises the capacity of existing systems and natural drainage patterns.
- 4.3 To encourage the use of Water Sensitive Design wherever appropriate.
- 4.4 To ensure stormwater management contributes to the recreational and visual amenity of the development.
- 4.5 To ensure the design of stormwater infrastructure and management of stormwater runoff from the Kikiwhenua Residential Area avoids or substantially mitigates adverse effects on people, property (including the development potential of surrounding land for future urban growth), infrastructure and the natural environment, and utilises where reasonably practicable the Mangaone Stream Catchment for discharge of runoff.

## 7A.4 Methods

### General

The principle methods used to implement the policies are District Plan Rules and the following Greenfield Structure Plans:

- The Whakarongo Structure Plan (Map 7A.1)
- The Kikiwhenua Structure Plan (Map 7A.2)
- [The Whiskey Creek Residential Area \(Map 7A.3\)](#)

In some cases, reliance on the provisions of the statute itself will cause policies to be implemented. For instance, Section 106 of the RMA in respect of refusal of consent or the imposition of conditions in respect of natural hazards, and Section 220 in respect of the imposition of certain subdivision conditions.

Council has prepared a document "Engineering Standards for Land Development" which illustrates good subdivision engineering practice and is useful in the control of subdivision. It provides sound technical standards which, where appropriate, can be incorporated by reference in conditions of consent.

## 7A.5 Residential Zone

### Introduction

This section contains specific rules and assessment criteria for the Greenfield Residential Areas and governs subdivision in that area. These provisions recognise the importance of achieving a logical, planned and integrated urban form that achieves high quality urban design outcomes.

#### 7A.5.1 RULES: CONTROLLED ACTIVITIES

##### R7A.5.1.1 Controlled Activities

1. Any subdivision in a Greenfield Residential Area for the purpose of accommodating any network utility is a Controlled Activity in respect of:
  - a. The size, shape and arrangement of the lot and access.
  - b. Those matters described in Sections 108 and 220 of the Resource Management Act 1991, provided the network utility concerned is a Permitted Activity or a resource consent has been granted.

##### R7A.5.1.2 Performance Standards for Controlled Activities

- (a) Lot Size



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The maximum area of an allotment for a network utility shall not exceed 200m<sup>2</sup>.

#### (b) Balance lot size

The balance lot(s) must not result in any increase in non-conformity with any permitted activity standard for the Residential Zone.

#### (c) Access

Provision is made for the safe, efficient and convenient access for vehicles to access the roading network.

#### (d) Servicing

New essential services are located in public service corridors that are vested with Council.

### 7A.5.2 RULES: RESTRICTED DISCRETIONARY ACTIVITIES

#### R7A.5.2.1 Restricted Discretionary Activities

1. Any subdivision in a Greenfield Residential Area which is not a Controlled Activity, and any cross lease, company lease or unit title subdivision creating allotments requiring vehicular or foot access to a road listed in 20.6.1.6 of the Land Transport Section as a State Highway or a Limited Access Road is a Restricted Discretionary Activity with regard to:
  - a. The size, shape and arrangement of roads, public open spaces, lots, cross lease and company lease areas, units and access
  - b. Those matters described in Sections 108 and 220 of the Resource Management Act 1991
  - c. Subdivision design and layout, provision for local services and public open space in general accordance with the relevant Structure Plan for the area
  - d. Urban design
  - e. Landscaping
  - f. Noise attenuation and management
  - g. Enhancement and management of surface water flows and overland flow paths
  - h. Integration of essential services
  - i. Natural hazards
  - j. Future development opportunities
  - k. Visual amenity
  - l. Effects on the capacity of Council infrastructure
  - m. Safe and efficient operation of the roading network
  - n. Connectivity
  - o. Outdoor/on-site amenity
  - p. Infrastructure and physical resources of regional or national importance
  - q. Hydraulic Neutrality with regards to stormwater runoff.

#### **NOTE TO PLAN USERS R7A.5.2.1(q)**

*For the purposes of the Kikiwhenua Residential Area hydraulic neutrality means limiting peak stormwater runoff rates to no greater than pre-development levels for a site*



### **R7A.5.2.2 Performance Standards for Restricted Discretionary Activity**

#### **(a) Comprehensive Development Plan**

All activities under R7A.5.2.1 must provide (as part of the resource consent application) a Comprehensive Development Plan that details how the design, layout and servicing of the Residential Area is in general accordance with the area's relevant Greenfield Structure Plan. The Comprehensive Development Plan must consider and address the following:

- (i) total area of the development
- (ii) total number of allotments to be developed
- (iii) programme and time frame from development, including the staging of development in the Residential Area
- (iv) the proposed mix of residential, commercial and recreational activities
- (v) primary and secondary road layouts and pavement widths, including details of how these are in general accordance with the relevant Greenfield Structure Plan
- (vi) streetscape including the location and type of street trees and other proposed planting
- (vii) design, shape and location of public open space within the development, including how these are to be managed in the future, including any landscaping or planting corridors
- (viii) location of natural watercourses, how these will be incorporated into the subdivision design and managed in the future, and their potential to be integrated into an innovative and/or low-impact stormwater design
- (ix) proposed walkways and cycleways
- (x) facilities for people with disabilities or special needs, such as shared walkways and disabled parking
- (xi) infrastructural network servicing requirements, including how the proposed infrastructure will provide for future staged development of the Residential Area
- (xii) a report from one or more chartered professional engineers, or other suitably qualified persons, experienced in soil mechanics, geotechnical engineering or land contamination, as determined relevant by Council, identifying geo-physical features and characteristics of the land, including potential erosion, falling debris, subsidence, slippage, alluvium or likely presence of hazardous contaminants, and the likely risks that those features or characteristics present for the land, adjoining land, or any structure likely to be constructed on the land. This report must also contain or be accompanied by:
  - any recommendations as to the design and construction of foundations that are appropriate to mitigate any characteristic or feature identified;
  - an assessment on how fill should be placed onto the land based on sub-surface conditions;
  - recommendations of the setback for buildings from areas of high natural hazard risk;
  - any recommendations as to the necessary remediation of contaminated land;
  - a copy of any site investigations including bore logs; and



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- a certificate from the engineer or other qualified person confirming that the analysis undertaken is in accordance with professional standards, appropriate to the risks identified and of sufficient quality in order to be relied upon as a comprehensive hazard assessment.
- (xiii) a report from a hydraulic engineer identifying the characteristics of the land including potential avulsion or inundation and the likely risks that those features or characteristics present for the land and its future use. This report must also contain any recommendation as to the location, design and construction of foundations that are appropriate to mitigate any characteristic or feature identified. A copy of any site investigations including bore logs must accompany the report. The report must also demonstrate how the proposed Water Sensitive Design measures will ensure hydraulic neutrality is achieved and ensure that there is no increase in stormwater effects on surrounding areas.

In the Whiskey Creek Residential Area, in addition to the above report, the application shall also provide a Comprehensive Flood Management Plan that demonstrates the cumulative flood effects of all stages of the development of the Whiskey Creek Residential Area and shall assess compliance with Performance Standard R7A.5.2.2(a) and shall include:

- i. A modelling assessment using the latest base version of the Taonui Basin Model in accordance with its historic conventions and methodology except where extended or improved on.
  - ii. Validation of the base model for the flood analysis to ensure that it reasonably matches results from the Taonui model.
  - iii. Confirmation that the most up to date LiDAR input data was used within the model.
  - iv. A modelling assessment of the performance of the Benmore Avenue stopbank system which reflects the current top levels.
  - v. A modelling assessment of the flood conditions associated with the 50 year and 200 year ARI events.
  - vi. Comprehensive reporting on all flood modelling work relating to the subdivision area including supply of digital and model geometries, results and differencing data;
  - vii. Confirmation that all necessary approvals have been obtained from the Regional Council.
- (xiv) an urban design statement from a registered architect, landscape architect, or qualified urban designer to explain how the proposed subdivision design relates to the site, its surroundings, and how it creates a high amenity living environment, sense of place, and contributes positively to the local neighbourhood. The urban design statement shall include:
- a context analysis describing how the planning anticipates staged development and/or future growth, including how the development relates to neighbouring sites and areas;
  - the rationale for site planning and design decisions; and
  - how the planning and design of the proposed subdivision relates to the relevant objectives and policies of the District Plan.
- (xv) how the proposed road layout and design ensures connectivity to property and roads that have been developed or have the potential to be developed in the future. Design matters must explain how the proposal provides for network connectivity to achieve:



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- increased number and choice of travel routes for all types of users; and
- improved access to public transport, cycling and walking networks and access to existing roading networks.

(xvi) Whether approval is required from external agencies, including the New Zealand Transport Agency, Horizons Regional Council, and the Department of Conservation, and what progress has been made in securing the approvals, where relevant.

**Explanation**

*The above is not a prescriptive list of requirements, but an indication of the range of matters that may be relevant. Relevance will depend on site characteristics including the context of streets, connections and adjoining activity, and the scale and type of development to be covered by the Comprehensive Development Plan.*

*These issues will be considered to the extent that they are relevant in each situation. The degree of emphasis given to each will depend on specific context, with the intention of achieving a well-planning, coordinated outcome that satisfies the Greenfield Residential Area Objectives.*

*The extent of documentation required will be that necessary to describe the planning and design intention and demonstrate that the relevant issues are addressed by the Comprehensive Development Plan. That will vary from subdivision to subdivision depending on the type of development, prominence of the site and the size of the area covered. It might include, but will not necessarily be limited to:*

1. *Context plan, describing the development in the context of neighbouring sites and the residential area as a whole, showing the arrangement of lots, activities, public open spaces, and landscape planting*
2. *Site and context analysis which identifies important existing conditions*
3. *Indication of the intended activities and their location, and the location and type of visual and physical connections between residential lots and public open spaces including streets.*
4. *Design rationale, which provides the reasoning the intended approach and describes how the relevant issues identified have been responded to.*

*There is no one optimal way of scoping or presenting the information for a Comprehensive Development Plan. The amount of information and type of approach will relate to the size and complexity of the project. Confirmation of relevant issues and precise information requirements should be discussed with the PNCC consents team early in the Comprehensive Development Plan formulation process.*

**(b) Essential services**

- (i) All essential services must be available for connection within 30 metres of the nearest point of the land being subdivided.
- (ii) All new lots must have sewer, stormwater and water supply services that are connected to essential services, including innovative/low impact stormwater designs as provided under the requirements for a Comprehensive Development Plan in R7A.5.2.2 and subject to the assessment criteria in R7A.5.2.3(a)(xii).
- (iii) All new essential services proposed in a subdivision must be located in public service corridors and vested in Council where practical.
- (iv) Wastewater in Pressure Sewer Areas shall be reticulated with a Pressure Sewer System.
  - For the purposes of R7A.5.2.2(b)(iii), the boundary kit and the pressure sewer pipe network located in public service corridors must be installed at the time of subdivision and vested to Council.

**Explanation**

*The Kikiwhenua Residential Area has been defined as a Pressure Sewer Area under the Palmerston North City Council Pressure Sewer System Policy. Pressure Sewer Systems are required in certain areas where there are geotechnical and technical constraints to wastewater servicing. The design, supply, and installation of the Pressure Sewer System must meet Council's Engineering Standards for*



**(c) Existing Buildings**

Where any land proposed to be subdivided contains existing buildings there must be no increase in the degree of non-conformity with any Permitted Activity standard for the Residential Zone (or relevant underlying zone at the time of subdivision).

**(d) Lot Size**

- (i) Unless otherwise specified below, Any subdivision within a Greenfield Residential Area must have an average lot size of 500m<sup>2</sup> - 550m<sup>2</sup>.
- (ii) No single lot shall be less than 350m<sup>2</sup>.
- (iii) No single lot shall exceed 1000m<sup>2</sup> (excluding balance lots or, within the Whiskey Creek Residential Area, neighbourhood centre lots, lots to be developed for multi-unit housing development).
- (iv) Any subdivision in the Whiskey Creek Residential Area must have an average lot size of 400m<sup>2</sup> – 500 m<sup>2</sup> and a minimum of 350 m<sup>2</sup>, other than multi-unit residential development in the identified multi-unit housing area on Map 7A.3 where the developed density shall be lots of no less than 150m<sup>2</sup> and no more than 400m<sup>2</sup>, with the average lot size being 250m<sup>2</sup> – 350m<sup>2</sup>.
- (v) In calculating the lot sizes in (i) to (iii) above, no balance lot, public open space lot, or road parcel shall be included; and the lot sizes shall be exclusive of the acoustic setbacks required by the provisions of R10.6.1.5(e)(i) and (ii).

**Explanation**

Council is seeking a variety of lot sizes in any subdivision. This will provide future residents with a greater choice to cater for their specific housing needs, rather than a uniform provision of lots in greenfield locations.

**(e) Cul-de-sacs**

- (i) Cul-de-sacs shall be a maximum of 100m in length unless otherwise shown on the area's relevant Structure Plan.
- (ii) Cul-de-sacs in the Kikiwhenua Residential Area shall include a minimum of a 10m wide straight public open space walking link connecting the cul-de-sac bulb with an adjacent road or reserve.

**Explanation**

Council is seeking control over the length and use of cul-de-sacs in an endeavor to ensure street connectivity is achieved and disjointed communities are avoided with a range of transport modes available to residents.

**(f) Water Sensitive Design in the Kikiwhenua Residential Area and Whiskey Creek Residential Area**

- (i) A Stormwater Management Plan must be prepared by a suitably qualified stormwater design consultant with experience in Water Sensitive Design concepts and elements. The Stormwater Management Plan must address the following:
  - a site-specific assessment of the likely changes in stormwater quantities created by the development for the 2-year, 5-year, 10-year, 20 year, 50-year and 100 year ARI events with storm durations appropriate for the relevant receiving system using the HIRDS database, taking into account climate change effects;
  - assessment of all internal stormwater infrastructure and how it will interact with the existing drainage system;



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- how the development will hydraulically relate to its surrounding environs, including assessment of overland flow paths and potential flood impacts;
- how the stormwater management system will ensure that any changes in runoff from the site will be addressed;
- Reduction in peak flow discharges by flow attenuation;
- Reduction in discharge volumes by infiltration, soakage or other means appropriate for the site (i.e., the first 5 or 10mm of daily rainfall runoff from impervious areas may need to be retained on site in certain circumstances);
- The ability to use Water Sensitive Design to address stormwater runoff quality aspects; and
- assessment on the impact of development (including new infrastructure) on the existing stopbanks and what mitigation may be required so as to not exacerbate the risk of piping failure

#### **(g) Flood Management in the Whiskey Creek Residential Area**

- Any subdivision consent application within the Whiskey Creek Residential Area (Map 7A.3) shall show through modelling that following the development of all stages of the Whiskey Creek Residential Area:
  - flood levels within the nearby Residential Zone will be reduced or remain unchanged.
  - flood levels within Rural Zone, will not increase by more than 50mm.
- All lots, excluding balance lots, within the Whiskey Creek Residential Area shall have ground levels to suit construction of conventional modern 'on grade' dwellings that have floor levels achieving a reasonable freeboard, above the 0.5% AEP (1 in 200 years) flood level (with flood levels and reasonable freeboard as determined by Horizons Regional Council).

#### **NOTE TO PLAN USERS R7A.5.2.1.1(q)**

*Plan users are advised to check the Engineering Standards for Land Development to ensure the current model for taking into account climate change effects is used when preparing a Stormwater Management Plan.*

In determining whether to grant consent and what conditions to impose, if any, the Council will, in addition to the City View objectives in Section 2, and the objectives and policies of Sections 7 and 7A, assess any application in terms of the following:

#### **R7A.5.2.3 Assessment Criteria for Restricted Discretionary Activity:**

##### **(a) Subdivision design and layout within a Greenfield Residential Area**

- The extent to which the design and layout of the subdivision is in general accordance with the area's relevant Structure Plan, including how the proposal contributes to the overall design principles for the area.
- The extent to which a range of lot sizes has been provided that enable the provision of a diverse range (or variety) of housing development options.
- How the proposed subdivision relates to adjoining sites and areas and whether it enables future subdivision of adjoining lots by providing for the necessary street connections.
- The extent to which houses front toward major roads and entrances to the city.
- The extent to which the proposed subdivision ensures that sufficient connection



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and connectivity is achieved that provides for a range of transport means and minimises the need for cul-de-sacs and rights of way.

- (vi) The extent to which the orientation of lots in the subdivision ensures sufficient solar access is available to the outdoor living area of future dwellings.
- (vii) How integrated public open space has been provided in the design of the subdivision.
- (viii) The continuity and coherence of street trees, public open space landscaping, and the extent to which they have been integrated into the design and layout of the subdivision and the wider neighbourhood environment.
- (ix) The extent to which street trees have been provided at an appropriate scale in relation to the size and significance of the related street and contributes to a distinctive sense of place within the streetscape.
- (x) The extent to which Water Sensitive Design is integrated where appropriate and geo-technically possible and is designed in a way that contributes to the recreational and visual amenity of the development.
- (xi) The extent to which proposed stormwater detention measures ensure hydraulic neutrality is achieved and that there is no increase in stormwater effects on surrounding areas.
- (xii) The degree to which the subdivision provides for the integration of essential services into the existing city network in a manner which is orderly and efficient and that facilitates future development and capacity requirements.
- (xiii) The extent to which Council has the ability to maintain and access infrastructure and services in the future.
- (xiv) The extent to which natural hazard risks are identified and the effects are avoided or mitigated.
- (xv) The extent to which subdivision considers and implements the findings of the geotechnical reports to address land stability issues and recommended mitigation measures.
- (xvi) The effect any earthworks will have on natural hazard risk and/or land stability, including effects on overland flow paths, and sedimentation..
- (xvii) The extent to which landscape planting along road corridors shown on the area's relevant Structure Plan is provided for in a way that delivers a coordinated and coherent streetscape.
- (xviii) The extent to which the design of the proposed subdivision facilitates the creation of high quality attractive public open spaces, including streetscapes.
- (xix) The extent to which earthworks will affect adjoining properties and result in adverse visual amenity and how these effects are managed.
- (xx) Whether any adverse effects of the subdivision on the safe and efficient operation of the roading network can be effectively managed.
- (xxi) The degree to which the location and design of access onto the State Highway network, Limited Access Road or Restricted Access Road adversely affects the safe and efficient operation of the roading network, taking into account the long term operation of the adjacent road.
- (xxii) To have particular regard to the safety of cyclists and pedestrians.

#### **(b) Subdivision design and layout within the Whakarongo Residential Area**



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- (i) The extent to which the subdivision and proposed street layout integrates with Whakarongo School.
- (ii) The extent to which the proposal provides for the establishment and maintenance of landscape setbacks adjacent to Napier Road and Stoney Creek Road, as outlined on the Whakarongo Structure Plan (Map 7A.1).
- (iii) The degree to which landscape planting along road corridors shown on the Whakarongo Structure Plan (Map 7A.1) is provided for in a way that delivers a coordinated and coherent streetscape.
- (iv) The extent to which flood hazard avoidance or mitigation is provided to ensure the protection of residential development in a 0.2% Annual Exceedance Probability stormwater event and to ensure the hydraulic neutrality of the residential area.

**(c) Subdivision design and layout within the Kikiwhenua Residential Area**

- (i) Whether an archaeological assessment of the site has been undertaken by a suitably qualified archaeologist.
- (ii) Whether archaeological discovery protocol have been prepared and approved by a suitable authority representing Rangitāne o Manawatū.
- (iii) Whether a cultural monitoring plan has been prepared and approved by a suitable authority representing Rangitāne o Manawatū.
- (iv) The extent to which subdivision layout and design recognises and represents the connection that Rangitāne o Manawatū have with their rohe.
- (v) The extent to which physical and visual connections are created between the following sites:
  - The subdivision
  - Kikiwhenua
  - Urupa
  - Awapuni Lagoon
  - Mangaone Stream
  - Rangitāne-o Manawatū owned land in the area
- (vi) The extent to which Kikiwhenua, Awapuni Pa, and associated urupa are retained and recognised within the subdivision.
- (vii) The extent to which subdivision layout enable the retention of mature tree stock and shelterbelts as established street trees.
- (viii) The extent to which a clear hierarchy of primary, secondary, and tertiary roads provides legible way-finding throughout the site and encourages walking and cycling along key cultural connections.
- (ix) The extent to which the subdivision positively fronts onto Pioneer Highway, Te Wanaka Road and the Awapuni Lagoon area.
- (x) The extent to which the site connects to the Longburn Shared Pathway, Mangaone Stream Shared Pathway, and the Manawatu River Bridle Track.
- (xi) The extent to which road corridors are designed to provide areas for pervious pavements and swales to reduce total runoff and peak flows.
- (xii) Whether on site detention ponds are designed such that the outlet reduces the peak flow to pre-development flow rates for return events up to the 50 year ARI rainfall event, and the spillway passes the 100 year ARI rainfall event at pre-



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development flow rates.

- (xiii) Whether stormwater detention areas utilise gravity flow paths and avoid the need for pumping stations.
- (xiv) Whether properties fronting onto Pioneer Highway are serviced by a laneway.
- (xv) The extent to which noise setback areas identified in the Kikiwhenua Structure Plan (Map 7A.2) incorporate high quality landscaping and Water Sensitive Design.
- (xvi) The availability of a suitable consent notice for allotments within the Kikiwhenua Residential Area to identify the requirement and management of on-property equipment for the area's Pressure Sewer System.
- (xvii) The extent to which the development of a community facility and small park, and a play area for young children are provided for.
- (xviii) Whether safe and appropriate treatments are in place that have been certified by the relevant road controlling authorities at the intersection of Te Wanaka Road and State Highway 56 prior to any subdivision within the Kikiwhenua Residential Area.
- (xix) The extent to which a traffic impact assessment for the Kikiwhenua Residential Area has been undertaken by a suitably qualified traffic engineer as determined by the relevant road controlling authorities. Without limiting other matters, the traffic impact assessment shall include:
  - An assessment of whether and when a full upgrade of the intersection of Te Wanaka Road and State Highway 56 should be provided to meet the needs of current and further land use; and
  - An assessment of what construction traffic mitigations are required.
- (xx) Whether the proposed stormwater approach will achieve hydraulic neutrality up to the 1% Annual Exceedance Probability (AEP) rainfall event, in comparison to the predevelopment land use, in accordance with the methods and requirements of the Engineering Standards for Land Development.

**(d) Subdivision design and layout within the Whiskey Creek Residential Area**

- (i) The extent to which the design and layout avoids adverse effects on the Manawatu Drainage Scheme and flood risk in the locality.
- (ii) The extent to which the design and layout provides for restoration of the ephemeral tributary of Whiskey Creek as recreational reserve with quality recreational links.
- (iii) The extent to which the design and layout provides appropriate setbacks of buildings from the natural gas pipeline that traverses part of the area and locates the pipeline within a public service corridor.
- (iv) The extent to which the design and layout provides for vehicle access to both Benmore Avenue and Rangitikei Line.
- (v) The extent to which lot boundaries are consistent with the existing residential lots in Meadowbrook Drive where the lots abut those properties.

**Explanation**

*Subdivision within Greenfield Residential Areas is a Restricted Discretionary Activity to ensure that development achieves high environmental outcomes. When rezoning large areas of land for future residential use, it is important that the staged development over time contributes to a well thought out layout and interconnected suburb. The provisions of this rule will ensure that development is integrated with the wider residential area, that connection between stages is maintained and provided for, and the development is consistent with the provisions of the area's relevant Structure Plan.*

**NOTE TO PLAN USERS: R7A.5.2.2 and R7A.5.2.3**

1. All subdivisions must supply a Comprehensive Development Plan as required by R7A.5.2.2 of the



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District Plan.

2. Any subdivision and development that is located on any object or site of Cultural Heritage Value, as listed in Section 17 of the District Plan, must also comply with R17.8.1.
3. Additional consents may be required from Horizons Regional Council for activities including land disturbance and vegetation clearance. Plan users are encouraged to contact Horizons directly for information about the Horizons One Plan requirements.
4. All subdivisions must comply with the National Environmental Standard for Assessing and Managing Contaminants in Soil.
5. Council requires, where appropriate, the approval of the relevant road controlling authority (New Zealand Transport Agency or Palmerston North City Council) before approving a subdivision consent application.
6. It is advised that the applicant contact the appropriate power, telecommunications and gas companies to determine the feasibility of connecting to their services.
7. Plan users are advised to check the Engineering Standards for Land Development to ensure the current model for taking into account climate change effects is used when preparing a Stormwater Management Plan.

#### **R7A.5.2.4 Flood Prone Overlay in the Whiskey Creek Residential Area**

- (i) Despite anything to the contrary in this District Plan, the Flood Prone Overlay shown on the Planning Maps (and associated rules in Chapter 22 of the District Plan) do not apply to subdivision development within the Whiskey Creek Residential Area in the following circumstances:
- a. Earthworks are completed for the purpose of achieving flood hazard avoidance in respect of the entire Whiskey Creek Residential Area shown in Map 7A.3 and in accordance with the Resource Management Act 1991, including any applicable conditions of consent, rules, or regulations; and
  - b. A suitably qualified and experienced engineer with skills in geotechnical assessment acceptable to council provides a certification in accordance with the following: that earthworks within the Whiskey Creek Residential Area and in respect of the site of the proposed subdivision have been soundly designed and constructed to completion such that there is a minimal risk of their failure; and
  - c. A registered surveyor provides correct and true 'as built' plans in respect of the earthworks completed for the purpose of achieving flood hazard avoidance and to inform certification of the works; and
  - d. A suitably qualified and experienced stormwater engineer skilled in flood management and mitigation acceptable to council provides a certification in accordance with the following: that earthworks within the Whiskey Creek Residential Area and in respect of the site of the proposed subdivision have been completed and as a consequence of their completion, flood control measures are in place that provide protection from the current 0.5% annual exceedance probability (1 in 200 year) flood event such that:
    - (i) a provision of freeboard over predicted flood levels is provided;
    - (ii) final ground levels are suitable for development and no further earthworks are required for the subdivision in relation to flood risk;

**Commented [AM1]:** FYI

**Commented [AM2R1]:** Paul Thomas prefers the term "subdivision development" in line 3 to be altered to "subdivision and/or development" in order to make the rule more comprehensive. This is relevant because the Chapter 22 provisions apply principally to habitable structures and therefore development, as opposed to solely subdivision.

**Commented [AM3R1]:** Council prefers the suggested wording kept as 'subdivision development' as Section 7A only applies to subdivision applications lodged to Council. If a bundled subdivision and land use consent is lodged this Rule will be applicable. However, any land use only application made under Section 10 in the Whiskey Creek Residential Area should not be assessed under this Rule which the suggested wordings of Mr Thomas can be interpreted as.



- (iii) final ground levels do not impede current drainage from neighbouring existing properties;
- (iv) the earthworks do not worsen or exacerbate flooding on adjacent properties; and
- (v) flood modelling has been completed to demonstrate the above conditions have been met.

### **7A.5.3 RULES: DISCRETIONARY ACTIVITIES**

#### **R7A.5.3.1 Restricted Discretionary Activities**

Any activity which does not comply with the Performance Standards for Controlled Activities and is not otherwise specified as a Restricted Discretionary Activity is a Discretionary Activity.

### **7A.5.4 RULES: NOTIFICATION**

#### **R7A.5.4.1 Notification**

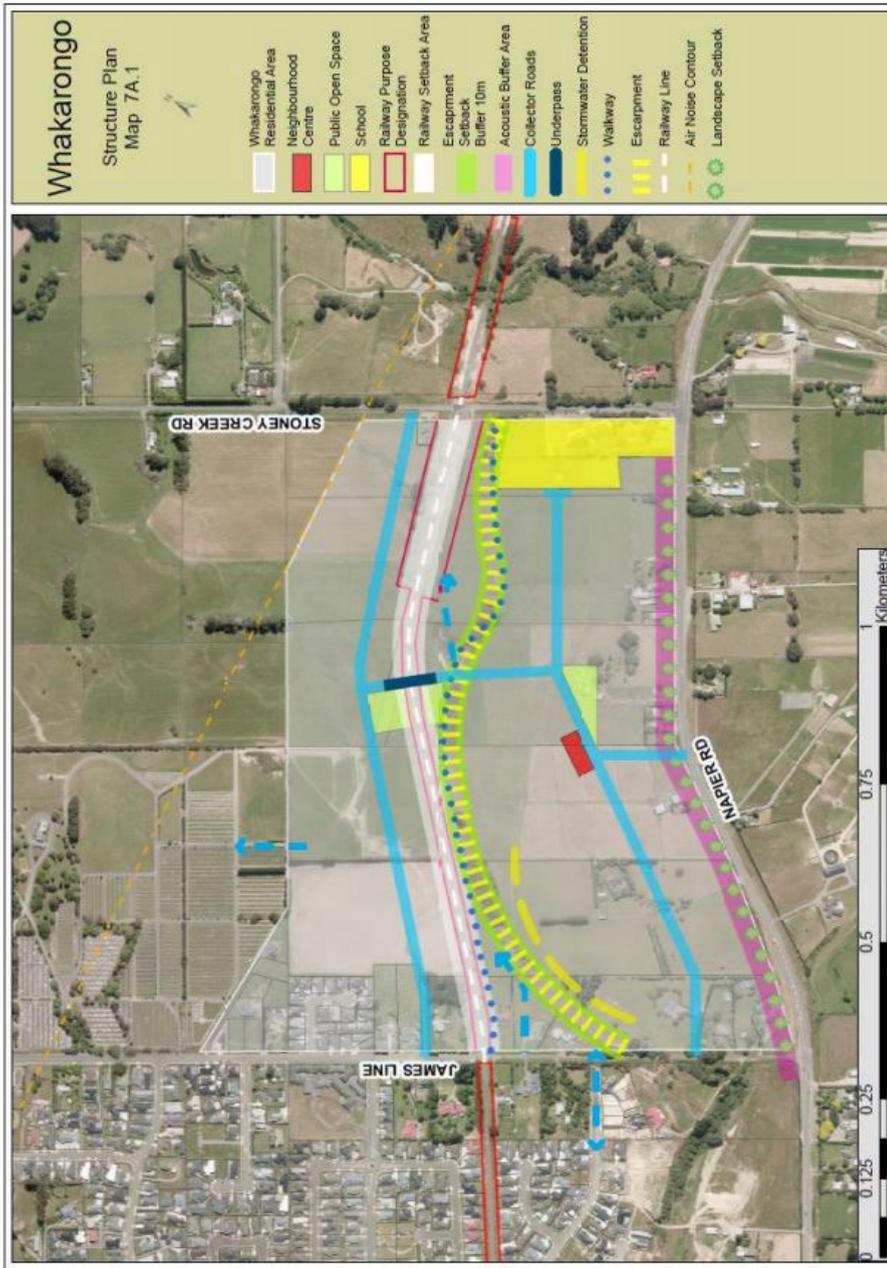
- (i) Public notification is precluded for applications under R7A.5.2.1.
- (ii) Subject to the exception in (iii) and (iv), limited notification is precluded for applications under R7A.5.2.1.
- (iii) Waka Kotahi New Zealand Transport Agency must be given limited notification of an application under R7A.5.2.1.
- (iv) The owners of 120 – 131 Benmore Avenue and 1 – 5 Meadowbrook Drive may be given limited notification of an application under R7A.5.2.1.

### **7A.5.5 RULES: NON-COMPLYING ACTIVITIES**

#### **R7A.5.5.1 Non-complying activities**



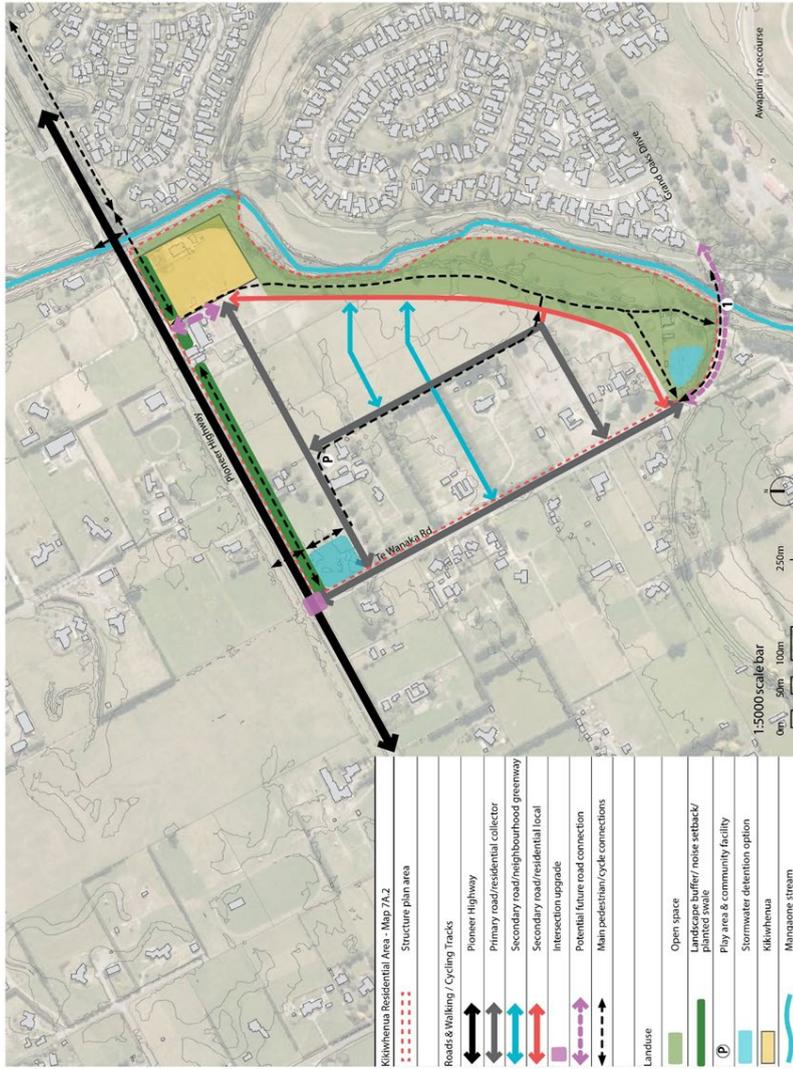
### Map 7A.1 Whakarongo Structure Plan





# Map 7A.2 Kikiwhenua Residential Area Structure Plan

## Kikiwhenua Residential Area Structure Plan Map 7A.2



	Kikiwhenua Residential Area - Map 7A.2 Structure plan area
	Roads & Walking / Cycling Tracks
	Pioneer Highway
	Primary road/residential collector
	Secondary road/neighbourhood greenway
	Secondary road/residential local
	Intersection upgrade
	Potential future road connection
	Main pedestrian/cycle connections
	Landuse
	Open space
	Landscape buffer/ noise setback/ planted swale
	Play area & community facility
	Stormwater detention option
	Kikiwhenua
	Mangrove stream

1 Potential future road connection subject to assessment via a Designation or PNCC Resource Consent and Horizons Regional Council Resource Consent.



**Map 7A.3 Whiskey Creek Residential Area Structure Plan**

