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Appendix 2: Issues and Themes informing Rural Land Management in Upper Hutt

Rural Land Use Assessment for Upper Hutt

PREPARED FOR UPPER HUTT CITY COUNCIL

AUGUST 2019

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1 What is happening in Upper Hutt's rural environment?

1. This Appendix sets out our review and analysis of the key information which informs rural land management in Upper Hutt. It examines the key features, trends and drivers of change in the rural environment since 2015. It looks at the following:

HOW IS THE CURRENT POLICY FRAMEWORK INFLUENCING THE EXISTING PATTERNS OF DEVELOPMENT?

2. This includes a review of:
 - the Operative Upper Hutt District Plan (September 2004) provisions
 - Upper Hutt Land Use Strategy 2016-2043

KEY CHANGES (NEW INFORMATION, STRATEGIES, STUDIES) SINCE 2015 AT:

3. THE NATIONAL LEVEL
 - Responding to the National Policy Statement on Urban Development Capacity 2016 (assessing supply and demand for residential and business land)
 - Implications of the National Planning Standards (April 2019)
 - Treaty Settlements and iwi engagement in resource management
4. THE REGIONAL LEVEL
 - Modelling and predictions for climate change (NIWA Regional Climate Change and Variability Change Report, 2017)
 - Natural hazards investigation and mapping (GNS Studies on Fault Traces and Liquefaction hazards, Plan Change 42 Pinehaven and Mangaroa Flood Hazard Extents)

- The Greater Wellington Regional Policy Statement 2013
- Proposed Natural Resources Regional Plan 2015
- Regional Land Transport Plan Mid-Term Review 2018
- Whaitua te Whanganui-a-Tara planning process

5. THE LOCAL LEVEL

- Significant Natural Areas - Wildland Consultants Report 2017 and 2018
- Outstanding Natural Landscapes and Special Amenity Landscapes - Isthumus Group 2018
- Sustainability Strategy 2012-2022
- Open Space Strategy 2018-2028
- Long Term Plan 2018-2028
- Infrastructure Strategy 2018-2028
- HBA Assessments - Rooding, Open Space, Infrastructure
- Council and privately initiated plan changes
- Resource consents, building consents and sales data, including a review of discretionary consents

A DESK-TOP REVIEW OF THE COMMUNITIES' ASPIRATIONS

6. As drawn from recent consultations on the LUS and LTP, in respect to the proposed scope of Plan Change 50.

ECONOMIC TRENDS AND DRIVERS INFLUENCING THE RURAL ECONOMY

7. Drawing on research undertaken by Sapere Research to support this assessment, and reported separately.

1.1 Current policy framework influences the existing patterns of development

1.1.1 Operative District Plan (September 2004)

8. The District Plan has had a strong influence on the development patterns in the rural area, due to the length of time it has been in place, and the informal encouragement of applications for 'controlled activity' subdivision, i.e. those that comply with the rules framework and minimum lot sizes.

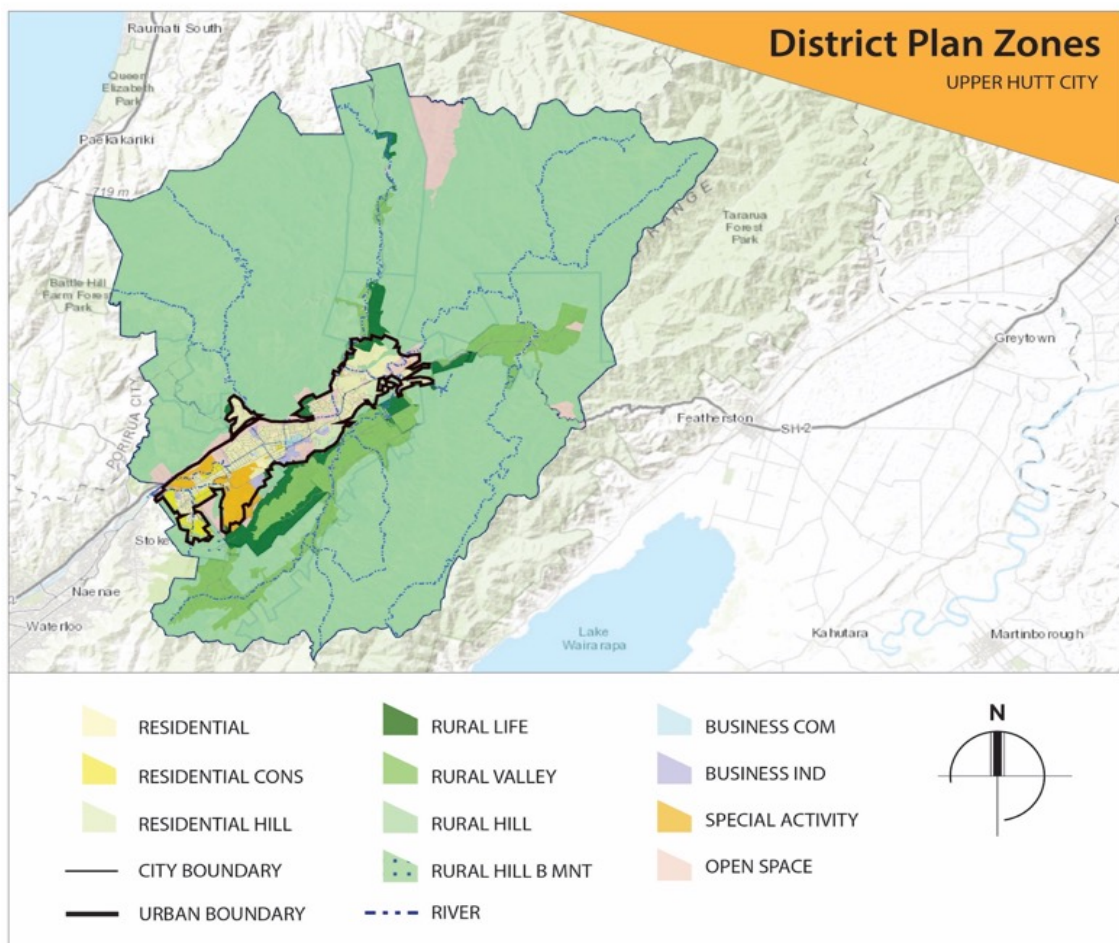


Figure 1: Current Upper Hutt City District Plan zoning

9. The District Plan divides rural Upper Hutt into two primary zones - the Rural Zone and the Open Space Zone. The majority of the rural environment is within the Rural Zone. The District Plan identifies three sub-zones within the Rural Zone:

- Rural Lifestyle
- Rural Valley Floor; and
- Rural Hill Country (which includes the Blue Mountains Area)

10. We provide some observations on the rule provisions in Table 1.

Table 1: Observations on rule provisions in the Upper Hutt District Plan

ZONE	DESCRIPTION	RULES	TRENDS AND OBSERVATIONS
Rural Valley Floor	Largely used for productive agricultural uses	<p>Minimum lot size - 4 ha</p> <p>Minimum building setbacks - 12m</p> <p>Intensive farming is a non-complying activity, most other farming activities (including forestry) are permitted activities.</p> <p>Non-farming activities, such as tourism and community facilities are discretionary activities, active recreation activities are controlled activities.</p> <p>Intensive animal farming is defined in the plan as: “any farming operation where animals are kept and/or fed in a building or outdoor enclosures, where the stocking density precludes the maintenance of pasture or vegetative ground cover”.</p>	

ZONE	DESCRIPTION	RULES	TRENDS AND OBSERVATIONS
Rural Hill	<p>Occupies greatest area</p> <p>Includes hill areas, and open spaces which are largely undeveloped and valued for recreation, scenic, heritage habitat, ecological, landscape and scientific values.</p>	<p>Minimum lot size - 20 ha</p> <p>Minimum building setbacks - 12m</p> <p>Most farming activities (including forestry) are permitted activities, intensive farming is a discretionary activity. Non-farming activities, such as tourism and community facilities are discretionary and active recreation activities are a Controlled Activity.</p> <p>No other rules specific to this sub-zone.</p>	<p>The policy and rules framework do not provide much protection from a landscape perspective for the Rural Hill sub-zone.</p>
Rural Hill (Blue Mountains)		<p>No minimum lot size, all subdivision is non-complying.</p> <p>Subdivision and development in the Blue Mountains Area are restricted due to constraints associated with land stability, drainage, existing lot sizes (too small to subdivide further) and roading and access. There is difficulty with sewage disposal due to poor soakage, as well as limited opportunities to draw groundwater.</p>	

ZONE	DESCRIPTION	RULES	TRENDS AND OBSERVATIONS
Rural Lifestyle	<p>Provides for low density, rural-residential development.</p> <p>Includes existing residential areas at MacLaren Street and Maymorn railway station, established during construction of the Remutaka Railway.</p> <p>Also includes a hillside area between Gorrie Road, Wallaceville Road and the ridgeline at the western end of the valley.</p>	<p>Minimum lot size - 1 ha</p> <p>Minimum building setbacks - 8m from front boundary, 3m from any other boundary.</p> <p>Intensive farming is a non-complying activity, most other farming activities (including forestry) are permitted activities. Non-farming activities, such as tourism, community and active recreation activities and vet clinics are discretionary activities.</p>	<p>There is a narrow focus on protecting rural residential activities and amenity, rather than other rural activities which form part of the rural character and its economy, such as vet clinics or active recreation activities. There does not appear to be a policy justification for being so restrictive on vet clinics in this zone, when they are permitted activities in the Rural Valley Floor and Rural Hills sub-zones. Likewise, active recreational activities are controlled activities in the Rural Valley Floor and Rural Hills sub-zones and the rationale for why active recreation activities become a discretionary activity in this zone is not clear.</p>
OVERLAYS AND CHARACTER AREAS			
Southern Hills Overlay and protected ridgelines (operative 14 August 2013).	<p>An overlay to manage development/ activities with the potential to adversely affect the ecological, visual and/or landscape values within the Southern Hills</p>	<p>New buildings or structures which would otherwise be permitted, become restricted discretionary, if they project through the identified ridgelines. Subdivision, otherwise controlled under the underlying zone, becomes restricted discretionary. Subdivision, otherwise restricted discretionary or discretionary under the</p>	<p>The greater level of control is appropriate, in the context of the sensitivity of this landscape.</p>

ZONE	DESCRIPTION	RULES	TRENDS AND OBSERVATIONS
		underlying zone, becomes discretionary.	

Note: Minimum lot size is as a controlled activity – consent will be granted but could be subject to conditions.

11. Other key rules for the purposes of this study include:

- New dwellings shall not be built within 10m of an existing forest. Other than this setback provision of 10m, there are very limited provisions here to manage reverse sensitivity between rural living and forestry. The New Zealand Forestry Code of Practice is referred to, this has been superseded by the NZ Environmental Code of Practice for Plantation Forestry. In addition, the NES for Plantation Forestry 2018 should be considered in the review of these provisions.
- Access standards for subdivision and land use – Access to any allotment, including rear lots, shall be sited at least 20m, measured along the road carriageway, from any access on an adjoining lot, unless the two access provisions join the road carriageway at a common point.
- Home occupations ancillary to the residential activity (live-work) and homestay activities (family style accommodation) are permitted within the Rural Zone (subject to standards). Family flats in conjunction with a dwelling are a permitted activity.
- Two or more dwellings on any one site is a non-complying activity. It is not clear why there is a need to be more restrictive than the approach taken to visitor accommodation or to family flats in conjunction with a dwelling.
- Visitor accommodation (other than as part of any home occupation) and tourism facilities are discretionary activities. These provisions may be limiting the aspirations in the Upper Hutt City Land Use Strategy 2016-2043 (LUS) to increase rural tourism).
- Educational institutions, places of assembly and community facilities are all discretionary activities in the rural zones. Although the need to

manage reverse sensitivity is appreciated, the provisions appear to discourage those facilities which are integral to community wellbeing.

OBSERVATIONS FOR THE PLAN REVIEW

12. The Council have undertaken an initial review of the objectives, policies and rules which relate to the rural environment. We agree with the following observations:

- The objectives are not well supported by the policies, and in some cases are more narrowly focused than the policies which are intended to implement them. Some policies are hanging policies, and do not clearly flow from an objective. In other cases, the objectives and policies are so broad, they are difficult to apply.
- There is insufficient protection for areas of significant indigenous flora or fauna.
- The objective, policy and rule framework does not provide much support for rural uses of rural land.
- The definition of and distinction between active and passive recreational facilities is poor.
- There is a rigid and aggressive approach to all other activities which are not considered by the current rules. This approach does not consider new activities which may want to locate in the rural area in the future, and which would be acceptable in a rural context.

1.2 Upper Hutt City Land Use Strategy 2016-2043 (LUS)

13. The Upper Hutt City Council Land Use Strategy 2016-2043 (LUS) envisages the wants and needs of residents living in Upper Hutt in 30 years' time and how Council plans to respond to that. It integrates urban and rural planning and land use considerations and takes into account input from people living and working in both the rural and urban areas.
14. The LUS 2016 updated the Urban Growth Strategy adopted in 2007, expanding this to consider rural areas as well as urban. It drew on research included in the 2015 Rural Foundation Report, which was prepared to inform development of the Rural Strategy (now part of the LUS).
15. The LUS also summarised consultation responses from rural residents, which indicates future development needs to be in keeping with the surrounding environment and that rural landscape, natural and amenity values should be maintained.
16. The LUS makes three broad observations about how the rural area could be managed in the future:
 - There are parts of the rural area – for example the areas zoned Rural Valley Floor – where minimum subdivision standards could be altered to better meet the community's expectations
 - There are additional opportunities in the rural area to meet market demand for more lifestyle living and the objectives of the Long Term Plan¹ and
 - There is a trend of land use in the rural area away from commercial farming to rural lifestyle living and leisure opportunities.

¹ Research for the Rural Foundation Study revealed a higher turnover of lifestyle lots of greater than 1 hectare, but a sustained demand for lifestyle blocks of around 1 hectare.

17. In identifying areas for future residential growth beyond the urban edge, the LUS looked at:

- site topography
- environmental constraints (such as natural hazards)
- access
- provision of infrastructure services
- landowner enthusiasm and capability
- special features (such as Outstanding Natural Landscapes or potential significant natural areas)
- likely type of housing.

18. Applying these factors, the following greenfield sites for future growth areas (Figure 2) were chosen:

- The Wallaceville Special Activity Area
- The Southern Growth area (Guilford Block)
- Gillespies
- Maymorn (Gabites Block)

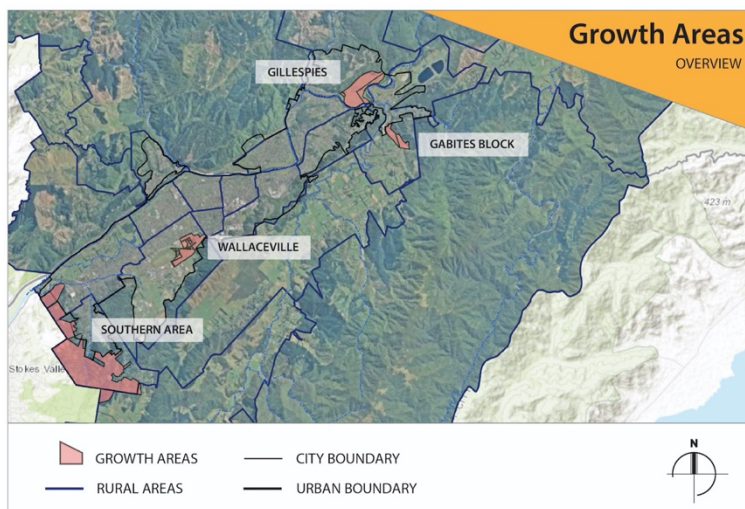


Figure 2: An overview of the future growth areas in the LUS



Figure 3: A detailed view of the future growth areas in the LUS

1.2.1 Future Growth Areas

19. The LUS identifies a number of future growth areas.

WALLACEVILLE SPECIAL ACTIVITY GROWTH AREA

20. This area was rezoned via a private plan change in 2016. A Structure Plan for Wallaceville is included in the district plan (which identifies a number of precincts). The plan change rezoned approximately 63 hectares of the former Wallaceville Ag-Research site and a small part of the Trentham Racecourse property for residential and commercial uses (so is outside the scope of this report).
21. The existing Rural Lifestyle zoning was retained over the remaining portion of the area located south of Alexander Road.

THE SOUTHERN GROWTH AREA (GUILDFORD BLOCK)

22. This 330 ha area extends along the south-western hills behind Pinehaven, from Silverstream Spur towards Avro and Avian Roads in the Blue Mountains.
23. The land is a pine plantation owned by the Guildford Timber Company (GTC), which intends to gradually retire the land from its current use as a commercial forest. GTC have begun considering other future uses, including development for housing and protection of some parts of the site that have visual or ecological value.
24. Responding to the topography and indigenous vegetation on the site, GTC have been investigating a concept that includes development of clusters of housing on the higher and less steep land beyond the Silverstream and Pinehaven ridges.
25. The Guildford block has not been included in the scope of Plan Change 50 because there are still matters which need to be resolved before this site can be progressed. The Council wants to avoid delaying the plan change, given the urgency of PC50 (based on the HBA projection).

THE GILLESPIES ROAD GROWTH AREA

26. This 66ha area at the end of Gillespies Road is already zoned residential, so out of scope of this report. The site has a number of constraints (erosion hazard from the Hutt River, flooding – 1 in 100yr flood plain, and fault hazards) and will require a substantial investment in infrastructure, including a new bridge over the Hutt River (as the road at the end of Gillespies Road would be insufficient to serve a large housing development). This is likely to be a longer-term development opportunity. The land has not been developed to date.

MAYMORN - THE GABITES BLOCK

27. This land, to the east of Maymorn Road, has the greatest potential for further investigation of development options for this report.
28. The Maymorn area was identified in the 2007 Urban Growth Strategy as the most significant area of land in the district suitable for future urban development. In 2012 a comprehensive structure plan (Maymorn Structure Plan, 2011) was put to Council to guide development for up to 1780 dwellings (an increase from 261 existing dwellings) covering 162ha in the Maymorn valley.
29. The estimated final population (including existing residents) would be up to 4,100 people. To put this into context, the 2013 census recorded a total population of approximately 4,000 people in the entire rural area (around 10% of the total population of the Upper Hutt City District).
30. Although the development was proposed to be staged over 20 years, with 14 different stages so that infrastructure (a new reservoir, up-graded pump stations and a new train station) and associated community facilities (including a hall, school, preschool, services and shops) could be developed in an efficient way, the Structure Plan was ultimately not taken forward by the Council. We understand this was due to fear of a strong push-back from the rural community, due to the perceived 'rapid urban expansion' of this area.
31. The LUS concludes that most of the Maymorn area is more suited to respond to demand for rural lifestyle development, as opposed to comprehensive

development as a major urban growth area, (as per the Maymorn Structure Plan). The LUS signals that much of this wider area could be included in a review of rural subdivision standards (given that it is currently zoned Rural Valley Floor and Rural Hill Sub-zones). The LUS identifies a smaller area to the east of Maymorn road (and north of the railway line) (referred to as the Gabites block) which would be appropriate for 'further investigation of development options' for 'edge expansion'.

1.3 Central government direction

1.3.1 Responding to the National Policy Statement on Urban Development Capacity (NPS UDC) 2016

32. The National Policy Statement for Urban Development Capacity (NPS-UDC) came into effect on 1 December 2016.
33. The NPS requires councils to understand demand for, and supply of, residential and business land capacity in their districts. In order to do this, the NPS requires councils to prepare three-yearly 'Housing and Business Development Capacity Assessments'. Upper Hutt is part of the Wellington urban area under the NPS-UDC, which has been categorised as a 'Medium Growth' region.
34. Fulfilling the requirements of the NPS-UDC will have a significant impact on land use planning in Upper Hutt. Council's need to provide enough space for well-functioning urban populations, either by allowing development to go "up" by intensifying existing urban areas, or "out" by releasing land in greenfield areas.
35. Whilst the focus of the NPS is constrained to the existing urban and residential area, it will have some implications for the rural areas. The impact of the NPS-UDC has been addressed to some degree in the Council's LUS, including identifying locations to accommodate anticipated growth.
36. Upper Hutt City Council has been working together with the other councils in the Wellington region in its response to the NPS and in the preparation of its development capacity assessment. The assessment covers both demand and supply for residential dwellings and for business land and floor area, and the interactions between housing and business activities. Supply is categorised as whether it is available in the short, medium or long term (between 2017 and 2047).

1.3.2 Wellington Housing and Business Capacity Assessment

NATIONAL POLICY STATEMENT FOR URBAN DEVELOPMENT CAPACITY UPPER HUTT CHAPTER FINAL DRAFT 16 AUG 2019

37. The Housing and Business Development Capacity Assessment (HBA) for Upper Hutt City Council looks at the demand for housing and business land and how that compares to the availability of developable land and infrastructure capacity. Growth predictions suggest that population growth in Upper Hutt could be between 9,000 to 12,800 people over 2017-2047, requiring between approximately 4,900 and 5,600 additional dwellings.
38. The assessment tested potential residential growth areas in the LUS (greenfield development) and infill/redevelopment opportunities in existing urban areas, taking into account three waters infrastructure, the local roading network and the open space strategy.
39. The results showed that the potential capacity anticipated in the Land Use Strategy for greenfield development was fairly accurate, but that it will be more difficult to deliver infill development due to capacity constraints and development feasibility issues.
40. For business land, the assessment looked at business land demand and floor area demand, by business type.
41. Results show that demand for business land will increase in the short term, and that this demand is primarily for industrial land. Industrial land developers need land which is well-serviced, largely flat, resilient to natural hazards, and appropriately priced. The spike in demand is reflective of the lack of suitable industrial business land across the region.
42. A moderate and steady demand for health, education, and training, retail, and government land uses is projected to 2047. Commercial business land demand is relatively small in the short term, but is set to increase to around 60% of all floor area demand in the long term.

43. Upper Hutt is well positioned to meet business demands due to its strong labour force; accessible public transport, ready access to the State Highway network; and resilience to natural hazards.
44. Upper Hutt has sufficient business development capacity to meet demand, with a total net capacity of just over 420,000m² of floor space still available in 2047, when incorporating both infill and vacant land development opportunities.
45. The infrastructure assessment found:
 - Three waters services require substantive upgrade works in order to enable future development in urban areas, particularly the urban north housing area.
 - Local roads and open spaces are considered to be sufficient, but the Level of Service on State Highway 2 through Upper Hutt remains an issue.
 - The design of future development will need to consider how best to utilise the public transport network in order to increase network efficiency.

1.3.3 National Planning Standards 2019

46. The National Planning Standards² which came into effect in April 2019, aim to improve consistency in the structure, format and content of plans and policy statements.
47. The Council is currently evaluating the most practical means to give effect to the Planning Standards, including how the current District Plan will be restructured. A rolling review is one possibility.

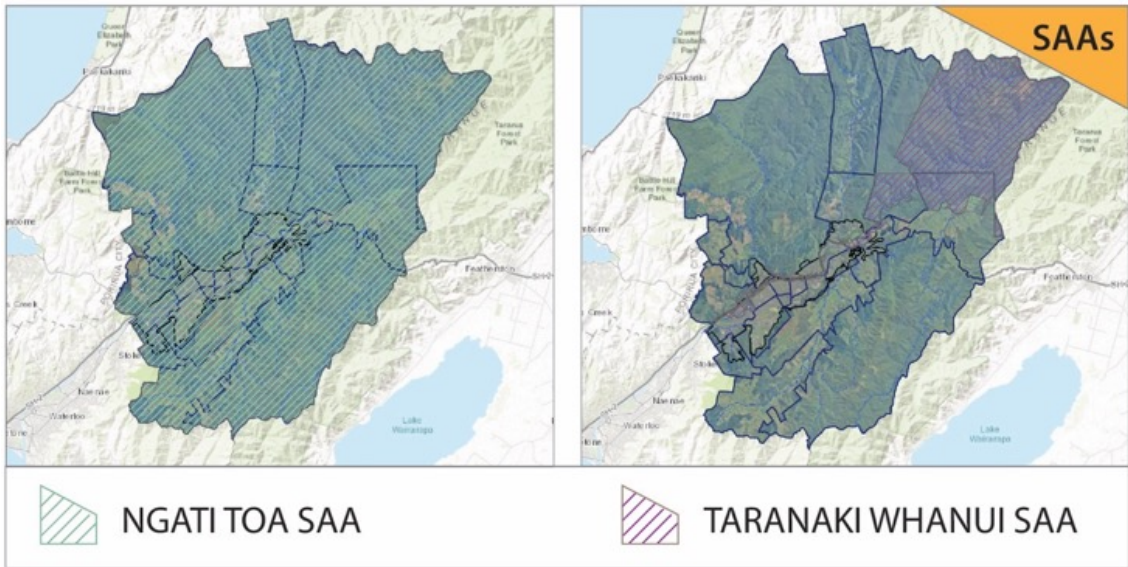
² Ministry for the Environment. 2019. *National Planning Standards*. Wellington: Ministry for the Environment.

OBSERVATIONS FOR THE PLAN REVIEW

48. The National Planning Standards provide an opportunity to:
- Develop strategic district-wide objectives and policies to articulate values in the rural environment and how they are to be retained, while at the same time enabling appropriate types of development (to give effect to the NPS UDC).
 - Provide a structured approach to re-assessing the zoning of the rural area. For example:
 - a. The future urban growth areas, as outlined in the LUS, could be zoned and shown on planning maps as a future urban zone.
 - b. Maclaren Street and the surrounding area could be zoned as a rural settlement zone (see the locality assessment for suggestions on the extent and boundary of this zone).
 - c. The purpose and extent of the Rural Valley and Rural Hill zones could be re-evaluated using the General Rural and Productive Rural zones in the planning standards.
 - d. Using precincts in locations where mixed used development could be appropriate, for example around the Maymorn Station.
 - e. Use of structure or outline plans to stage development. (The landscape assessment and our detailed locality analysis includes suggestions for areas where structure/outline planning would be useful).

1.3.4 Tangata Whenua involvement in resource management of the rural area

49. There are three iwi with mana whenua in Upper Hutt - Ngāti Toa, Te Atiawa (Wellington) and Taranaki Whānui ki te Upoko o te Ika. Many iwi and hapū are increasing their capacity to engage in district and regional planning processes and have the mandate, as part of the Settlement process, to develop strongly directive environmental policy in environmental management plans. Some management plans include policy to support the development of papakainga (which often occurs in rural environments), or stimulate innovation and progress in housing choice for the elderly, for example. There are currently no iwi management plans which cover the Upper Hutt District. The relationship between iwi and Council, in light of the Statutory Acknowledgements, is still developing.
50. Statutory Acknowledgements are set out in:
- The **Port Nicholson Block (Taranaki Whānui ki Te Upoko o Te Ika) Claims Settlement Act 2009**, which registers the special association of Taranaki Whānui ki Te Upoko o Te Ika with the Hutt River, including the streams and tributaries that lead down through Pakuratahi at the head of the Hutt Valley.
 - The **Ngāti Toa Rangatira Claims Settlement Act 2014**, which registers the special association of Ngāti Toa Rangatira with the Hutt River and its tributaries, from the time of their participation in the invasion of the Hutt Valley during 1819 and 1820.
51. The Council has plotted those areas which will fall within the two Statutory Acknowledgement Areas and created a GIS layer for this purpose. The SAA area for Taranaki Whānui ki Te Upoko o Te Ika is extensive and covers the majority of the district.



52. Under section 25 of the Act, the Council must have regard to the statutory acknowledgement in forming an opinion whether the trustees are adversely affected persons by the granting of a regional consent for activities within, adjacent to or directly affecting the statutory area. Under s29, the Council must send a summary of all resource consent applications that may affect the statutory areas to the trustees.

53. It would be useful to track the responses from iwi to resource consent applications in the rural area over time. This may highlight trends or issues for rural land use which it would be useful to consider on a strategic level.

OBSERVATIONS FOR THE PLAN REVIEW

54. Direct engagement with iwi is needed to identify particular relationships and connections iwi have with localities in the rural area, as well as to tease out the tangata whenua's aspirations for the rural environment, both of which may have a bearing on how the rural environment is managed. The Council has recently appointed an iwi liaison officer who will be in post from August 2019. We strongly recommend early engagement with that person once in post.
55. A refresh of the RLUA to reflect findings of any consultation with iwi may be needed.

1.4 Changes at the Regional Level

1.4.1 The impact of climate change on future rural land use

56. The RMA requires territorial authorities to control the actual or potential effects of the use, development or protection of land, including for the purpose of avoiding or remedying natural hazards. The Resource Management (Energy and Climate Change) Amendment Act 2004 requires local authorities to have particular regard to the effects of climate change.
57. Today, climate change is firmly on the agenda at the national, regional and local level. Upper Hutt City Council is a member of the recently convened Wellington Region Climate Change Working Group, a forum tasked with achieving a pan-regional approach on climate change mitigation and adaptation (preparing for impacts such as sea level rise, drought and enhanced natural hazards effects).
58. The Council manages climate change through its Sustainability Strategy and Action Plan (2012), which is currently being reviewed. It is presumed that this will bring it more in line with the 'state of emergency' that characterises recent local government declarations.

1.4.2 NIWA Regional Climate Change Report 2017

59. In 2017 NIWA prepared a report for the GWRC called 'Climate change and variability - Wellington Region'³ (NIWA, 2017), which included mapped projections for a range of emission scenarios.
60. The NIWA 2017 study notes the importance of long-term planning for climate change, and designing climate-sensitive infrastructure and assets which are

³ NIWA. 2017. *Climate change and variability - Wellington Region*. Wellington: NIWA

likely to be around for many decades (e.g. housing). The report includes a useful figure which shows the relationship between timescales and adaptation:

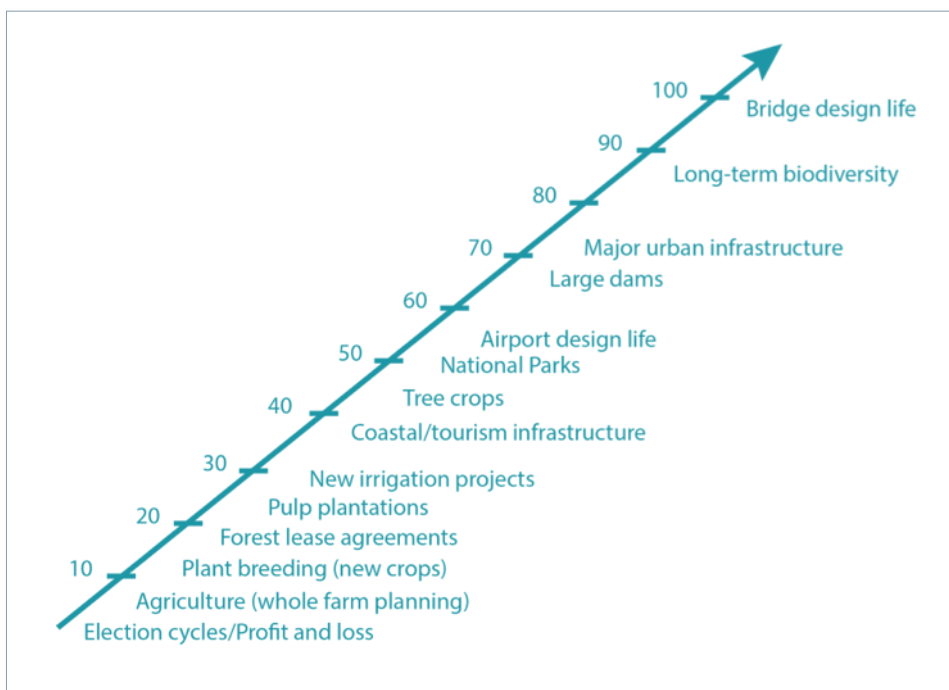


Figure 5: Time scales and adaptation. Numbers are years from present. Planning for human-induced climate change becomes increasingly important as one moves right along this line. After R. Jones, CSIRO (Taken from the NIWA report, 2017, Figure 6-1)

1.4.3 Assumptions and limitations of this data:

61. This report reproduces a series of maps from the NIWA mapped projections. These results are based on modelled data, and as such are ‘indicative only’ of likely changes. The nominal resolution is 5 x5km, and NIWA’s advice is that this data is “best interpreted as a broad spatial pattern”⁴.
62. We have chosen to show projections using Representative Concentration Pathway (RCP) 8.5, which is the ‘high emissions’ or ‘business as usual’ scenario, (i.e. no reduction in emissions in the future). We have chosen this scenario on the basis that it is impossible to know which scenario will be closer to reality by the end of the century, and on NIWA’s recommendation that planning

⁴ <https://mapping1.gw.govt.nz/gw/ClimateChange/#how-to-use> accessed 05 August 2019.

‘incorporates a range of outcomes’. The website advice on scenario choice states:

63. “The latest data (as of 2017) shows that even if all the pledges countries made under the 2015 Paris Climate agreement were fulfilled, global emissions could still be on a high-intermediate path not much lower than RCP8.5”⁵.
64. The projections cover two time periods, 2031-2050 (taken as 2040), and 2081-2100 (taken as 2090). Upper Hutt falls within the Wellington Harbour and Hutt Valley Whaitua (catchment) for the purposes of this study. A summary table of findings for the whole catchment is reproduced below⁶.

⁵ <https://mapping1.gw.govt.nz/gw/ClimateChange/#how-to-use> accessed 05 August 2019.

⁶ <http://www.gw.govt.nz/assets/Climate-change-2/WhaituaClimateChangeprojections.pdf> accessed 05 August 2019

Table 2: Wellington Harbour and Hutt Valley Whaitua – Climate Change Projections (catchment scale), from NIWA 2017

Wellington Harbor & Hutt Valley whaitua			
Variable/period	2040	2090	Commentary
Average annual Temperature	+0.5C to 1C above present (+1.2C to +1.7 C above pre-industrial)	+1C to +2.5C above present (+1.7C to +3.2C above pre-industrial)	Maximum warming in summer and autumn, least in spring and winter Note reference to above present versus pre-industrial: About 0.7C of warming has already happened from pre-industrial to present (1880-1909 compared to 1986-2005 reference periods). Uncertainty range: lower range for RCP4.5 and upper range for RCP8.5
Average annual rainfall	5% decrease to 10% increase	5% decrease to 10% increase	There is a large uncertainty in the range of changes due to model differences and emission scenarios. Changes against RCP are not necessarily linear. Greater likelihood of positive changes in autumn and winter.
Amount of rain falling during heavy rainfall days (> 99 th percentile of daily rainfall)	5% to 15% increase	5% to 30% increase	Although the uncertainty in average rainfall range is high, extreme rainfall increases are more certain due to the increased amount of water vapour that the atmosphere can hold as it gets warmer (about 8% increase in saturation vapour per degree of warming)
Sea level rise	0.12 to 0.24 metres above present (0.38 to 0.5 metres above pre-industrial)	0.36 to 0.98 metres above present (0.62 to 1.24 metres above pre-industrial)	The projected sea level rise (based on IPCC AR5) may get significantly worse depending on the behavior of the Antarctic ice shelves, so the upper limit is not a fixed physical limit. There is very high confidence in sea level rise projections, probably more so than any other variable. Note the difference between present and pre-industrial, as we have already had about 26cm of sea level rise so far. See the link below for inundation

			maps plotting for anywhere in the world: http://sealevel.climatecentral.org
Number of hot days (above 25C) per year	Between 0 and 10 days increase	Between 0 and 40 days increase	
Number of frost nights (below 0C) per year	Between 0 and 5 days reduction	Between 0 and 10 days reduction	
Change in the intensity of wind during windy days (>99 th percentile of daily mean)	1% to 2% increase	1% to 4% increase	
Change in annual number of windy days	2 to 6 days increase	2 to 12 days increase	
Change in annual growing degree days base 10	Increase between 0 and 300 GDD units	Increase between 200 and 800 GDD units	Measures potential for crop and pasture growth
Change in annual potential evapotranspiration deficit (mm)	Increase between 40 and 100 mm	Increase between 40 and 140 mm	Measures drought intensity
Change in rivers mean annual low flow discharge (MAL)	Decrease up to 40%	Decrease up to 40%	Measures water shortage in the catchments
Change in rivers mean annual flood discharge (MAF)	Increase up to 40%	Increase up to 100%	Measures flood potential in the catchments
Changes in number of days of very high and extreme forest fire danger	50% to 100% increase	100% to 150% increase	These figures are given by IPCC model averages. Individual models can show much higher increases of up to 700%
Key environmental impacts	<p>Increased flood intensity</p> <p>Increased coastal inundation (some areas to become permanently inundated)</p> <p>Increased erosion</p> <p>Reduced soil fertility</p> <p>Decreased water quality</p> <p>Groundwater quality and availability pressures</p> <p>Saltwater intrusion</p> <p>Increased pressure on water storage</p>		
	<p>Biodiversity losses</p> <p>Increased pests such as wasps and rodents</p> <p>Ocean acidification</p> <p>Decline in fish population</p> <p>Increased wildfire</p> <p>Increased allergies (e.g. pollen)</p>		

KEY FINDINGS

65. The following are some key headlines from the NIWA 2017 report which will have implications for the rural area.

Mean temperature

66. All future projections of mean temperature for the Greater Wellington Region show a warming signal. Warming is most pronounced for inland areas such as Upper Hutt. By 2040, there is a predicted increase in annual mean temperature of 0.75-1 degree across Upper Hutt. The variability across the seasons shows less of an increase in temperatures in spring, (0.5-0.75 degrees), but autumn is relatively warmer than the mean annual average increase, (increasing by between 0.75-1.25 degrees). By 2090, mean annual temperature has increased by about 2.5-2.75 degrees in Upper Hutt. Again, there is less of a relative increase in spring temperatures (1.5-1.75), and autumn is warmer than the mean average increase (2.75-3 degrees warmer).

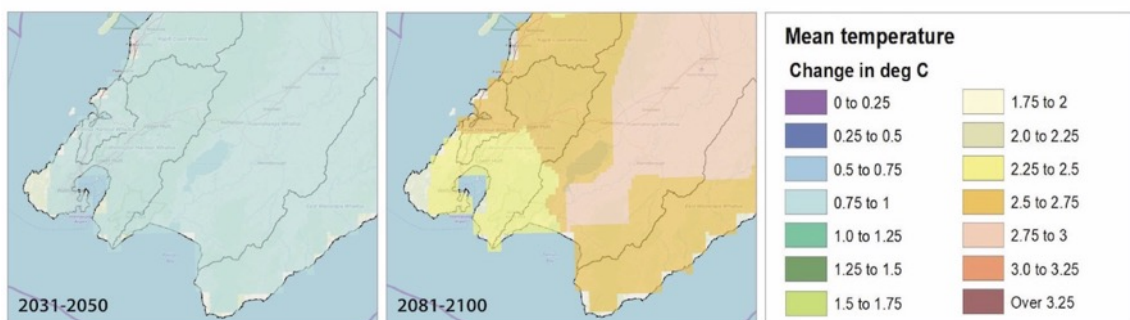


Figure 6: Annual mean temperature projections

67. The report notes that livestock (particularly cattle) may be susceptible to increased heat stress with rising temperatures (NIWA, 2017).
68. Changes to temperature are likely to result in increased seasonal grass and crop growth rates during winter, spring and autumn which has flow-on effects to dairy production and calving dates, among other effects. Potential impacts on pasture include shifts in the composition and quality of pastures, with increased weediness (Orwin et al., 2015, in NIWA, 2017).

69. Soil warming may increase pasture biomass and nitrogen mineralisation (which makes organic nitrogen available to plants in an inorganic form) but can also increase pathogens, result in reduced soil fertility (denitrification) and increased ammonia emissions (NIWA, 2017).

Growing degree days (GGD)

70. Consistent with the regional warming trend, the number of growing degree days (10 °C base temperature) is projected to increase in 2040, and considerably by 2090⁷.

71. This means that crops may be sown earlier in the growing season and will reach maturity faster due to higher temperatures. Due to warming temperatures, there may be opportunities to grow different crop species.

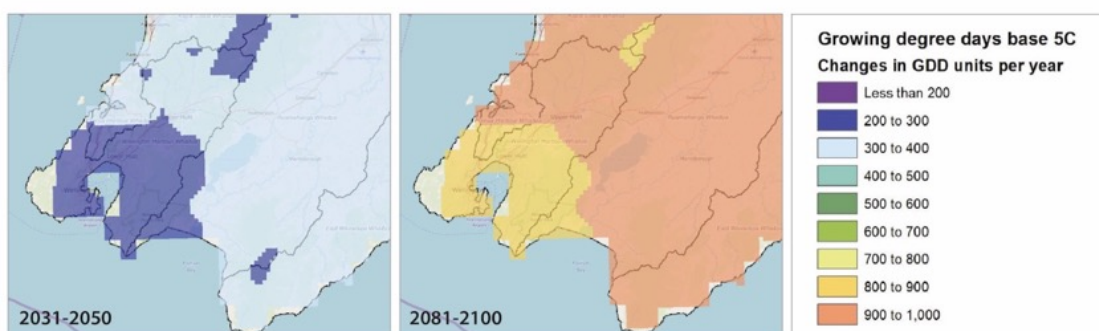


Figure 7: Growing Degree Days (base 10C)

Soil moisture deficit (indicator of drought)⁸

72. The maps below show the marked increase in soil moisture deficit days for the Upper Hutt area in the latter time period (2090).

⁷ GDD express the sum of daily temperatures above a base temperature (10C) that represents a threshold for plant growth. This is useful to primary industry in terms of monitoring plant growth and planning harvests (NIWA, 2017).

⁸ Soil moisture deficit (SMD) is calculated based on incoming daily rainfall (mm), outgoing daily potential evapotranspiration (PET), and a fixed available water capacity (the amount of water in the soil 'reservoir' that plants can use) of 150 mm.

73. The increasing risk of drought will impact the productivity of agriculture and horticulture. Increases in drought may reduce crop and pasture growth and cause greater plant mortality.

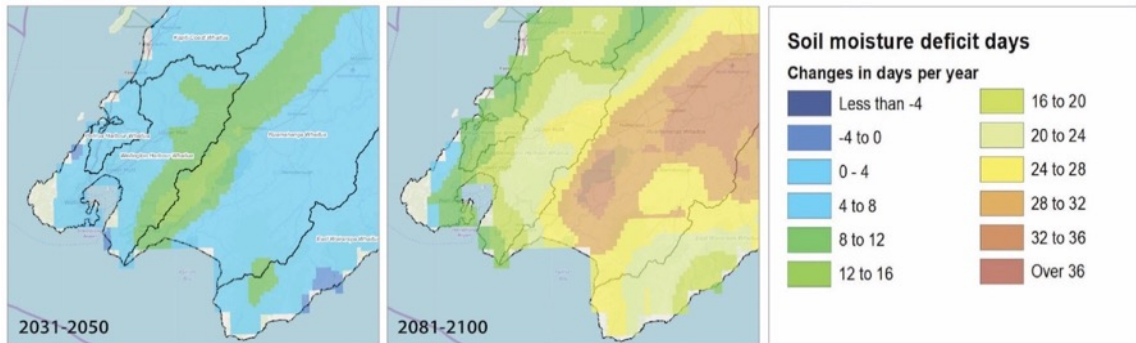


Figure 8: Soil Moisture Deficit Days

74. Rainfall is one of the most important climate drivers of primary production, as there are limits (both too much and not enough water) where plants cease to grow or are harmed (Clark et al., 2012, in NIWA, 2017). For intensive grazing, drought has a negative effect on above ground biomass and soil fertility, as well as on nitrogen fixation. In extensive grazing systems, drought causes increased erosion (Orwin et al, 2015, in NIWA, 2017).
75. Farmers may turn towards increased irrigation as a method for dealing with increased incidence of drought (Clark et al., 2012, in NIWA, 2017). However, this may not be feasible depending on the future changes to rainfall and availability of water for irrigation.

Availability of water

76. River flows are projected to change considerably, with mean low flows declining in the catchment by about 40%, and flood flows increasing by about 40%. This will impact on freshwater biodiversity as well as water use for industry⁹ (NIWA, 2017).

⁹ <http://www.gw.govt.nz/assets/Climate-change-2/WhaituaClimateChangeprojections.pdf>

77. Water demand is projected to increase in the district over time, but the opportunity to abstract water in the region is generally expected to decline, putting greater pressure on water resource management and agricultural productivity.

Rainfall

78. In 2040, the expected annual increase in rainfall in Upper Hutt is between 0-5% increase in the rural areas, with seasonal differences. There is a 0-5% increase in rainfall expected in spring and autumn (in the very west of the district, this increases to 5-10% in autumn), and up to a 5% decrease in rainfall in winter and summer. This picture changes in 2090, with an overall trend towards less rainfall in spring, summer and autumn, but an increase in rainfall in winter. The total annual rainfall increases by up to 5% on the western side of the district, but decreases by up to 5% on the eastern side of the district.

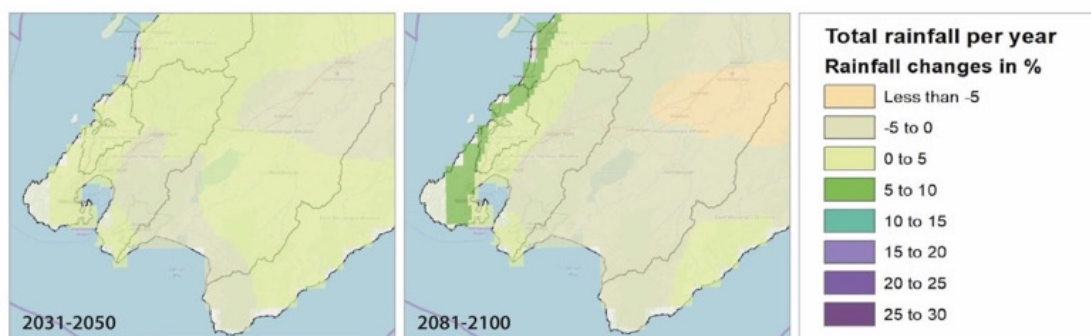


Figure 9: total rainfall (annual)

79. Projections of heavy rain days (where daily rain is greater than 25mm) show that in 2040 there will be a predicted annual increase of about 0-5 days over current wet days in Upper Hutt. That projection doesn't change in 2090.

Flood hazard

80. The flood hazard is projected to increase substantially in the Wellington Harbour and Hutt Valley Whaitua. Increased flood exposure is projected at the same time as there will be increased pressure on water availability and storage,

potentially compounding the challenges faced by local agricultural activities¹⁰ (NIWA, 2017).

Pests

81. The current distribution of pests in New Zealand is likely to change as a result of increases in temperature and rainfall. Changes in temperature and rainfall may allow pest species to move into new habitats where they may outcompete NZ's native species. Tropical and subtropical pests (e.g. certain mosquito species) that currently occur as seasonal immigrants may become firmly established with warmer temperatures. 'Sleepers' pests that are currently in New Zealand may affect primary industries due to change in host-pest relationships (e.g. increase in different pasture grass species, more heat-tolerant pests favoured). The shift towards reliance on drought and heat tolerant plants (in particular, pasture grasses) may cause new pest species to spread and for new host/pest associations to develop (Kean et al., 2015, in NIWA, 2017).

Forest fire

82. The number of days of very high and extreme forest fire danger are projected to increase by 100-150% by the 2090s for the catchment (NIWA, 2017). Afforestation with exotic tree species, one of the most popular climate change mitigation strategies, may increase the fire hazard, and more so than pasture or native shrubland or forest (exotic conifer and gum plantations create the equivalent of North American and Australian forests, respectively) (McGlone and Walker, 2011, in NIWA, 2017).

Erosion

83. Hill country erosion is a significant issue for higher-elevation parts of the Wellington Region, particularly those areas used for primary industries such as agriculture, horticulture and forestry. Hill country erosion has downstream effects including river sedimentation which can have impacts on flooding

¹⁰ <http://www.gw.govt.nz/assets/Climate-change-2/WhaituaClimateChangeprojections.pdf>

magnitude and frequency, water quality, and aquatic habitats. Hillslope erosion processes (e.g. shallow landslides, earthflows, gully, and sheet erosion) are likely to be influenced by climate change (including as a result in the increase in windy days and increase in intensity of wind) (Basher et al., 2012, in NIWA, 2017).

1.4.4 Planning for Natural Hazards

84. The Upper Hutt District is subject to a number of natural hazards which have shaped its current land use patterns, and will continue to do so in the future. The risk of flooding has resulted in large areas of land adjacent to the Hutt River being retained as open space. The roading pattern, including the location of State Highway 2, is influenced by the location of the Wellington fault.
85. In 2017 the RMA was amended to make the management of significant risks from natural hazards a matter of national importance. This has placed a stronger emphasis on not just knowing more about natural hazards, but also determining the severity of the consequences and the likelihood of an event occurring; and developing appropriate planning responses to manage these risks.
86. In the rural environment this may result in development being prohibited in areas subject to a high risk of hazards in the future. Development may be enabled only in areas where the community determines there is an acceptable level of risk.
87. Discussions about risk will be an important issue for community dialogue in preparation of PC50. The Council has collated data to inform the plan change on a range of hazards, which are considered below. This hazards data has informed our assessment of development potential in the rural localities.

Fault hazards

88. In 2005 the Council commissioned GNS¹¹ to undertake a survey of the earthquake trace faults within the Upper Hutt City boundaries. There are five active faults: (from most active to least), the Wellington, Akatarawa, Otaki Forks, Moonshine, and Whitemans Valley faults.

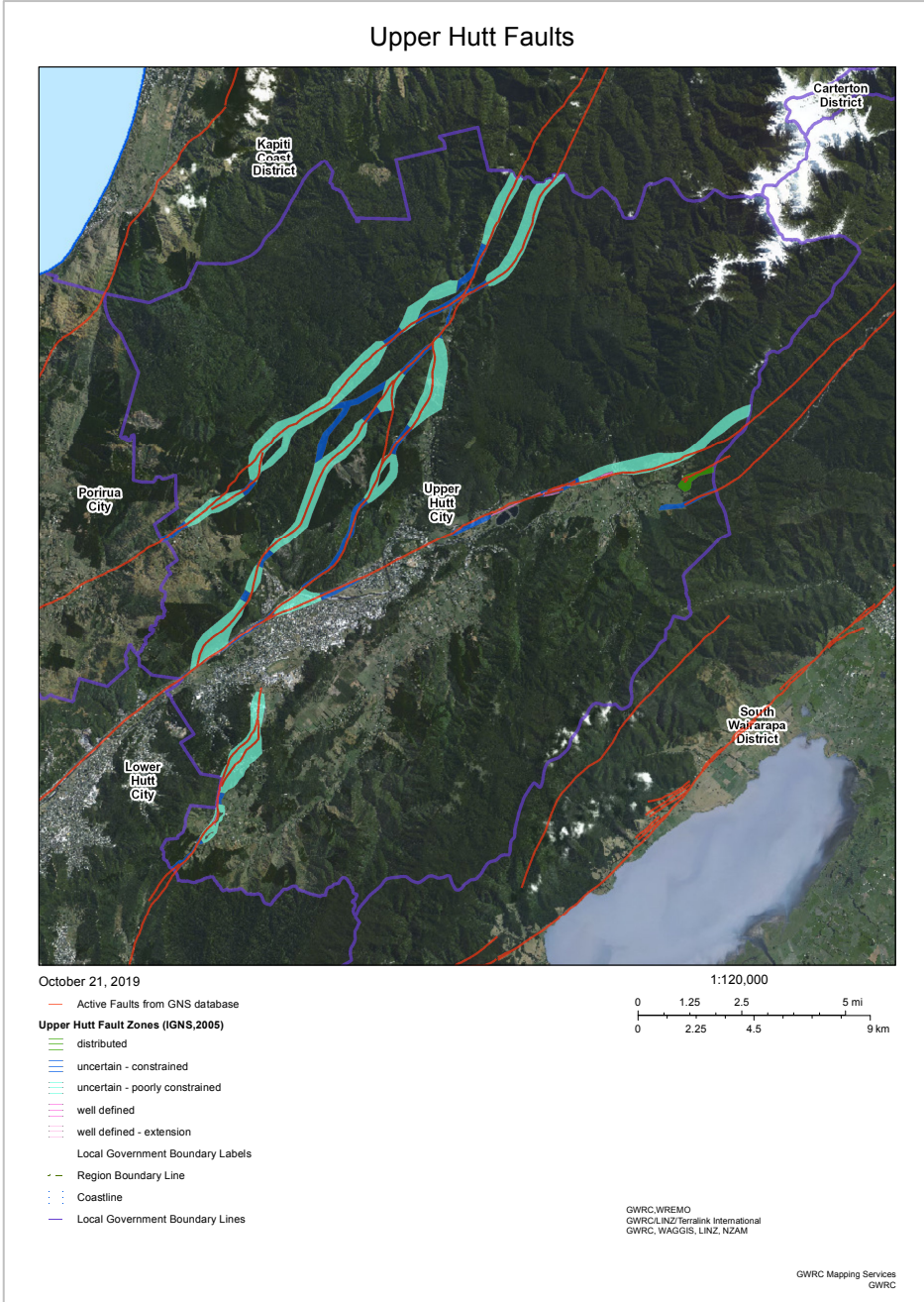


Figure 10: Upper Hutt fault zones from GWRC mapping services (data from IGNS 2005).

¹¹ GNS (2005) Upper Hutt City Fault Trace Project, Report prepared for Prepared for Greater Wellington Regional Council and Upper Hutt City Council, Institute of Geological & Nuclear Sciences client report 2005/151 Project Number: 430W1184

89. The study defined Fault Avoidance Zones for the length of each of the five faults. From this information the Council has developed a spatial GIS layer, which we have used in our assessment of the different rural localities¹². The fault avoidance zone for the Wellington Fault, which is the most active, is shown on the District Plan maps.

Liquification

90. In 2018 GNS¹³ completed a study of liquefaction hazard in the Wellington Region. Liquefaction is a process that leads to a soil suddenly losing much of its strength, most commonly as a result of strong ground shaking during a large earthquake¹⁴.
91. The GNS study found that areas with a high susceptibility to liquefaction are found in the Mangaroa swamp.
92. The mapping for this project relied on the 1:50,000 scale geological map, so currently, the lack of detailed spatial data constrains the location of specific sites subject to liquefaction¹⁵. The Council is following up the recommendations of this study by undertaking a geotechnical review, which is providing further

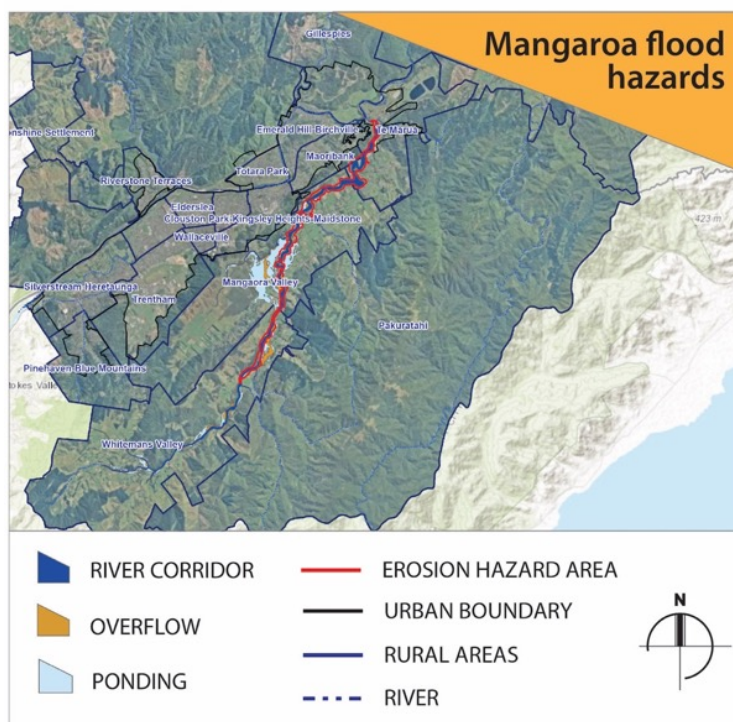
¹² On the basis that MfE guidance 'Planning for the development of land on or close to active faults: A guideline to assist resource management planners in New Zealand (July 2003) promotes a risk-based approach, to avoid damage or loss of life resulting from movement along a fault trace. For example, in the rural environment, the building of a fence or farm shed may be acceptable in an area subject to a fault rupture hazard, but not a community hall, where large numbers of people gather.

¹³ Dellow GD, Perrin ND, Ries WF. 2018. Liquefaction hazard in the Wellington Region. Lower Hutt (NZ): GNS Science. 71 p. (GNS Science report; 2014/16). doi:10.21420/G28S8J

¹⁴ All three following pre-conditions must be present for liquefaction to occur: geologically young (less than ~10,000 years old); loose sediments, that are fine-grained and non-cohesive (coarse silts and fine sands); and saturated (below the water table).

¹⁵ The mapped extent of the liquefaction hazard in the Wellington region study is not intended to be used at a site specific or property level. The correct use of these maps is to identify areas where further, more detailed investigation of the liquefaction hazard is warranted.

detailed investigation of the liquefaction hazard through investigation of reports provided with resource consents, along with ground-testing/truthing. It is expected that this information will be available as a spatial layer, not long after this RLUA assessment has been completed. This may be another area of evidence which will require a refresh of the RLUA.



Flooding - new information

93. Plan Change 42 - Pinehaven and Mangaroa Flood Hazard Extents (Operative 12 September 2019)
94. Plan Change 42 addresses the risk from flooding within the Mangaroa River and Pinehaven Stream catchments for the 1:100 year flood event, following flood hazard modelling undertaken in 2015.
95. The plan change incorporates flood hazard maps associated with flood events in the Pinehaven Stream and Mangaroa River catchments. The provisions seek to avoid development in the high hazard areas and avoid and mitigate the risk from flooding in the lower hazard areas. There is a strong focus on hydraulic

neutrality. The flood hazard maps have been taken into account in our assessment of the rural localities.

1.4.5 Wellington Regional Policy Statement 2013

96. The Wellington Regional Policy Statement 2013 (RPS) identifies various Resource Management Issues and associated Objectives and Policies designed to address them. The 2015 Study summarised the key influences of the RPS on planning for the rural environment, including:

- Locating new development in a planned and coordinated way, taking into account the location and capacity of existing infrastructure (including the transport network), or which does not create unsustainable demand for new infrastructure¹⁶.
- Recognising and protecting regionally significant infrastructure¹⁷ to avoid incompatible land uses which constrain the management, use and operation of infrastructure. Regionally significant infrastructure in the Upper Hutt rural environment includes the railway corridor through Mangaroa Valley, the electricity transmission lines running along the western side of the Valley and onwards to the Wairarapa via the Kaitoke locality, and sections of the Remutaka Cycle Trail that are identified in the RLTP as having combined utility and recreation focus (therefore being defined as part of the ‘strategic transport network’).
- Reducing energy use and meeting energy needs more efficiently, with greater use of renewable energy from diversified types and scales (to replace dependency on fossil fuels)¹⁸. This has the potential to influence infrastructure provision, including domestic scale (up to 20kW) and small scale distributed renewable energy generation (up to 100 kW) infrastructure and cycling / walking infrastructure.

Figure 11: Mangaroa flood hazard areas

¹⁶ Objectives 9 and 10 and Policies 8, 9, 10 39, 57 and 65

¹⁷ Objective 10 and Policies 7, 8 and 39

¹⁸ Objective 9

- Altered or degraded regional landscapes from large-scale earthworks and rural residential developments. The RPS directs Districts to map outstanding landscapes and natural features and provide for their protection in District Plans¹⁹ and to do the same for special amenity landscapes²⁰. The Operative District Plan does not currently identify outstanding natural landscapes or features. Some discrete areas of high landscape and visual values in the Southern Hills area are identified on district planning maps and have associated regulatory protection.
- Loss of indigenous ecosystems and habitats. The RPS directs Councils to identify and protect significant indigenous ecosystems and habitats²¹. A Plan Change is required to the Upper Hutt District Plan to identify significant natural areas within the City.

1.4.6 Proposed Natural Resources Regional Plan 2015

97. The Proposed Plan is in its final stages of development, with decisions on submissions released 31st July 2019.
98. The Hutt River, upstream of the Kaitoke Dam, has been identified in the Proposed Plan as a river with ‘outstanding indigenous ecosystem values’. The values are high macroinvertebrate health, indigenous fish diversity and threatened fish species. This will have implications for freshwater management at the regional level.
99. The NPS-UDC Three Waters Infrastructure Enabled Development Capacity Report for the Upper Hutt District, prepared by Wellington Water (May 2019) notes that the Proposed Plan has introduced new and more stringent provisions for the protection of water quality, including the requirement for

¹⁹ Objective 17, Policies 25, 26

²⁰ Objective 18, Policies 27 and 28

²¹ Objective 16, Policies 23 and 24

Council's to have a consent for stormwater discharges, including discharges of stormwater contaminated with wastewater.

100. The report also comments that:

“water sensitive urban design and planning and designing for stormwater runoff and its discharge to fresh and coastal water are relatively new disciplines in the Wellington Region and regulatory tools requiring their use for land use and subdivision are still in progress. Achieving these new objectives will require significant investment. While the water quality limits have yet to be set, it is anticipated that new development will be required to meet increasingly higher levels of water quality outcomes.

It is strongly recommended that Councils implement planning controls for overflow paths, hydraulic neutrality and protection of streams as well as water quality outcomes. Without the controls stormwater will limit growth and also increase the risk of flooding elsewhere in the catchments”²².

101. Key issues where the Proposed Plan regulations will have an impact on the rural environment in Upper Hutt, include in relation to whether or not the Mangaroa Peatland/Swamp will be protected as a wetland, as well as any regulations in relation to forestry, which is a significant industry for the City's rural economy²³.

²² Wellington Water. 2019. *The NPS-UDC UHCC Three Waters Infrastructure Enabled Development Capacity Report*. Wellington. Wellington Water

²³ It is noted that at the time of writing, the decision on submissions issued has deleted the proposed rules for plantation forestry (Rule R102 and R103), relying instead on the National Environmental Standards for Plantation Forestry Regulations 2017. See Proposed Natural Resources Plan Decisions Version at <http://www.gw.govt.nz/assets/Proposed-Natural-Resources-Plan/Web-update-docs/Proposed-Natural-Resources-Plan-Decisions-Version-Track-Changed-Updated-Part-1.pdf> accessed 13 August 2019.

102. Other key issues are defining areas at risk of 1:100 year flooding, setbacks from waterbodies, earthworks and erosion/sedimentation controls and controls on indigenous vegetation removal, particularly on erosion prone land.

1.4.7 Regional Land Transport Plan (RLTP) Mid-Term Review 2018

103. An updated programme of land transport activities has been prepared to align the RLTP with the 2018 Government Policy Statement on Land Transport. The updated programme reflects the shift in investment priorities, with three particular focus areas:

- public transport, including improvements to urban and interregional rail services. For the first time, railway track improvements can be funded through the National Land Transport Plan
- improving resilience (to major natural events, severe weather, longer-term climate change related impacts)
- improving walking and cycling infrastructure
- and a shift in state highway investment to focus on safety improvements.
- Observations for the plan review

OBSERVATIONS FOR THE PLAN REVIEW

104. As noted in the 2015 study, rail and bus service improvements (in terms of reliability, capacity, frequency and in the longer term, faster journey times and increased reach) will increase demand for rural living in the City, as an increasingly accessible commuter location. Likewise, planned improvements to the strategic road network are designed to improve journey times and reliability of the road system, and could also result in the City's rural environment becoming increasingly attractive.

1.4.8 Whaitua te Whanganui-a-Tara

105. The Whaitua te Whanganui-a-Tara Committee was formed in November 2018. The Committee will analyse environmental, mana whenua, economic, and technical information alongside community knowledge to develop a Whaitua Implementation Programme, or WIP. The WIP will contain recommendations for the integrated management of land and water resources in the Hutt Valley and Wellington city. The WIP will result in regulatory changes to the Regional Natural Resources Plan – as well as non-regulatory initiatives such as education programmes and priorities for investment.

OBSERVATIONS FOR THE PLAN REVIEW

106. It is too early at this stage to gauge what the Whaitua’s findings and recommendations will be. However, it will be important to take into account the future policy directions the Whaitua may develop in respect of water and nutrient allocation, and to consider the effects this may have on rural land use.

107. A report prepared for the Whaitua in October 2018²⁴ to report on the current state and trends of the waterways noted:
- Macroinvertebrate community health is degraded in streams and rivers draining catchments with a significant amount of urban or agricultural land cover, but is generally good or excellent in catchments dominated by indigenous forest.

²⁴ Aquanet Consulting Ltd. 2018. *Whaitua Te Whanganui-a-Tara River and stream water quality and ecology*. Wellington: Greater Wellington Regional Council. At: <http://www.gw.govt.nz/assets/Whaitua-Te-Whanganui-a-Tara/REPORT-Whaitua-Te-Whanganui-a-Tara-River-and-stream-water-quality-and-ecology.pdf> accessed 13 August 2019.

- The Mangaroa River is one of only two non-urban waterways in the Whaitua, that are not suitable for primary contact recreation, due to elevated levels of E. coli. The primary source of faecal contamination is stock (sheep and beef cattle).
- Benthic cyanobacteria also poses a significant health risk to recreational users in the Hutt River, but the causes for this are complex and not fully understood.
- Improving the state of the agricultural catchments, specifically the Mangaroa River, will require a shift in land management practices. However, further information needs to be collected on nutrient sources, transport and dynamics to support future decision making.

1.5 Changes at the local level

1.5.1 Significant Natural Areas

108. In 2017 Wildlands Consultants Ltd began an assessment of Significant Natural Areas (SNAs). A preliminary whole of District (private and public land) SNA study was completed in 2018. The Council plans to undertake field checks and consult with affected landowners, before a separate plan change is prepared to bring these areas and associated objectives, policies and methods into the District Plan.
109. While the data is not yet publicly available it does place a greater emphasis on the need to regulate new development on rural land, in order to protect the existing areas of native bush and wetlands (especially when considered alongside the trend of declining indigenous landcover and the RPS directive).
110. The research also identifies opportunities for landowners to undertake restoration projects on a voluntary basis, to enhance and restore areas of significant habitat.
111. The following map gives an indication of the *potential* extent of areas for protection.

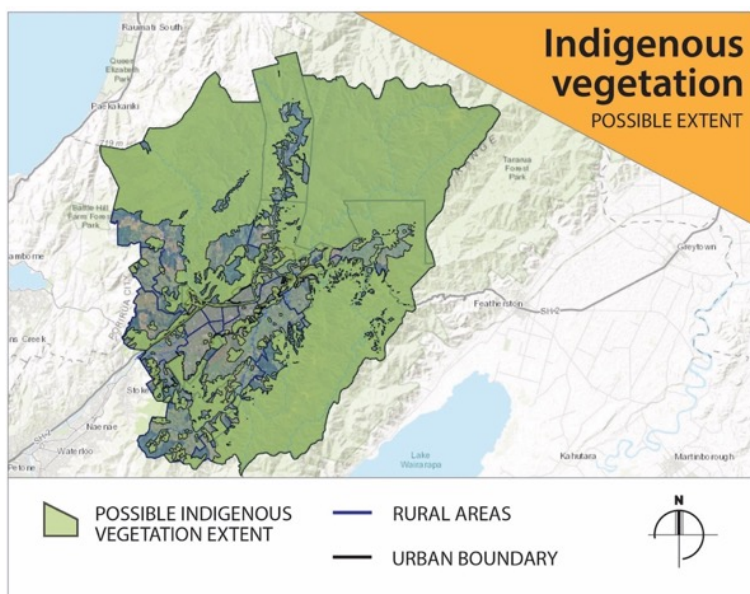


Figure 12: potential indigenous vegetation protection areas (SNAs)

1.5.2 Outstanding Natural Landscapes (ONLs) and Special Amenity Landscapes (SALs)

112. In 2017 the Council commissioned the Isthmus Group Ltd²⁵ to provide an assessment of the City's outstanding natural features and landscapes and special amenity landscapes under Part II of the RMA and the Greater Wellington RPS. The Council plans to consult with the community, before confirming these areas and preparing a plan change to bring defined areas and protective provisions into the District Plan.

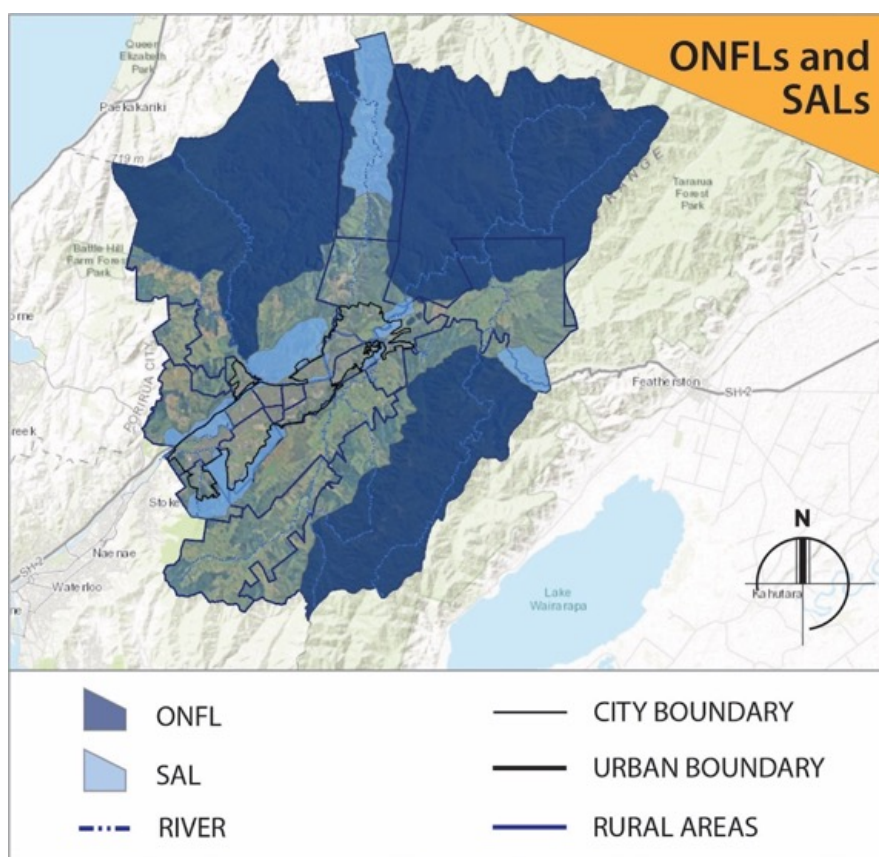


Figure 13: Map of potential SALs and ONFLs

²⁵ Isthmus Group. 2018. *Upper Hutt City District Landscape Study*. Upper Hutt City Council.

1.5.3 Sustainability Strategy 2012-2022

113. Upper Hutt City Council is in the process of reviewing its Sustainability Strategy and engaging the community in this process. The 2012 Strategy identifies a number of strategic issues that require action, including addressing stormwater/sewerage discharges, water quality of rivers, including toxic blooms, and unsustainable levels of household water consumption.
114. Two of the actions which have relevance for the rural area include investigation of the potential scope for a River Restoration Project for the Hutt and Mangaroa Valley Catchments (to include planning controls) and an Ecological Corridor Project for Hulls Creek.
115. As part of the Annual Plan 2019-20 consultation, and in preparation for this review, Council asked the community what they thought were the biggest sustainability challenges facing Upper Hutt and what should be the focus of the reviewed strategy. The top four themes were: climate change, economic sustainability, energy and the environment.

1.5.4 Upper Hutt City Open Space Strategy 2018 -2028

116. A large proportion of the land area in Upper Hutt is taken up by regional parks and public open spaces. The Council manages and maintains 421 hectares of reserve land. A further 34,600 hectares of open space is owned or managed by GWRC, DoC, and the QEII Trust. Most of these lands (regional and forest parks) are on the periphery of the city, except for the regional council land along the Hutt River/Te Awa Kairangi.
117. The Open Space Strategy provides a strategic framework for managing public parks and open space. 'Open space' is defined as land set aside for public recreation, that the community has a relatively free right of access to.
118. The Strategy notes a number of trends in open space demands, including:
- a growing preference for participation in informal, non-organised recreational activities such as mountain biking, bush-walking and nature-based recreation.

- a trend towards the integration of environmental protection values with recreation areas, to provide dual benefits for the environment as well as for the recreation experience of people.
- The popularity of cycling, biking, walking, tramping and hiking for overseas and local visitors.
- lower levels of participation in formal organised equipment based recreational activities. A large number of clubs and groups are simply ‘surviving’, at a below sustainable level and venue costs and maintenance are a significant challenge.

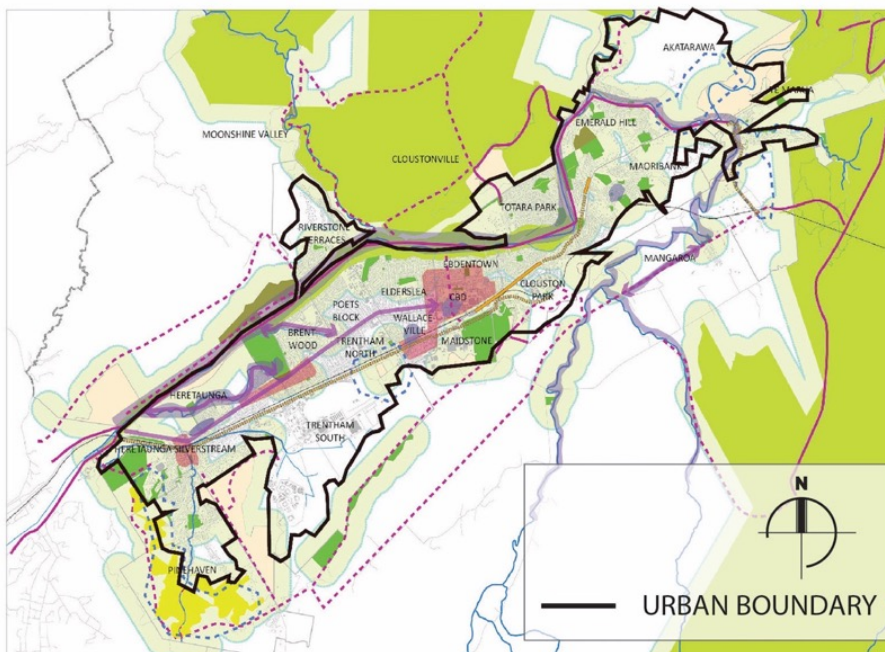


Figure 14: Open Space Strategy 2018-2028

HOW IS OPEN SPACE PROVIDED FOR IN THE RURAL ENVIRONMENT?

119. The Strategy has a very strong focus on the urban community, with the goals and the objectives targeted at improving the provision for urban users. The lack of provision of ‘formal’ open space in the rural environment is justified (in the Strategy) by reference that in the rural area, section sizes are larger, and homes generally have more private space than urban homes. In rural areas, open spaces are more likely to be connections (e.g. roads and pathways) and regional parks, rather than Council managed reserves. There is an assumption therefore, that private open space is a substitute for community open space.

IS THERE A PLAN TO ENSURE CONNECTIVENESS OF OPEN SPACES AND CYCLE WAYS IN THE RURAL ENVIRONMENT?

120. Community consultation on the LUS has shown a strong desire by the rural community to improve connectivity and the shared pathway network. The Council has done an open space analysis by neighbourhood, but this work relates to neighbourhoods within the urban boundary, or where there are potential urban extensions. It is therefore difficult to appreciate what if any, formal open space exists in the rural areas.
121. In the urban fringe areas, (e.g. Te Marua) the Strategy appears to be largely based on improving access and connectivity to existing open spaces. In the Mangaroa-Whitemans Valley - there is an opportunity to connect stream and river corridors through acquisition of esplanade strips and reserves. There is a further opportunity to form a shared pathway within the valley floor along a paper road.
122. The Open Space Strategy includes a map of locations where there are gaps in the esplanade strip network, where connections could be improved, including in particular along the Mangaroa and Pakuratahi rivers.

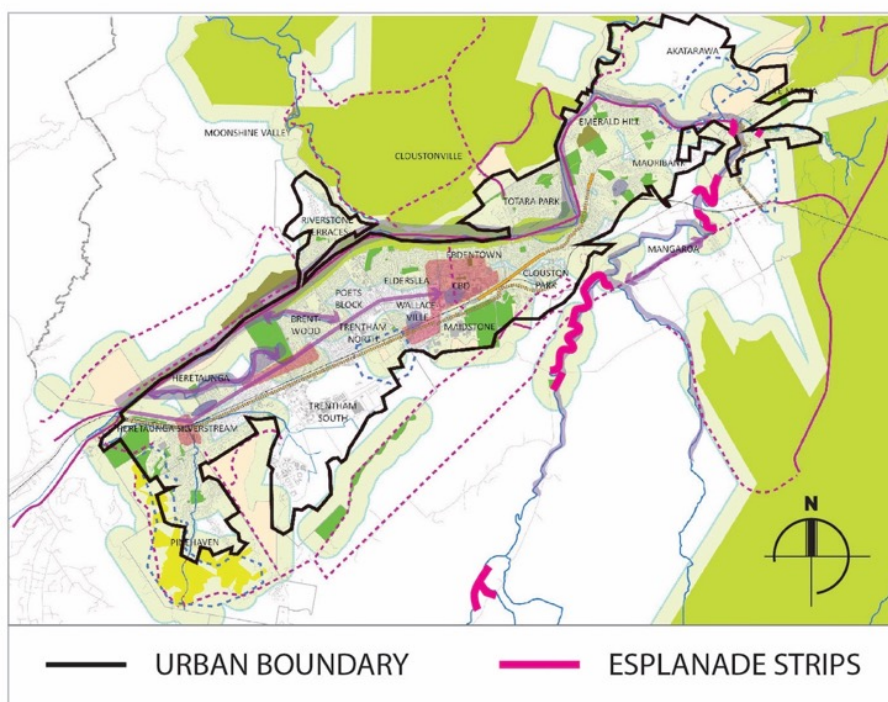


Figure 15: Esplanade strip gaps (Open Space Strategy 2018-2028)

OBSERVATIONS FOR THE PLAN REVIEW

123. The Open Space Strategy is premised on the existing pattern of large-lot subdivisions, and makes the assumption that private open space performs the same function as community open space. However this assumption ignores the importance of human connections to wellbeing. It is not clear how aspirations for active recreational uses, such as rural sport, are provided for in this approach. The definition and distinction between active and passive recreation in the Operative District Plan provisions is not clear, and despite the rural lifestyle zone being the most intensive rural living zone in the plan, active recreational activities which would service these communities are a discretionary activity.
124. The Open Space Strategy has identified an opportunity in the Mangaroa-Whitemans Valley to connect stream and river corridors through acquisition of esplanade strips and reserves. There is a further opportunity to form a shared pathway within the valley floor along a paper road. This would greatly assist to improve connectivity in these valleys for active travel, which is a key aspiration picked up in the Council's Long Term Plan and through community consultation to date.
125. A potential option to increase the provision of community open space / opportunities for recreation in rural areas, but still retain the sense of privacy of rural living, would be to facilitate the development of cluster subdivisions. In this type of subdivision, housing is located on smaller lots in closer proximity, leaving the balance of land to be used for community open space, recreational use, or agriculture.

1.5.5 Long Term Plan (LTP) 2018-2028

126. The vision for Upper Hutt is “Life. Leisure. Live it!”. The vision is supported by five strategic priority areas, including the ‘Environment’ area – which is summarised as: ‘we’re a scenic playground”.
127. The LTP sets the Councils activity plan and budget over a ten year period and is refreshed every three years. The 2018 LPT identifies two critical themes:
- investment in resilience of infrastructure, community services and Council facilities (against shocks and adverse events)
 - Managing accelerated growth, including bringing forward infrastructure projects.
128. The LPT identifies 11 new projects for investment, the majority of which focus on the urban environment, including a ‘residential stimulus’ policy, to encourage higher density residential development in the urban area. There is a strong cycling theme, with two cycling-based projects (regional cycle trails, and development of the wider walking and cycling network. The Infrastructure Strategy forms part of the LTP.
129. The LTP sets out the councils funding priorities for the next ten years, which will need to be implemented through various mechanisms, including the District Plan. Providing for active leisure and improving resilience of infrastructure are particularly important themes for the rural plan review.
130. The previous Long Term Plan 2015-2025 identified rural recreation and rural lifestyle as a key strand of Council’s vision for the future of the city.

1.5.6 Infrastructure Strategy – (2018-2028)

131. The Infrastructure Strategy identifies infrastructure challenges and opportunities for the 30-year planning period covered by the LUS. Based on the growth projections in the LUS, the Strategy identifies a number of drivers and trends which will influence growth or decline in demand for infrastructure services:

- demographic changes – increasing population, aging population, trend towards smaller households
- planning for growth – greenfield development will require additional infrastructure
- a change from manufacturing to craft breweries and other industries that have a high demand for water
- community desire for improved walking and cycling facilities
- greater awareness and community desire for resilient service networks.

WHAT ARE THE CURRENT ISSUES WITH THE INFRASTRUCTURE IN THE RURAL AREA?

132. There are high average maintenance costs for rural roads, relative to urban.
133. Narrow rural roads designed for low traffic volumes, which are now carrying much higher numbers of vehicles due to growth in rural lifestyle blocks, combined with multiple users, including cyclists, walkers and horse riders is a growing and on-going problem.
134. Traffic modelling which applies the LUS to the roading network shows several intersections, including some State Highway intersections, and lengths of road where the present layout is not capable of carrying the expected demands. This applies to both capacity and configuration for expected users – i.e. cycle lanes, bridal paths and footpaths.
135. Resilience of the rural road network is also a major concern, due to the number of hilly rural roads that could be affected by major slips. The frequency/severity of these events is increasing due to the increased frequency of high intensity localised rainfall events. Some important access roads could also be affected by fallen overhead cables after a severe event, whether it is seismic, or weather related.
136. Resilience of three waters infrastructure is not generally an issue for rural residents, as they are not on reticulated systems.

137. In most parts of the rural area, wastewater is treated on-site, and is the responsibility of the landowner. For new systems, standards specified in the proposed regional Natural Resources Plan must be met. Old septic tanks and ineffective drainage and wastewater disposal systems can contribute to the pollution of waterways and land. It is important that these systems are of good quality and regularly monitored and maintained.
138. It is important to ensure allotment sizes are sufficient to ensure onsite disposal of sewerage does not result in pollution, especially where land is poorly drained. This may have implications for minimum lot sizes for cluster subdivisions unless some sort of communal scheme is used.
139. As demand for lifestyle blocks increases, there is likely to be a corresponding increased demand for Council services. Given the high cost associated with the installation of reticulation systems, it is unlikely that large scale reticulated systems will be provided in the rural area. If reticulated systems are desired by the community, then how to fund these services will need to be explored.
140. There is growing demand in rural areas for reliable broadband, telecommunications and power. The success and growth of rural business in particular is highly reliant on this technology, and it is critical for safety (i.e. communicating accidents on farms and in civil defence emergencies).

WHAT ARE THE PLANNED UP-GRADES?

141. The Council plans to undertake the following during the 30-year Strategy:
- Rural road upgrades to address substandard carriageway widths, to cater for rural lifestyle as opposed to agricultural users, and to improve the safety of motorists, cyclists, horse riders and pedestrians
 - Akatarawa Road safety improvements
 - The Pinehaven Stream flood protection upgrade.
 - Resilience assessments and identified works to reduce the vulnerability of the rural roading network to natural hazard events, including bridge upgrades. The Regional Land Transport Plan work programme includes

assessments for Eastern Hutt Road, Silverstream Bridge, State Highway 58.

- Replacement of the Silverstream Bridge 2023-2025 and an upgrade to Ward/Whakatiki/Fergusson Drive (2018-2021) – these projects have been brought forward due to growth being ahead of forecast.
- Providing and extending cycling and walking facilities, including where these routes add to or enhance the connection of regional or national cycleways.
- Future provision of broadband, telecommunications and power networks will generally be met through national programs (Ultra-Fast Broadband rollout), but total coverage may be reliant on new or emerging technologies to provide services at an adequate level to the entire rural area.

142. The Council has undertaken modelling to identify additional infrastructure requirements. Beyond 2028, greenfield development (i.e. taking land out of the rural environment) will require the following:

- Field Street wastewater upgrade to accommodate the wastewater flow from the proposed Guildford and Silverstream Spur developments
- Totara Park wastewater rising main and pump station upgrade to accommodate the proposed developments in Totara Park area (inside urban boundary)
- Upgrade to wastewater reticulation, a new water reservoir (potable water supply) and feeder pipe to support development in Maymorn of up to 220 lots.
- The LTP includes potential projects to ensure that adequate capacity is provided for the expected traffic volumes from future development, including works to Silverstream Bridge, Eastern Hutt/Silverstream, Fergusson/Ward/Whakatiki, and Fergusson/Gibbons/Main.

143. We have taken the constraints identified by this assessment into account in our traffic light assessment of the rural localities (Appendix 3).

1.5.7 NPS-UDC Infrastructure Assessment – Roading

144. In early 2019, Council completed updated modelling to identify and measure transport network deficiencies out to 2028 using the base 2013 Upper Hutt Transportation Model and future Urban Development Capacity (UDC) land use and population data.
145. At present, traffic flow on the local road network is generally quite stable in both the morning and evening peak periods. However, volumes on State Highway 2 are resulting in significant restrictions to drivers along the single lane section between the Fergusson Drive (south at Silverstream) and Whakatiki Street intersections.
146. Along State Highway 2, intersections with Fergusson Drive (south at Silverstream), Moonshine Hill Road, Whakatiki Street and Akatarawa Road (where rural residential traffic will access the strategic network) all show degraded intersection levels of service during peak periods, ranging from forced flow to nearing unstable flow.
147. Based on the 2028 modelling, locations of network deficiencies are largely unchanged compared to 2018, however the severity of the deficiencies is predicted to increase. Intersection and link deficiencies generally increase over time with more locations experiencing the lowest level of service of forced flow conditions by 2028, meaning traffic volumes are exceeding the network capacity at these points.
148. We have taken the constraints identified by this assessment into account in our traffic light assessment of the rural localities (Appendix 3).

1.5.8 Plan Changes to the District Plan

149. Plan changes are a way to review and update provisions in the District Plan. Plan Changes may be initiated by the council or promoted by individuals. Since the plan was made operative in 2004 the Council have initiated the following plan changes in the rural area:

PLAN CHANGE 29: SOUTHERN HILLS OVERLAY AND PROTECTED RIDGELINES (OPERATIVE 14 AUGUST 2013)

150. The landscape values of the Southern Hills include the highly visible land either side of the ridgeline, including prominent and distinctive vegetated spurs, particularly where the hills form a backdrop to the suburbs and CBD of Upper Hutt. The Southern Hills landscape provides a largely undeveloped, 'green' backdrop to the city. The plan change sought to protect areas with high levels of naturalness (high quality landcover, largely unmodified landform and the absence or unobtrusiveness of built elements).
151. Within the Southern Hills Overlay Area, areas of high ecological, landscape and visual amenity value are mapped and have associated regulatory protection. Protected ridgelines are identified, and subdivision, buildings and structures are regulated within these areas. Standards are set for earthworks, and indigenous vegetation clearance requires resource consent within high value ecological areas.

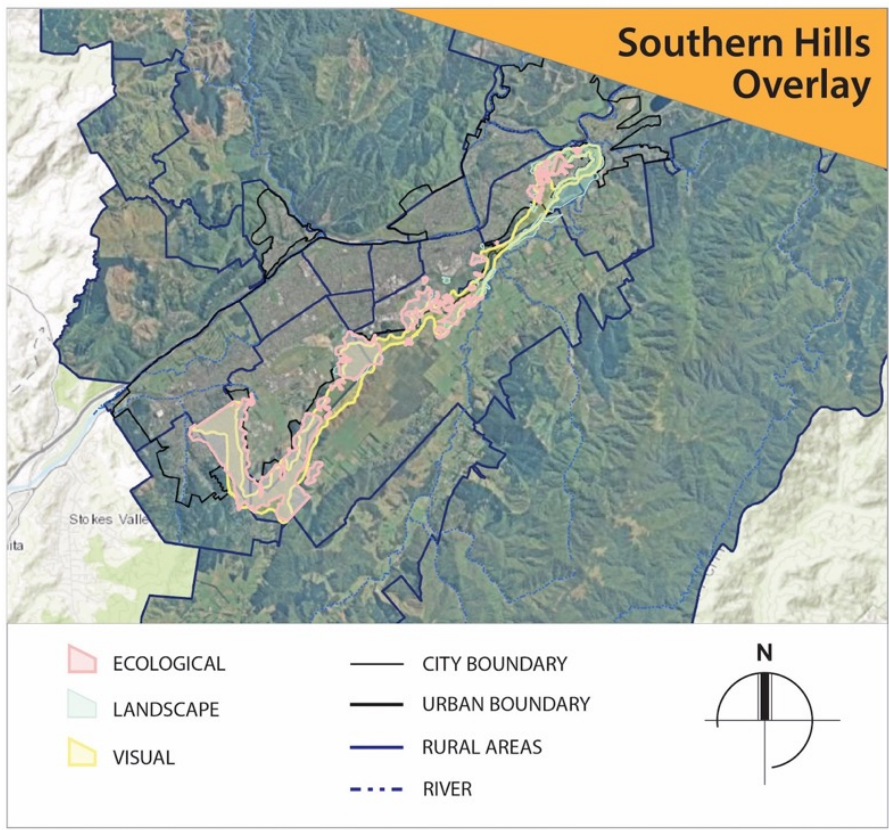


Figure 16: Southern hills overlay

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152. A similar level of protection could be valid in other parts of the rural environment. This is worth investigating in those areas where there is sustained demand for rural-residential living. The ridgeline on Katherine Mansfield Drive in the Whitemans Valley (on the eastern side), is an example of where we feel further control could be beneficial and would more closely match the protection provided on the western side.

PLAN CHANGE 40 WALLACEVILLE (OPERATIVE APRIL 2016)

153. The Wallaceville Special Activities Zone was rezoned for residential and commercial uses through a private plan change in 2016. Development of this area is guided by a Structure Plan, as set out in Chapter 39 of the District Plan. The Structure Plan identifies a series of precincts and sets out the intentions for development of each of those precincts, including around expected residential densities, pedestrian and cycling connections, urban design/character, provision of open space and trees, land uses etc.

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154. There are a number of other places in the rural environment where we consider that a Structure Plan approach would be a useful tool to coordinate and guide development, we have identified these in our detailed analysis of the individual localities.
155. The precinct concept is also validated by the Planning Standards 2019. There are other areas in the rural environment where a precinct approach would be valid, for example in the vicinity of the Maymorn Station.

1.5.9 Private Plan Changes

156. Anyone can seek a change to a district plan under the RMA. Through a plan change an individual can request a change in existing provisions or to add in new provisions.
157. Private plan changes provide a signal as to the degree of disparity between demands for rural development and the ability for the Operative Plan provisions to achieve anticipated or desired environmental outcomes.
158. Since 2004 the following private plan change has been lodged:

THE RIVERSIDE FARMS PRIVATE PLAN CHANGE (29 MANGAROA ROAD) (PENDING).

159. On 7 February 2018 the Council received a private plan change application to subdivide 79ha of land in the Mangaroa Valley known as Riversdale Farm to a greater density than is allowable under the District Plan provisions. The site is currently a combination of Rural Valley Floor and Rural Hill sub-zones.
160. The developer's rationale is:
 - meeting the market demand for smaller lifestyle blocks.
 - It is not clear why the rolling hills portion of the site is not zoned Rural Lifestyle (minimum lot size 1 ha), as is the case on the other side of the Mangaroa River.
 - concentrating residential development in the rolling hills portion of the site, enables the productive use of the flatter, more production land, retaining the overall rural amenity values.
 - appropriate landscaping will be able to mitigate the effects of the increased density.

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161. This plan change application highlights a couple of issues:

- the District Plan provisions are not seen as being fit for purpose to meet market demands for rural lifestyle living;
- in some places, the rationale for the existing zoning is not clear, and does not seem to be related to the values which the zones seek to protect (e.g. retention of productive land, sensitive siting of built development to reflect landscape values)
- the plan provisions do not easily accommodate cluster development and the 'balance lot' approach.
- The importance of having discretion over mitigating factors such as specification of building platforms, use of topography to mitigate visual impacts, landscape planting and road layout.

1.5.10 Trends and observations from Resource Consent and Building Consent data

162. The Council have defined rural data catchments based on density, zoning, land titles and historic consenting information. These new data catchments, referred to as 'localities' in this report, for ease of reference, have been devised to provide a level of granularity for the rural area that is not available in the standard 'Forecast ID' blocks, because population numbers and density in the rural zones is low.

163. The Council have collated annual consenting statistics for each catchment area, providing information on the following:

- Activity/consent type
- Net new lots created
- Building consent data, including average floor area, number of storeys, estimated value of building consent

- Sales – no. of units, average total residential floor area, average net and gross sale prices for occupied and vacant parcels (for business and residential activities) and average residential land values.

164. This data is useful to identify existing or emerging patterns of development of rural land, and which areas of the rural environment have been most popular. It is also useful in exploring whether zoning has influenced land use patterns and developments in the manner anticipated by the Plan.
165. The ‘localities’ layer is a close approximation to the landscape character layers used in the 2015 document.
166. The ‘localities’ layer has potentially wider relevance to the Council in terms of guiding future infrastructure and asset management in the rural environment; and the level of detail and type of data collated has and will provide valuable insights into historic land use development patterns and trends in the rural area, and in the future.
167. Data has been collected between 2006 and 2018.

1.5.11 Resource consents:

168. Pinehaven-Blue Mountains had the greatest number of resource consent applications (137), followed closely by the Mangaroa Valley (136) and then Te Marua (113). The least number of applications were in the remote areas of Pakuratahi (3) and Moonshine Valley (4) (Table 3).
169. The locality with the highest number of new lots created (total over the time period) was Mangaroa Valley (163 new lots), followed by Te Marua (112) and Gillespies (81), with 62 of the new lots in Gillespies created in 2015 (Table 4). The year with the greatest amount of new lots created was 2006 by a significant margin (155 lots, of which 94 were in the Mangaroa Valley and 52 in Te Marua). The next most prolific year was 2015 (77 new lots), where 62 lots created in Gillespies made up the bulk of this. 2016 was the quietest year for subdivision, with just 10 new lots created, followed by 2017, with 11 lots created. Last year (2018), the total number of new lots rose to 33, dominated by activity in Kaitoke (15 lots) and Mangaroa Valley (12).

170. Apart from the two busiest years (2006 and 2015), the average number of lots in each application has ranged between 1-4 (Table 5).
171. The most common applications have been discretionary land use consents (216), followed by limited discretionary land use consents (155) (Table 6). Of the consents which relate to subdivision, controlled consents have made up the bulk of these applications, with 89 applications for subdivision only consents (and 3 combined land-use/subdivision consents). This compares to 65 discretionary subdivision consents, and 7 discretionary consents which comprised both land use and subdivision, and just two limited-discretionary subdivision consents. Only two non-complying subdivision consents were received during the time period, (one subdivision consent and one combined land use and subdivision consent).

Table 3: Number of resource consent applications by year

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	Grand Total
Akatarawa	1	1	2		2				1	1	1	4	1	14
Gillespies	9	7	2	3	3	4	4	2	4	11	6	6	4	65
Kaitoke	7	7	3	7	2	3	4	2	5	2	4	3	6	55
Mangaora Valley	19	17	10	10	8	13	10	9	10	7	3	9	11	136
Moonshine Settlement	4	3	4	3	1	4	5	2		1	1			28
Moonshine Valley			1			1				1	1			4
Pakuratahi								1			2			3
Pinehaven-Blue Mountains	14	11	7	16	10	14	12	9	11	12	4	13	4	137
Te Marua	20	13	5	10	7	7	4	8	8	10	9	5	7	113
Whitemans Valley	7	10	4	4	4	6	7	9	3	4	9	7	5	79
Grand Total	81	69	38	53	37	52	46	42	42	49	40	47	38	634

Table 4: Number of new lots created by year

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	Grand Total
Akatarawa		1							1		2	4	0	8
Gillespies	4	1		1	1	4	3	1		62		1	3	81
Kaitoke	3	6			4		1			1		2	15	32
Mangaora Valley	94	10		1	7	19	3	2	3	8	1	3	12	163
Moonshine Settlement	1	1		1		2	3			2				10
Moonshine Valley														
Pakuratahi														
Pinehaven-Blue Mountains	1	1		3	2	1		1	15			1	0	25
Te Marua	52	12		20	2	2	5	3	3	3	7		3	112
Whitemans Valley		3		12			1	5	3	1			0	25
Grand Total	155	35		38	16	28	16	12	25	77	10	11	33	456

Table 5: Average number of lots in each application by year

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	Grand Total
Akatarawa		1							1		2	2	0	1
Gillespies	2	1		1	1	4	2	1		21		1	1	5
Kaitoke	2	3			4		1			1		2	3	2
Mangaora Valley	16	1		1	4	6	2	1	2	2	1	3	1	4
Moonshine Settlement	1	1		1		2	3			2				2
Moonshine Valley														
Pakuratahi														
Pinehaven-Blue Mountains	1	1		2	1	1		1	8			1	0	2
Te Marua	13	2		7	1	1	5	1	3	3	4		0	4
Whitemans Valley		3		4			1	1	3	1			0	2
Grand Total	10	2		3	2	4	2	1	4	6	3	2	1	3

Table 6: Count of resource consent type

	16	FHN	LC	LD	LDR	LN	LSC	LSD	LSN	OPW	PB	SC	SD	SLD	SN	Grand Total
Akatarawa		4		1	2	1						4	2			14
Gillespies	1	2	9	16	13	1						9	13	1		65
Kaitoke		3	6	13	12	3		2				10	6			55
Mangaora Valley	2	6	9	31	39	5	2	2			2	21	16	1		136
Moonshine Settlement			1	5	10	1		1				5	5			28
Moonshine Valley		2				1							1			4
Pakuratahi			1	1	1											3
Pinehaven-Blue Mountains	2	2	1	90	23	2	1	1			1	12	2			137
Te Marua			6	37	24	6		1	1	1	1	26	9		1	113
Whitemans Valley		6	4	22	31	3						2	11			79
Grand Total	5	25	37	216	155	23	3	7	1	1	4	89	65	2	1	634

1.5.12 Building consents:

172. Where codes of compliance have been issued, the greatest numbers of certificates have been issued in Pinehaven-Blue Mountains, Te Marua and Mangaroa Valley - all around the 350-380 mark (Table 7). Whiteman's Valley and Gillespies were equal, at 171 certificates issued, followed by Kaitoke at 95. Only one certificate was issued in Moonshine Valley, and 2 in Pakuratahi between 2006-2019. Akakarawa at 42 and Moonshine Settlement, at 56, have been the next quietest areas.
173. Average estimated values of building consents by year (Table 8), shows that across the time period, the highest value buildings overall were generally in Kaitoke, Gillespies and Whiteman's Valley, with these three areas also showing high values in recent years. At the opposite end of the scale was Pinehaven-Blue Mountains.
174. Building consent data (Table 9) shows that the majority of new codes of compliance have been issued for single storey buildings over the last 12 years (78% of all certificates of compliance were for single storey buildings). Only 1.9% of certificates issued were for three or four storey buildings. Pinehaven-Blue Mountains was by far the locality with the largest number of consents for two storey units, (86 in total), well above the next highest (37 were issued in Te Marua).
175. Average floor area data for codes of compliance (Table 10) is more difficult to interpret, as there appears to be some large outliers or errors in the data for Mangaroa Valley and Moonshine Settlement. Average floor areas appear to be largely consistent in recent years, with a growth trend in average floor area between 2014-2018, from 62m² to 91m² (ignoring the outlier in 2016).

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176. This data reinforces the subdivision activity trends, showing a strong demand for rural residential development in the more accessible rural localities (Te Marua, Mangaroa Valley, Gillespies), with activity also strong in Whitemans Valley, due to its attraction as a 'high-end' locality.

177. A caveat: our analysis of building consent data is based on issued codes of compliance. Building consent records from 2006-2016 were exported in Aug 2018, and 2017 and 2018 records were exported in May 2019. The records therefore provide a 'snapshot of a live record entry', and do not provide a full picture of the total certificates which will be issued.

Table 7: Status of Building Consent by Area (CCC issued only)

	CAR	CC2	CCC	CCCL	CCFR	CCIR	CX	CXE	FI	FP	I	LAPS	LRL	LS	NOCC	RCCC	RL	S37U	TB	WD	WXE	XL	Grand Total
Akatarawa		4	42					1			5		1	1	1	1					2	3	61
Gillespies	2	5	171	1	4			2	4	1	45	2	2	1	8	2		1		1		10	262
Kaitoke		2	95			1		2	1		13	4	1		7	3	1	1			1	2	134
Mangaora Valley	1	10	349		2		2	8	1		47	4	2	2	19	6	1	1		2	2	5	464
Moonshine Settlement		2	56	1			1	1	1		9		1		5							5	82
Moonshine Valley			1																			1	2
Pakuratahi			2																				2
Pinehaven-Blue Mountains		10	386	1	2	1	1	3	2	1	39	6	4	2	14	8	2	2		2	2	14	502
Te Marua	1	8	354		2			7	1		30	2	3	2	12	11	4	1		1	1	11	451
Whitemans Valley		3	171					4	1		20	6	3		6	3	1		1	1		4	224
Grand Total	4	44	1627	3	10	2	4	28	11	2	208	24	17	8	72	34	9	6	1	7	8	55	2184

Table 8: Average Estimated Value of Building Consent by Year, where Code of Compliance was issued

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Grand Total
Akatarawa	3,000	8,165	55,000	38,334	34,740	72,650	43,450	78,375		117,500	4,500	41,167	45,233		47,535
Gillespies	7,645	3,433	45,357	34,846	33,378	35,717	75,871	29,856	23,467	63,736	13,638	199,942	256,831	189,605	92,951
Kaitoke	96,000	65,743	25,972	77,375	124,125	51,000	69,700	117,114	154,244	52,456	113,400	520,667	165,387	122,200	112,199
Mangaora Valley	13,580	37,297	106,459	75,162	73,822	43,580	64,697	114,289	61,670	87,418	68,404	79,342	110,208	56,757	74,727
Moonshine Settlement	4,000	12,500	21,877	57,760	19,940	84,030	29,000	61,269	7,500	5,186	73,300	165,000	153,300		50,367
Moonshine Valley									314,000						314,000
Pakuratahi												4,800	55,000		29,900
Pinehaven-Blue Mountains	21,811	15,095	37,249	46,360	34,916	17,187	24,088	35,594	22,421	34,020	40,959	52,812	19,790	30,057	32,104
Te Marua	61,001	60,569	77,860	81,318	101,816	90,267	73,596	28,828	50,230	71,783	38,572	74,777	89,030	61,500	69,877
Whitemans Valley	65,000	70,664	117,318	83,828	102,429	82,685	52,027	47,080	72,794	74,413	59,288	70,011	129,240	593,000	80,806
Grand Total	33,964	37,322	67,085	67,421	65,264	55,699	53,815	66,514	61,070	59,252	52,468	103,729	123,393	115,115	66,853

Table 9: Count of number of storeys, by area where CCC was issued

	1	2	3	4	Grand Total
Akatarawa	15	6			21
Gillespies	98	17		1	116
Kaitoke	55	9			64
Mangaora Valley	170	29	4		203
Moonshine Settlement	26	11			37
Pakuratahi	2				2
Pinehaven-Blue Mountains	145	86	9	1	241
Te Marua	190	37	3		230
Whitemans Valley	97	10	1		108
Grand Total	798	205	17	2	1022

Table 10: Average of Floor Area when a Code of Compliance was issued by year

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Grand Total
Akatarawa	0	41	108	38	86	88	40	27		40	0	19	19		47
Gillespies	0	195	194	81	71	35	274	19	22	39	11	117	130	119	98
Kaitoke	64	29	124	84	135	91	200	160	111	66	309	285	94	129	137
Mangaora Valley	36	409	127	927	92	409	63	100	100	83	8023	83	107	91	683
Moonshine Settlement	0	76	7174	69	120	71	106	165	0	8	2	40	216		967
Moonshine Valley									177						177
Pakuratahi												165	165		165
Pinehaven-Blue Mountains	1	39	88	44	61	24	70	26	20	82	34	49	48	45	48
Te Marua	51	160	78	157	128	156	95	43	31	69	33	66	58	47	97
Whitemans Valley	89	87	92	123	89	186	79	96	87	72	50	53	95	288	97
Grand Total	32	157	525	282	92	151	101	75	62	69	1521	77	91	93	242

1.5.13 Sales data:

178. Sales data has been captured for the same time period of 2006-2018. This data gives an indication of the popularity of different areas.
179. Pinehaven / Blue Mountains has seen the greatest number of total sales over this period, with 913 units, followed by Te Marua with 299 and Gillespies with 289 units (Table 11). Moonshine Valley had the lowest number of sales, with just 5 units sold in total over this 12-year period, followed by 33 in Moonshine Settlement and 34 in Akatarawa.
180. The highest average sale value of residential properties was \$716,622 in Whiteman's Valley, (based on 105 sales). Moonshine Settlement commanded an average sale value of \$634,647, (but this needs to be balanced against the fact that there were only 33 sales over this time period). The lowest average sale value was in Moonshine Valley, at \$365,250, but this is based on only 5 sales (and no sales in the last three years). Gillespies and Pinehaven-Blue Mountains also had lower average sale values.
181. Business sales are difficult to interpret, as it is not clear how many sales the figures are based on. Mangaroa had the highest average sale value, at \$1,330,000, and Pinehaven-Blue Mountains had the lowest average sale price at \$88,167, (which may include urban businesses) (Table 12).
182. In terms of net sales by year and location (Table 13), Whitemans Valley has had consistently high average net residential sales values and comes out top, with an overall average of \$716,622, followed by Moonshine Settlement, at \$634,647 and Akatarawa, at \$592,900. The lowest average gross residential sales values are found in Gillespies, Moonshine Valley and Pinehaven-Blue Mountains, all around the \$365,000 to \$375,000 mark.
183. Average land area sales by locality reflect the land use zoning in that area (Table 14, Table 15).
184. In terms of land value, the highest average land value of residential properties overall for the time period was recorded in Whitemans Valley, at \$335,100,

followed by Mangaroa Valley at \$280,395 (Table 16). The lowest average land values were in Moonshine Valley (\$105,000, but based on only 5 sales), and Pinehaven-Blue Mountains (\$112,065, but this is likely to reflect the smaller land areas and residential nature of this location). In the last three years, Whitemans Valley has had the highest average land values, followed by Kaitoke and Mangaroa Valley.

185. When average difference between assessed value and sale price is reviewed, a clear trend is shown across all rural areas (Table 17 and accompanying graph). Sale prices were very high relative to assessed value in 2006 and 2007, began to drop in 2008, and then plummeted in 2009. Sale prices stayed below assessed value for several years, before beginning to recover.
186. In the last two years, there has been a strong recovery in the market across all areas, with the average difference between sale prices and assessed values close to the inflated prices seen in 2006 and 2007. When different areas are compared, the strongest performers (those commanding the highest sales prices relative to assessed value) in the last two years (2017-18) have been Akatarawa, Whitman's Valley, Te Marua and Mangaroa Valley.

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187. This analysis, along with a review of remaining subdivision potential (using GIS mapping) shows a strong demand and uptake of rural residential living between 2006-2018. This is particularly demonstrated in the valleys which are most accessible to the urban area, such as Te Marua, Mangaroa, and Gillespies, where very little subdivision potential remains. There has also been significant activity in the less accessible Whiteman's Valley (of a high-value nature). Other less accessible areas such as Kaitoke and Akatarawa valleys have also been growing in popularity in recent years, as opportunities have dried up in the more accessible locations. Moonshine Settlement/Valley is the only locality where growth has been modest.

Table 11: Sales by count of units per year and area

	Akatarawa	Gillespies	Kaitoke	Mangaora Valley	Moonshine Valley	Pinehaven-Blue Mountains	Te Marua	Whitemans Valley	Grand Total
2007	3	21	2	23	2	91	38	12	193
2010	1	10	4	16		53	16	8	111
2013	1	7	6	15	1	61	27	9	129
2016	6	42		12		75	24	10	171
2006	6	22	7	28		109	30	13	221
2008		22	4	11		48	15	7	110
2009		13	3	14		59	25	6	122
2011		12	1	14		68	13	2	112
2012	2	17	4	26	1	66	21	9	146
2014	1	27	5	17		67	20	5	144
2015	4	20	2	16	1	82	24	7	160
2017	6	46	2	20		81	23	6	185
2018	4	30	3	16		53	23	11	145
Grand Total	34	289	43	228	5	913	299	105	1949

Table 12: Average sale by type

	Business	Residential	Grand Total
Akatarawa	72,500	592,900	566,971
Gillespies	55,000	376,294	376,221
Kaitoke	77,500	508,487	520,999
Mangaora Valley	1,330,000	581,741	598,150
Moonshine Settlement	50,125	634,647	636,523
Moonshine Valley	20,000	365,250	476,200
Pinehaven-Blue Mountains	88,167	372,956	372,020
Te Marua	30,708	429,432	429,445
Whitemans Valley	49,900	716,622	713,445
Grand Total	656,308	434,514	437,697

Table 13: Average net sale by year – residential

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	Grand Total
Akatarawa	791,167	548,500			80,000		427,500	232,000	210,000	506,333	583,750	584,667	801,000	592,900
Gillespies	323,182	438,881	494,167	317,423	414,075	316,792	370,091	313,625	390,519	337,915	316,149	373,687	446,852	376,294
Kaitoke	511,800	360,000	469,750	387,000	515,250	544,000	358,350	473,083	590,709	647,000		667,500	689,833	508,487
Mangaora Valley	433,383	548,783	447,636	506,607	620,719	619,643	516,481	591,292	583,471	600,607	600,417	693,100	891,428	581,741
Moonshine Settlement	513,400		686,000	790,500	573,667	540,250		552,000	601,750	616,250	521,375	975,000	823,250	634,647
Moonshine Valley		345,000					389,000	180,000		547,000				365,250
Pinehaven-Blue Mountains	303,676	336,306	350,554	338,521	350,647	331,544	347,522	353,061	375,495	365,719	436,343	483,146	514,186	372,956
Te Marua	342,818	386,403	372,967	358,058	425,631	459,308	390,476	498,056	368,475	416,612	382,620	604,089	608,054	429,432
Whitemans Valley	495,500	499,611	602,333	774,833	561,125	1,075,000	860,000	697,375	547,600	738,429	708,700	900,583	1,132,909	716,622
Grand Total	361,450	396,421	416,707	389,368	430,790	399,705	416,648	432,716	417,331	422,500	431,104	515,146	624,542	434,514

Table 14: Average land area sale by year

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	Grand Total
Akatarawa	12.2	46.3			0.1		2.1	0.1	0.1	37.7	3.4	9.0	10.4	13.1
Gillespies	1.5	16.1	7.9	0.5	8.2	1.1	0.5	1.2	7.3	0.9	5.0	1.5	1.9	4.2
Kaitoke	9.4	4.5	3.8	5.4	3.5	3.7	3.6	3.1	5.5	4.8		2.8	5.2	4.8
Mangaora Valley	3.5	3.0	2.9	2.2	3.7	2.8	2.3	2.2	2.3	4.8	2.2	3.1	2.4	2.9
Moonshine Settlement	19.0		10.7	18.1	7.0	11.7		8.4	4.4	15.1	3.1	4.3	9.7	11.4
Moonshine Valley		0.0					0.0	0.1		0.1				0.0
Pinehaven-Blue Mountains	0.2	0.2	0.1	0.3	0.2	0.2	0.1	0.2	0.1	0.2	0.2	0.2	0.2	0.2
Te Marua	1.2	0.5	0.5	0.2	0.2	0.8	0.7	0.8	0.9	0.7	0.7	0.5	0.8	0.7
Whitemans Valley	10.7	12.7	4.6	9.6	4.8	4.1	4.9	3.7	3.6	7.0	4.2	7.9	27.6	9.3
Grand Total	2.4	3.7	2.6	1.4	2.0	1.0	1.0	1.1	2.2	2.3	2.0	1.5	3.7	2.1

Table 15: Average total floor area of residential buildings sold by year

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	Grand Total
Akatarawa	190.5	160.0					135.0	60.0	90.0	125.3	217.8	147.5	150.3	159.5
Gillespies	109.6	117.6	112.2	117.2	145.0	117.2	143.1	113.4	117.3	99.3	72.5	90.2	130.4	108.3
Kaitoke	140.8	0.0	172.5	38.3	132.3	145.0	216.5	121.8	199.0	144.0		285.0	214.0	143.1
Mangaora Valley	83.3	122.0	112.0	152.6	148.9	160.6	180.4	180.5	186.4	159.1	189.2	174.6	240.8	156.3
Moonshine Settlement	103.8		207.0	187.0	201.3	280.0		150.0	146.0	155.3	264.0	293.0	168.8	171.7
Moonshine Valley		159.0					159.0	0.0		178.0				124.0
Pinehaven-Blue Mountains	135.0	131.7	152.9	145.4	144.9	142.6	144.9	138.7	147.7	152.9	147.2	152.3	141.3	143.8
Te Marua	123.8	133.6	107.3	148.0	183.2	152.4	151.1	188.2	156.2	155.4	122.7	187.3	173.5	151.8
Whitemans Valley	112.3	102.6	164.8	183.2	180.4	234.5	256.0	209.7	272.5	256.7	186.6	181.0	233.2	185.2
Grand Total	124.0	126.4	137.5	143.5	154.8	146.6	158.6	153.4	151.1	150.4	133.3	149.4	167.4	144.2

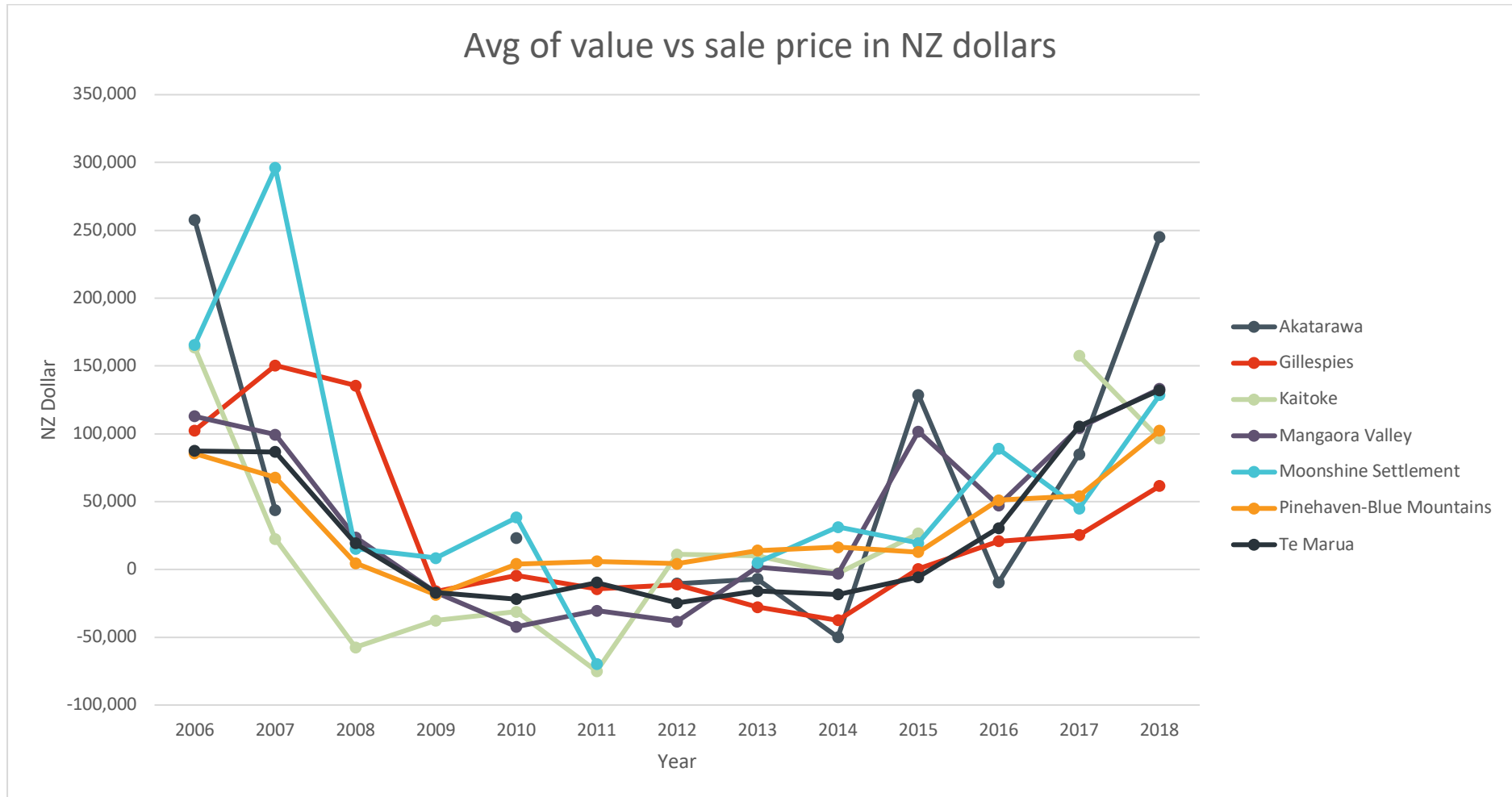
Table 16: Average land value of residential properties sold by year

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	Grand Total
Akatarawa	157,167	360,000			57,000		168,000	66,000	86,000	228,333	257,000	234,833	267,750	213,367
Gillespies	78,727	141,000	181,476	141,769	141,100	144,833	154,000	143,500	229,000	168,400	190,429	221,957	223,600	178,993
Kaitoke	226,600	332,500	310,000	326,667	271,500	335,000	280,000	254,167	340,000	352,500		290,000	371,667	297,171
Mangaora Valley	228,370	262,000	284,091	260,357	349,375	321,429	273,692	263,750	267,412	311,000	276,667	280,200	316,250	280,395
Moonshine Settlement	199,600		282,500	425,000	221,667	265,000		217,500	255,000	275,000	227,500	270,000	310,000	262,690
Moonshine Valley		75,000					65,000	140,000		140,000				105,000
Pinehaven-Blue Mountains	69,935	91,056	107,625	109,220	106,226	103,118	102,197	104,033	116,209	123,707	128,907	161,691	156,302	112,065
Te Marua	101,867	124,861	149,133	130,769	129,750	175,154	158,286	188,593	167,900	169,043	166,375	186,087	207,217	155,697
Whitemans Valley	195,500	294,636	354,167	380,833	284,125	380,000	375,625	336,250	329,000	365,714	333,500	449,167	413,636	335,100
Grand Total	111,288	142,092	170,738	158,106	169,261	153,143	167,786	163,548	179,264	173,599	176,314	206,189	227,736	167,764

Table 17: Average difference between assessed value and sale price (residential)

	Akatarawa	Gillespies	Kaitoke	Mangaora Valley	Moonshine Settlement	Pinehaven-Blue Mountains	Te Marua	Whitemans Valley	Grand Total
2006	257,666.67	102,409.09	163,571.43	112,833.25	165,666.67	85,587.16	87,334.17	161,846.15	104,752.74
2007	43,666.67	150,404.76	22,500.00	99,347.83	296,000.00	67,755.35	86,726.97	106,726.83	87,212.48
2008		135,522.73	-57,500.00	23,727.27	15,333.33	4,637.50	19,166.67	-61,928.57	28,500.91
2009		-16,192.31	-37,666.67	-17,035.71	8,500.00	-18,699.83	-17,096.15	90,000.00	-12,624.31
2010	23,000.00	-4,625.00	-31,250.00	-42,218.75	38,333.33	3,986.57	-21,868.75	-2,375.00	-7,805.06
2011		-14,458.33	-75,000.00	-30,500.00	-69,750.00	6,014.71	-9,769.23	12,500.00	-4,535.71
2012	-10,500.00	-11,202.94	11,100.00	-38,487.88		4,279.39	-24,714.29	-13,777.78	-10,539.97
2013	-7,000.00	-27,750.00	10,083.33	1,700.00	5,000.00	13,889.34	-15,944.44	3,222.22	2,424.42
2014	-50,000.00	-37,555.56	-2,890.60	-3,117.65	31,250.00	16,330.60	-18,425.00	11,600.00	-1,981.27
2015	128,750.00	414.80	26,500.00	101,631.25	19,500.00	12,847.56	-5,621.67	6,571.43	20,408.65
2016	-9,666.67	20,791.67		47,250.00	88,875.00	51,023.28	30,494.79	61,900.00	39,401.29
2017	85,000.00	25,425.85	157,500.00	104,400.00	45,000.00	54,071.93	105,436.96	133,916.67	63,437.65
2018	245,000.00	61,552.17	96,500.00	133,115.00	128,500.00	102,167.32	132,184.78	226,636.36	116,113.95
Grand Total	104,970.59	35,979.31	32,440.63	42,750.38	71,037.88	35,195.09	33,420.02	70,683.07	39,604.38

Graph of Table 17.



1.5.14 Discretionary Applications – what are the key themes?

188. Applications for resource consent which fall into the ‘discretionary activity’ classification must be assessed against all of the relevant district plan objectives and policies and Part II of the RMA. Unlike a controlled activity, a discretionary application can be declined by the Council, so there is more risk for the applicant with such applications. A review of discretionary resource consent applications is useful highlight demands or trends which the Operative District Plan is not adequately addressing.

FAIRVIEW FARM APPLICATION FOR A 53 LOT SUBDIVISION AT 148 GILLESPIES ROAD (GRANTED JANUARY 2015)

189. Features of this application:

- 53 lot subdivision on a 160ha site at 148 Gillespies Road (comprised of 47 rural residential lots (from 0.52ha to 12.75ha) one buffer lot, one balance lot (76.2ha) and 4 lots to vest as road.
- largely located in the Residential (lot sizes approx. 400m²) and Rural Hill Zones (20 ha lot sizes).

190. The District Plan rather paradoxically allows for intensive residential development (Residential zone) directly alongside very low-density rural development (Rural Hill sub-zone) in this location. The discretionary activity status of this consent was triggered by minimum lot sizes less than 20ha in the Rural Hill Sub-zone²⁶.

191. As shown in Figure 17 above, the key feature of this application is the juxtaposition of Residential and Rural Hill zoning combined with the relative isolation of the site. As the subdivision is not sited on a main transport link and is less visible to the local community, it was considered that the site had potential to support a higher density of development.

²⁶ Chapter 1 of the Operative plan (1.7.2) states that where there is a split zone, the most restrictive rules shall apply.

192. The adverse effects of the development, which were considered to be minor, were able to be mitigated by:

- Defining building platforms on the proposed lots;
- Undertaking on-site mitigation planting;
- Protecting the significant natural area on the site; and
- Limiting the height and colour of future buildings.

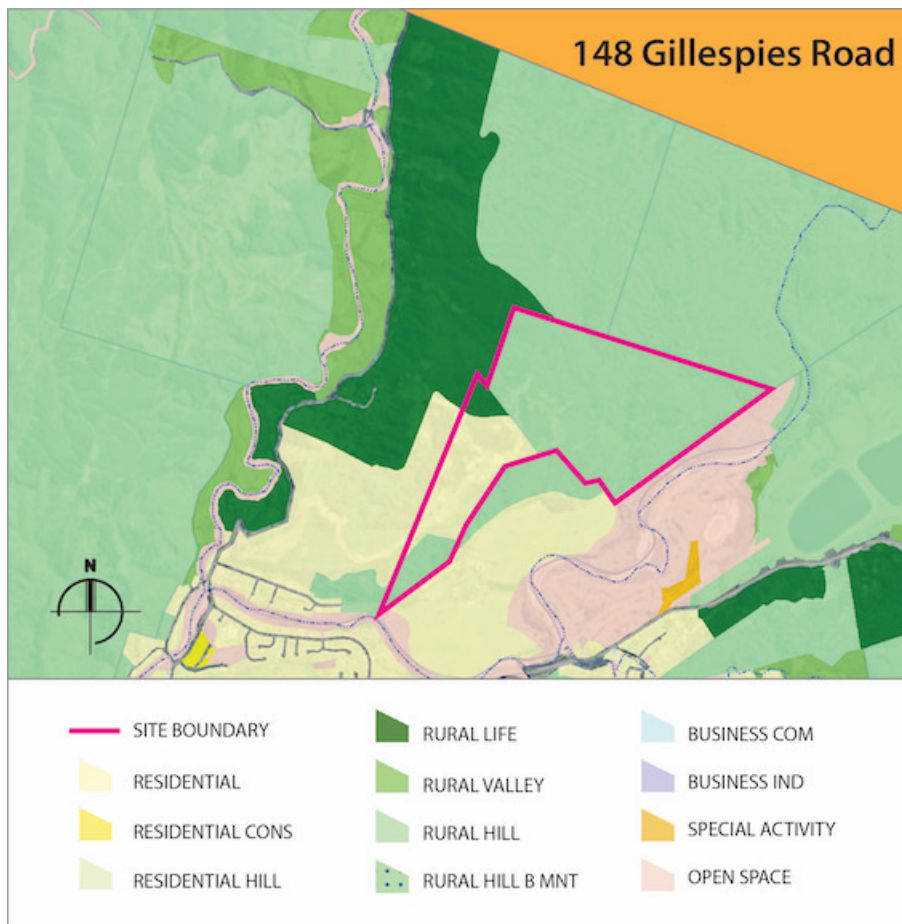


Figure 17: Fairview Farm location at 148 Gillespies Road.

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193. The outcome of this application (approval) shows that to some extent the zoning was arbitrary and doesn't reflect the constraints (the residential zone sites were unable to be serviced) and the capacity of the site (due to its isolation) to absorb a higher density of development (from a visual effects perspective). It also shows that controls like defining building platforms, limiting height and colour, and undertaking mitigation planting, can help to address the landscape and visual effects of rural-residential developments (and we have picked up on this in our general recommendations).
194. We do note however that this development is quite isolated, which means that residents are required to drive to access facilities, including schools, shops, recreation and leisure activities. The typography and location of lots does not encourage informal neighbourly interactions or active travel.
195. We have some reservations about the urban/rural divide in this area and have made some observations about this in our individual assessment of the Gillespies locality.

APPLICATION FOR A 13 LOT SUBDIVISION AT 281 KATHERINE MANSFIELD DRIVE, UPPER HUTT (GRANTED SEPTEMBER 2018)

196. Features of this application:
- Amended application for a 13 Lot subdivision of 37ha site zoned Rural Valley and Rural Lifestyle (which is also subject to a protected ridgeline and the Southern Hills Overlay).
 - Creates 6 lots of 4ha in the flat area of the site which complies with the minimum lot size of the Rural Valley Floor Subzone, and 6 lots of 2ha (on the undulating hillocks) which as they have a split zoning between Rural

Valley and Rural Lifestyle, did not meet the requirements for a controlled activity in the Rural Valley Subzone.

- The developer's rationale was that the lot sizes and design provides a more coherent design that responds to the characteristics of the site, than just configuring to meet the current zone standards.
- Upgrades to mitigate additional traffic were proposed by the applicant, in the form of passing bays, widening of corners and shoulders.

197. The application was granted in September 2018 on the basis that the proposed subdivision will create rural lifestyle sections "in keeping" with the development pattern of the surrounding area and consistent with that expected in the Rural Valley floor zone.
198. The smaller lots are located on rising land at the rear of the site, where the rises and valleys of the land along with vegetation will assist to visually separate future buildings, resulting in the effects on the character and rural amenity being less than minor. Because they are located amongst the lower slopes of the hills, future houses will be integrated into the backdrop.
199. The resulting house sites on the lots encompassing the hill and subject overlays are located at the base of the hills, well below the protected aspects of the site, and as seen from the surrounding valley, the upper reaches of the site will remain unchanged. This essentially protects the values of the highest portions of the site (which are within the Southern Hills overlay and a portion of the protected ridgeline).
200. The existing poor construction and condition of the access road were noted, but that the Council did not have upgrade works scheduled for this extension road.

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201. Review of this application, along with GIS mapping highlights a reservation we have noted about the boundary of the Rural Lifestyle zone on the eastern side of Katherine Mansfield Drive. We have concerns that the upper edge of this zone should be more landscape responsive, and that it is not appropriate or practical to take rural lifestyle development to the top of the ridgeline in this location. We note that there is no protected ridgeline on this side of the valley.
202. We support the approach adopted here of locating houses on the lower slopes of hills, which provides an integrating backdrop. We have suggested the introduction of controls on building platform locations which would give the Council greater discretion to achieve this outcome in other localities.

92 MARCHANT ROAD (GRANTED 27 SEPTEMBER 2017)

203. This 4-lot subdivision triggered a discretionary activity status, as Lot 1 was below the 4ha minimum for a controlled activity within the Rural Valley sub-zone (two lots complied with the minimum 4ha requirement, and the balance lot was 78 ha). However as the undersize lot was largely configured on an existing undersized lot, it therefore represented a minor change to an existing non-compliance. It was also noted that there were other, under-sized lots in the vicinity, and as the lot already accommodated an existing dwelling, the adverse effects would be less than minor.

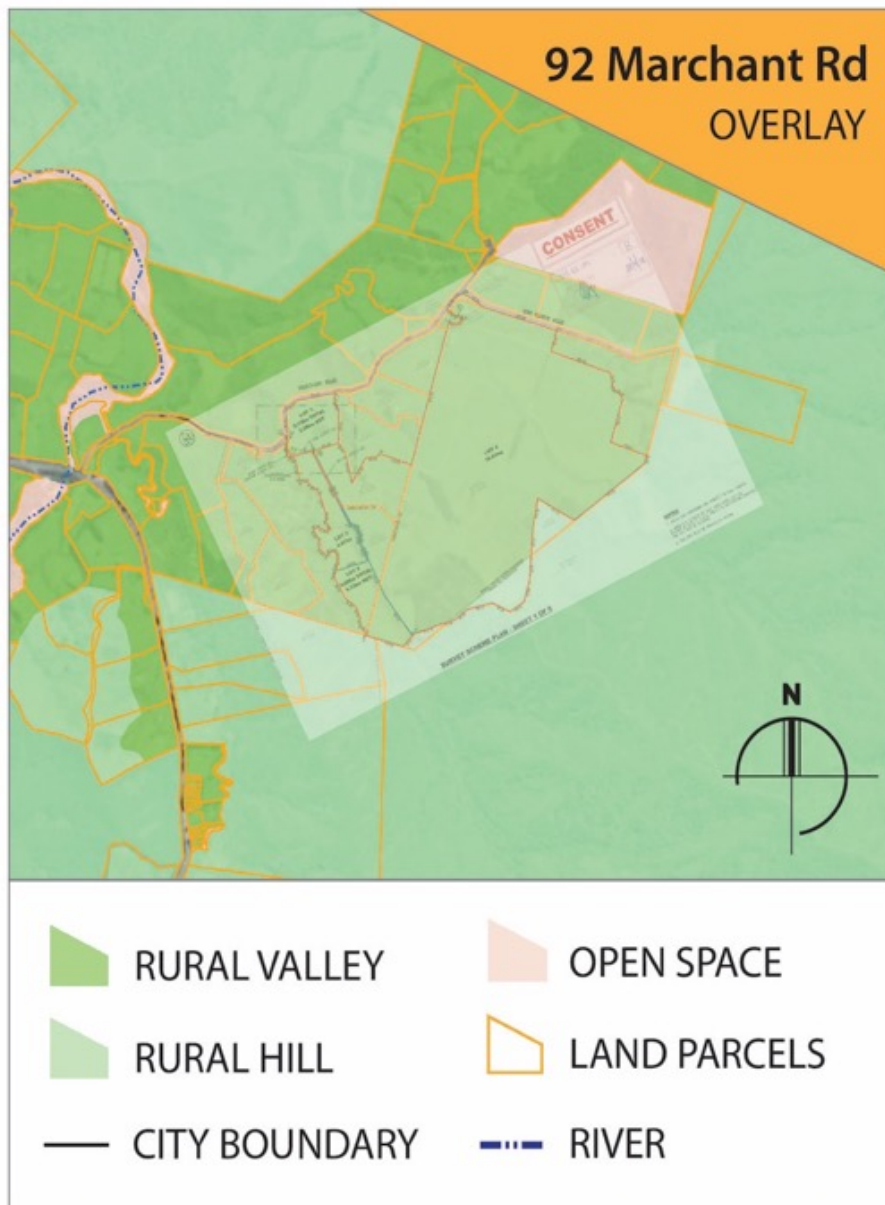


Figure 18: 92 Marchant Road with subdivision scheme plan overlay

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204. There are a number of locations in the rural area where there are undersized lots that appear inconsistent with the underlying zoning, but which reflect historic cross-roads development. In some of these areas, we have recommended that cluster development would be appropriate, although in this situation we consider that the Rural Valley zoning should be retained.

44A CREST ROAD (GRANTED 11 FEBRUARY 2015)

205. This was a 16 Lot subdivision and land use consent (earthworks), across split zoning – Rural Lifestyle and Residential.

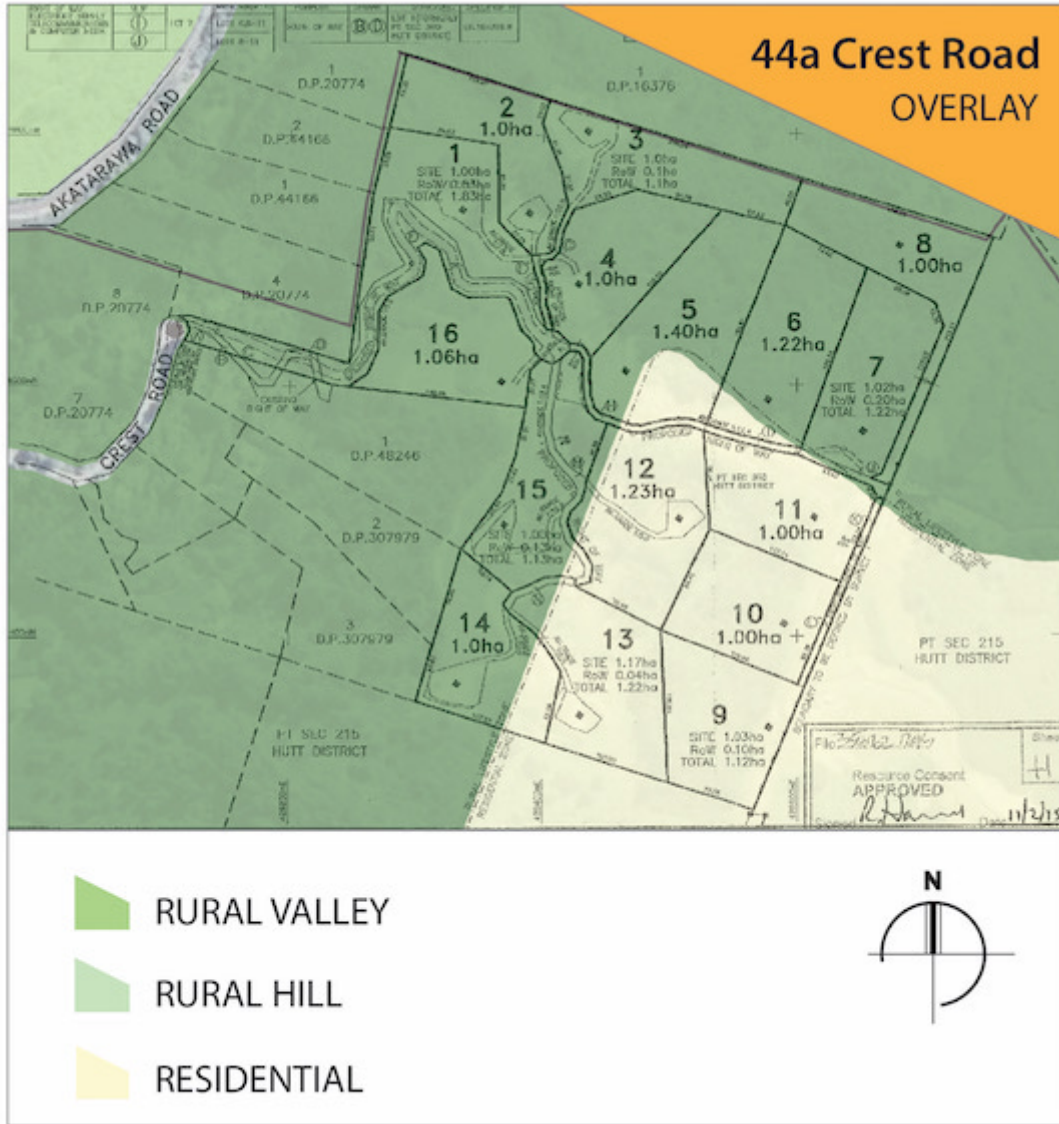


Figure 19: 44A Crest Road with subdivision scheme plan overlay

206. This was a slightly unusual application, as the site is located just within the urban rural boundary and parts of the site are zoned residential. The officers report observed that the proposals would create rural residential sized lots of approximately 1ha, to allow for onsite servicing and consistent with the “rural lifestyle amenity values in this area”. Unless Council wastewater and water services were provided to the site, the actual lot sizes would have to be considerably larger than allowed for by the underlying residential zoning

(400m²). Given the lack of feasibility of connection, it was concluded that the site was better utilised as rural lifestyle size lots (1ha minimum).

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207. We agree with the officer that this area reads as having rural lifestyle character, and therefore it might be appropriate to review the zoning and urban edge in this location.

208. The applications reviewed above are just a snapshot of development activity in the rural environment. However they highlight some of the issues we have identified in our detailed analysis of the rural localities, and provide justification for a review of the current zoning and other planning controls in these areas.

2 Economic changes and drivers

209. As part of this assessment, an economic analysis of productive land uses in the rural area has been undertaken. This assessment is reported separately as: *Economic Analysis of Rural Land Uses in Upper Hutt, 2019*. This section of the report highlights some of the key drivers and trends and reflects on these in the context of other themes from our research.
210. **Forestry:** Forestry is a key player in the Upper Hutt rural economy. There is evidence of a trend of increased harvesting (both locally and nationally), as trees reach the economically optional age for harvest, and due to the improved returns from log prices relative to historic prices.
211. The underlying economics of forestry is very dependent on scale, accessibility of the plantation and distance to market. The City's exotic forest plantations are small relative to those of other regions, but they are of economic scale and are relatively close to market (i.e. the Port of Wellington, or wood processing operations in the Wairarapa).

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212. Policies designed to mitigate climate change are also likely to encourage increased afforestation (especially on more accessible blocks with poor soil fertility). However this needs to be considered alongside future predicted impacts of climate change, including a substantial increase in forest fire risk from exotic plantations, and reduced soil fertility (NIWA, 2017), both adverse impacts which could be further amplified by this policy approach.
213. Pastoral farming (beef and sheep) is also in a comparatively upbeat state, compared to historic trends, due to strong prices in beef meat in particular. Pastoral farming is likely to continue to be an economically attractive land use,

if strong commodity prices continue. Pastoral farms in the Upper Hutt rural area may be more resilient to climate change than hill country farms in the east of the region, as the west is likely to continue to receive more rainfall relative to the east as a result of climate change. It is also not predicted to experience the same degree of increase in temperatures as the east, which may lead to heat stress in livestock, increased pathogens and pests, and changes to pasture species over time (NIWA, 2017).

Dairying

214. Dairying is a minor and declining land use activity in the Upper Hutt district. It is likely to come under increasing pressures and face greater costs given environmental concerns about the quality of freshwater resources and greater urbanisation in the district.

Nutrient planning documents

215. Of the 96 farms recorded in the 2017 Agricultural census, only nine had any form of formal nutrient planning document. This is a concerning statistic, in light of the recent Whaitua research, which has identified that:
- macroinvertebrate community health is degraded in streams and rivers draining catchments with a significant amount of agricultural land cover,
 - the Mangaroa River is one of only two non-urban waterways in the Whaitua that are not suitable for primary contact recreation, due to elevated levels of E. coli, the primary source being faecal contamination from stock (sheep and beef cattle).
 - Improving the state of the agricultural catchments, specifically the Mangaroa River, will require a shift in land management practices. Further information needs to be collected on nutrient sources, transport and dynamics to support future decision making.

Irrigation

216. Irrigation of pasture or crops is not common in the rural area, although there could be greater reliance on irrigation if trends towards increasing droughts come into play as a result of climate change. As mean low river flows are also

predicted to reduce further, there could be increasing competition for water resources between urban and rural land uses in the future.

Lifestyle sized rural enterprises

217. Lifestyle sized rural enterprises can be a source of experimentation and innovation that is not always possible in larger, more established commercial operations²⁷. Many of these activities may be able to be accommodated on blocks of 4 hectares or less and some on 1 hectare or less. However, others will need flexibility to operate on larger areas. The returns per hectare of some of these activities is likely to be significantly better than that achieved on the pastoral sheep and beef farming land that they have superseded, even with the current buoyant meat prices.
218. There is likely to be a lot more varied and richer set of commercial/life style activities in the Upper Hutt district than is captured in the Agricultural Production Census. This is because the census surveys are targeted at businesses through GST registration records, so smaller life style blocks are unlikely to be included.

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219. The economic analysis concludes that the City's rural land makes a useful, but marginal, contribution to New Zealand's overall agricultural and forestry production. Given this, and the generally less valuable soils of the district, it could be viewed as an area in which to accommodate increased demand for urban development in the Greater Wellington area. *(continued)*

²⁷ Examples include equestrian training for show jumping or dressage, horses trekking, truffle growing, olive orchards, greenhouses, small tourism enterprises like paintball or disc golf, rare and heritage animal breeding, nut production, specialty gardens, cafés and crafts.

220. The district might provide attractive expansion options as part of a wider strategy for coordinating areas for future urban growth in the region. This is particularly so, given its proximity and accessibility, and planned improvements in road, rail and bus service infrastructure, which are likely to further increase that accessibility.

3 What does the community want?

221. In this section we summarise the Upper Hutt community's aspirations for the rural environment and the values they hold.
222. Understanding the values a community associates with an environment provides a very useful lens through which to consider issues such as managing land use and accommodating growth and change.
223. The following information is taken from a review of community consultation exercises that have been undertaken already. In particular, it draws from the consultation responses from rural residents in the LUS, which was drawn up with extensive community input. It also captures feedback on the Council's Long Term Plan process, and a councillor workshop in 2019 to capture their aspirations for the upcoming plan change for the rural environment.
224. The LUS provides a helpful structure for summarising these themes, and we have used this here.

ECONOMY

- Increased flexibility and versatility within the District Plan would allow for development of new businesses that are compatible with the rural environment.
- More reliable infrastructure is required to support rural business growth, especially broadband internet access
- The community is supportive of encouraging tourism in the rural environment.
- The rights of established rural activities should be protected.
- Agricultural activities are important features that define the rural character.

ENVIRONMENT

- Open spaces, quietness, naturalness are qualities that people value about the rural area.
- The quality of the natural environment is a key contributor to quality of life.
- The sense of spaciousness and low level of development is a key feature of the amenity of rural areas.
- There is support for using formal methods to give more protection to areas that have been identified as valuable for either amenity or ecology reasons.
- The rural environment is changing, with traditional productive uses now sharing emphasis with amenity and natural values.

COMMUNITY AND HOUSING

- Any development on the hills around the city, if allowed would need to be carefully considered and be respectful of amenity, landscape and ecological values
- Intensification of the existing urban areas of the city is preferred to urban density expansion into the rural areas.
- New development needs to take into account servicing and infrastructure requirements.
- Future development needs to be in keeping with the surrounding environment.
- Rural landscape, natural and amenity values should be maintained.
- Use hillsides for housing sparingly and sensitively to ensure the green backdrop of Upper Hutt dominates the valley landscape
- There is high demand for semi-rural lifestyle housing. There is an expectation that the Council should ensure there are enough rural properties for 'lifestyle' options to meet market demand.

- More detailed investigation of the Southern Growth Area is needed to determine its feasibility for future housing growth, to meet anticipated demand.

INFRASTRUCTURE AND MOVEMENT

- Rural residents are concerned about rural road safety and conflict between road users, and the potential for additional rural development to exacerbate this. A network of safe shared paths is desired and strongly supported. Cycling opportunities offer future potential for residents and as tourism opportunity.
- Demand for lifestyle properties raises expectations of high quality, reliable infrastructure in the rural area. Flooding and stormwater management are key rural infrastructure issues.
- Rural residents are less satisfied with public transport options than urban residents.
- Reliance on telecommunication infrastructure is increasing and an important requirement for daily lives.
- There is enthusiasm for emerging technology, especially where infrastructure systems need supporting or upgrading. Young people in particular, see a huge potential for new and emerging technologies to help improve the environment and manage resources.

225. Community buy-in is essential in taking communities with you in implementing change. Rural lifestyle communities are often largely resistant to further change, despite having been a factor in that change themselves. Large scale change is seen as particularly threatening by local rural communities, as was demonstrated by the community resistance to the Maymorn Structure Plan. It is likely that the rural community will be sensitive and resistant to any change which is proposed for that area. In this respect, it is helpful to have examples of where things have been done well, so that these models can inspire and motivate others.

OBSERVATIONS FOR THE PLAN REVIEW

226. As part of the PC 50 review, the Council proposes to convene a rural community forum. It will be important to engage with this group to confirm the values identified through recent consultations.
227. Depending on the timing of this consultation, it may be useful to revisit the RLUA once this engagement has taken place.

Disclaimer

This report has been prepared by Perception Planning Ltd, with input from Peter McIntyre of Sapere Research Group on economic matters.

We used a lot of different sources of information to write this report. Where we could we tried to make sure that third party information was accurate, but we couldn't audit all those external reports, websites, people or organisations. If the information we used turns out to be wrong, we can't accept any responsibility or liability if that affects our report or its conclusions. We might (but aren't required to) update our report if we find any additional information that was available when we wrote the report that affects its conclusions.

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