BEFORE THE HEARINGS PANEL

IN THE MATTER	of the Resource Management Act 1991
AND	
IN THE MATTER	of proposed Plan Change G: Aokautere Urban Growth to the Palmerston North City Council District Plan

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SECTION 42A TECHNICAL REPORT OF JOHN HUDSON
ON BEHALF OF PALMERSTON NORTH CITY COUNCIL

TECHNICAL – LANDSCAPE

Dated 15 September 2023

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A. EXECUTIVE SUMMARY

1. The key conclusions of my s 42A technical report are that the proposed Plan:

   (a) Recognises that incised gullies are a special characteristic of the Aokautere plateau area;

   (b) Reflects these special characteristics in the Structure Plan, which has been prepared collaboratively with the urban designers and other technical experts, and informs zoning and provides for visual and physical access to these gullies;

   (c) Addresses effects within Moonshine Valley regarding overlooking and visual dominance. Three mitigation measures are recommended to limit overlooking into Moonshine Valley and to ensure the zoning is appropriate. These are:

      (i) Implement a 15m setback for promontory properties bordering Moonshine Valley;

      (ii) Limited building height on the promontories to 9m;

      (iii) Implement an assessment criterion regarding overlooking and privacy; and

      (iv) Redesign the Residential layout on promontory 4 to increase the distance between the residential area and Moonshine Valley lots boundary to limit overlooking.

   (d) Ensure the stormwater design is incorporated into the streetscape and layout design;

   (e) The layout follows current landscape design principles in terms of preservation of landscape character, connectivity in terms of roading layout, stormwater capture and treatment, and density; and

   (f) From a landscape perspective, the 2023 Landscape Assessment found that the Structure Plan is the most appropriate way to achieve the objectives of the Act, including preservation of natural character, and maintenance and/or enhancement of amenity values and quality of the environment.

B. INTRODUCTION

2. My name is John Robert Hudson. I am a landscape architect and principal of my own practice, Hudson Associates, and I have been a practicing landscape architect for over 40 years. I am a registered member, fellow and past president of the New Zealand Institute of Landscape Architects (NZILA). I have also held the roles of member and chairman of the Institute's professional Examination Committee for ten years, as well as judge for the Institute's biennial award. I have a Bachelor of Arts (Geography, Victoria University), post graduate Diploma in Landscape Architecture (Lincoln College) and post graduate Diploma in Business Administration (Victoria University).

3. I have obtained the Making Good Decisions certificates from the Ministry for the Environment as both a Hearing Commissioner and Chair, and I have subsequently renewed them, so both are current. I have been engaged as an Independent Commissioner for several large consent applications, including a wind farm and coal mine, and chaired a recent application for a refuse landfill.

4. I have been engaged by Palmerston North City Council (**Council**) in relation to proposed Plan Change G (**PCG**), which seeks to rezone a new greenfield growth area in Aokautere for residential development and insert an accompanying structure plan and provisions (objectives, policies and rules) into the District Plan.

5. I have been involved with PCG since its earliest stages in 2015. My role has involved assessing and evaluating the landscape opportunities and constraints of the plan change area and considering the implications for development opportunities when considering the Masterplan approach to PCG. I have worked closely with the urban designers, traffic, and stormwater engineers in designing the overall layout, neighbourhoods and streets and contributing to the Masterplan document.

6. I prepared the Landscape Character Assessment titled 'Palmerston North City Council – Aokautere Structure Plan' in July 2022 (**2022 Landscape Assessment**).[1] Because our professional institute (NZILA) have since issued new guidelines on landscape assessment, I considered it appropriate to prepare an updated Landscape Assessment

[1] PNCC *Proposed Plan Change G: Aokautere Structure Plan – Section 32 Report (2022),* Appendix 10. Can be accessed at https://www.pncc.govt.nz/Council/Official-documents/District-Plan/Proposed-Plan-Change-G.

dated September 2023 in accordance with these guidelines. (**2023 Landscape Assessment).** This is **Attachment 1** of this report.

C. CODE OF CONDUCT

7. I confirm that I have read and agree to comply with the Code of Conduct for Expert Witnesses contained in the Environment Court Practice Note 2023. I confirm that I have stated the reasons for my opinions I express in this report and have considered all the material facts that I am aware of that might alter or detract from those opinions.

8. Statements expressed in this report are within the scope of my expertise, except where I rely on the technical advice listed at [13].

9. I have all the information necessary to assess the application within the scope of my expertise and am not aware of any gaps in the information or my knowledge.

10. I am familiar with the site for PCG, having visited the site most recently on 3 May 2023.

D. MATERIALS AND SCOPE

11. In preparing this evidence, I have reviewed and considered the following information:

    (a) PCG s 32 Report, Appendix 4: Aokautere Masterplan Report;

    (b) PCG s 32 Report, Appendix 9: Geotechnical Assessment, in particular the slope stability assessment;

    (c) PCG s 32 Report, Appendix 11: Stormwater Management Strategy;

    (d) Palmerston North City Council District Plan 2018;

    (e) Palmerston North Aokautere Design Guide 1996 (**Attachment 2**);

    (f) Moonshine Valley Landscape and Visual Assessment (Unnamed and undated) (**Attachment 3**);

    (g) Palmerston North Landscape Inventory 2011 (and PN Landscape Study 2008) (**Attachment 4**);

    (h) Proposed PCG Amendments to the Operative District Plan; and

(i) Visual effects of overlooking on adjacent valleys, through the preparation of draft and final visual simulations and cross sections. Review of aerial photography and recent Lidar output to determine topography and vegetation height, site visits to view current visibility of overlooked properties in response to submissions received.

12. In addition to my own observations, I rely on the technical evidence of:

(a) Ms Allison Reiko Baugham and Mr Tony Miller – Stormwater;

(b) Mr Andrew Burns – Urban Design;

(c) Mr Adam Forbes – Ecology;

(d) Ms Harriet Fraser – Transport;

(e) Mr Eric Bird – Geotechnical; and

(f) Mr Michael Cullen – Urban Economics.

13. I have reviewed submissions and further submissions on PCG. Of particular note when considering my field of expertise are the submissions relating to the following issues:

(a) Effects on neighbouring areas, particularly adjacent valleys. These include the following issues raised in submissions:

(i) opposing the three storey units on the end of the promontories;

(ii) suggesting a 15m setback from Moonshine Valley boundaries;

(iii) requesting larger lots (eg: 1 ha) as a 'transition' from proposed density of Woodgate through to Moonshine Valley;

(iv) requests for minimum section size in Aokautere promontories of 1 ha;

(v) requests that attention be given to the special character of Moonshine Valley;

(vi) questioning the ecological value of gullies with fill in them (ecology relates to the expertise of others, gully landscape value relates to my expertise);

(vii) overlooking;

(viii) concerns regarding loss of amenity values and privacy (RMA s 7(c));

(ix) Moonshine Valley being unfairly treated in comparison to Turitea Valley (and Hokowhitu Lagoon Residential area);

(x) Concerns that trees planted for screening of promontory units will cause shading on Moonshine Valley houses and block views from the promontory units;

(xi) a wish to maintain the character and rural setting of Moonshine Valley;

(xii) the tranquillity and scenic beauty of Aokautere especially for views east from existing houses;

(xiii) PCG should exclude medium density multi-storey housing from promontories; and

(xiv) submissions for and against development on Adderstone Reserve and similarly for Abby Road gully crossing.

14. Having reviewed all submission points, I note points relevant to my expertise include rural amenity, the visual effects of apartments on promontories overlooking Moonshine Valley, the location of 3 level dwellings, setbacks and the potential for a transition zone. My evidence will focus on these matters.

E. BACKGROUND

15. PCG seeks to rezone a new greenfield growth area to the south-east of Palmerston North for residential development and inserts an accompanying structure plan and provisions into the District Plan. The plan change will provide for additional housing supply in Aokautere (and the City), to help meet growth projections for Palmerston

North over the medium to long term, while addressing the specific landscape and environmental issues in Aokautere.

16. As part of the background work to the preparation of the provisions, I was involved in Council workshops with team experts (traffic, stormwater, planning, urban design, retail, ecology), site visits, meeting with geotechnical engineers, consultation through a public open day in 2019, and preparation of the Masterplan and Structure Plan.

17. Feedback at the open day was particularly concerned with stormwater, flooding and erosion, all of which are being addressed by other experts. Stability had been a constraint when I was preparing the rural-residential lot layout for the Waters land. Specific design would have been needed for each site which resulted in it not being included in this Plan Change but left to be addressed at the resource consent stage (see response to submission # 61).

18. I worked with the several experts including the urban designer when carrying out the layout and roading design. Other experts also included the traffic engineer and the recreation planner regarding frequency, placement and size of parks and recreation facilities, some of which might also accommodate stormwater ponds. Parks and pathways have been sized and located to meet Council standards in terms of frequency in relation to population density and paths through the gullies have been reviewed in terms of buildability, considering terrain.

F. OVERVIEW OF EFFECTS [LANDSCAPE EFFECTS/ASSESSMENT]

19. From a landscape perspective, the 2023 Landscape Assessment found that the Plan Change is the most appropriate way to achieve the objectives of the Resource Management Act 1991 (**the Act**), including preservation of natural character, and maintenance and/or enhancement of amenity values and quality of the environment.

20. The site is well located as to assist in providing for development. It is a continuation of surrounding housing in the areas. There is a primary school planned for nearby, existing shops service the area from the close by Summerhill Shopping Centre, buses can service the extended area, the flat terraces provide attractive topography for housing and the gullies provide attractive conservation/amenity opportunities. Much of it is a greenfield site and it is not subject to liquefaction. It is essential that it is appropriately designed

to be sympathetic to the landscape's values. The gullies and recreational activities and the landscape they are situated within is highly valued by the community.

The design response to the evaluation of the landscape has been to avoid certain areas, preserving gullies, managing location of development, creating a connectivity through the roading network, walking and cycling trails, creating public open space in key areas, creating or continuing a distinctive landscape character for the site, and utilising the existing landform.

21. Landscape advice has been provided throughout the development of the Structure Plan. This has been integral to the proposed design of the plan change area, which has been significantly informed by the hydrologist/geotechnical engineer to determine buildable areas and then the Urban Designers to determine layout. Landscape advice that I contributed to the design included the following principles:

(a) Recognise and preserve the gullies as a unique characteristic of the area. I have sought to retain these and allow them to be visually and physically accessible by the public through the placement of roads, housing areas, recreational areas and paths. Their retention is also integral to the stormwater design of the plan change area which is carried out by other experts.

(b) Existing landscape context, which is partially developed flat terraces bounded by and dissected by incised gullies, is recognised as a key parameter. The conclusion of my 2023 Landscape Assessment acknowledges the following:

> The Structure Plan will result in a significant change to the existing landscape character of Aokautere, it will ensure future development is well integrated into the existing and anticipated future landscape context. The unique landform of the area, which is a key attribute that contributes to the character of the area, will be maintained. The Structure Plan is also consistent with the relevant statutory provisions in terms of landscape and natural character. From a landscape perspective, the Structure Plan is the

most appropriate way to achieve the objectives of the Act, including preservation of natural character, and maintenance and/or enhancement of amenity values and quality of the environment.

G. FURTHER ASSESSMENT

22. I have undertaken further work in response to submissions, particularly to appreciate the matters raised by residents surrounding the plan change area in relation to outlooks, overlooking and impacts on visual amenity.

23. I have reviewed the submissions and undertaken a site visit to locations in Moonshine Valley, Polson Hill, Turitea Valley, Aokautere, and previously to the Waters property. I have visited 4 private and many public viewpoints and have prepared draft cross sections and visual simulations from 10 locations. I have used this information to help form an opinion on the points raised in the submissions and to recommend mitigation or changes where I consider this is appropriate.

24. The method used to evaluate submission was to map their location, visit a representative selection of them or nearby public land, determine visibility of the proposed development using Lidar, Google and site photographs, prepare cross sections, consider whether private areas are overlooked or whether intervening features exist, evaluate mitigation options such as height controls or screen planting, evaluate the degree of effect.

25. When the visual simulations and analysis was undertaken, I have made a number of assumptions:

- Where mitigation measures are recommended within the PCG site, I have assumed that they will occur.

- Effects are assessed as though no mitigation is undertaken on private land, although in reality existing screening vegetation will likely be retained or new mitigation may be undertaken by private residents.

- Where the District Plan provisions provide for 11m high buildings (which are normally three storey), I have assumed that a building of this height will be built and that the new assessment criterion regarding privacy will apply.

- Where the District Plan provisions provide for 9m high buildings (which are normally two storey), I have assumed that height may be built even though existing patterns suggest that a single storey building is more likely.

- I have assumed that buildings completely fill the space outside the yards and recession planes, even though they are likely to be smaller.

- I have made no allowance for design, material, form, or colour of buildings but have simply portrayed them as pastel-coloured rectangular boxes in my analysis.

H. MOONSHINE VALLEY

26. A number of submissions (nine submissions) cited Moonshine Valley's special character and the threat the proposed Aokautere development may have on this character. Some of the submissions referred to the 'Moonshine Valley as having a 'Special Character Designation,' which I do not believe is the case. In my understanding, Moonshine Valley is specifically recognised in the District Plan and has a 1.5ha minimum lot size but does not have a designation.

27. The District Plan states:[2]

> The Moonshine Valley Rural Residential Area has been identified as a special character area. Moonshine Valley is a distinctive, relatively incised and contained valley landscape, comprising a broad valley floor, sloping sides with contour level changes and reserve corridors. It has important natural character and landscape values and significant ecology and biodiversity. These values and characteristics of Moonshine Valley are documented in the report Moonshine Valley Visual Landscape Assessment (Palmerston North City Council 2011) and the Palmerston North Landscape Inventory (Palmerston North City Council 2011). The essential contributing factors to the area's special character are its relatively uniform subdivisional arrangement (multiple parcels of a similar 1.5 ha size) and its natural

[2] PNCC District Plan, Section 7, Policy 3.6 Explanation.

> streetscape character, which creates a unique and distinct sense of place. The low-density development pattern and the natural character of Moonshine Valley Road environs especially, contributes to the high visual amenity of Moonshine Valley, overall. To ensure that these important and defining characteristics are retained and subsequent development does not create adverse effects on the special character and identity of Moonshine Valley, subdivision within the Moonshine Valley Rural Residential Area, not complying with the specified minimum lot area, will be consented as a Non-Complying Activity.

28. Reference is made in the District Plan to various background documents such as the Moonshine Valley Visual Landscape Assessment (Palmerston North City Council 2011) and the Palmerston North Landscape Inventory (2011). Also of relevance is the 1996 Aokautere Design Guide. (Both are attached as Attachments 2 & 3)

29. An examination of each of the cited documents shows that Moonshine Valley has had several reports completed prior to the provisions currently inserted in the District Plan, and selected extracts from these background reports include the following relevant statements:

> The report is designed to 'engage, inform, and assist' readers in gaining a broad overview of the city, how it is structured, and the diversity of landscapes which the community enjoys. To this end the 'Sense of Place' approach has provided a snapshot of each unit and its unique qualities, the people to whom it is important and, more value based, an indicative analysis of the landscape's sensitivity to change. The challenge for the council is to develop planning provisions that provide for landscape values and ensure that these are protected and sustained over time whilst still supporting the continuing and ever-changing productive activities within these rural environments.[3]

30. The Unit 9 Moonshine Valley description includes the following statement:

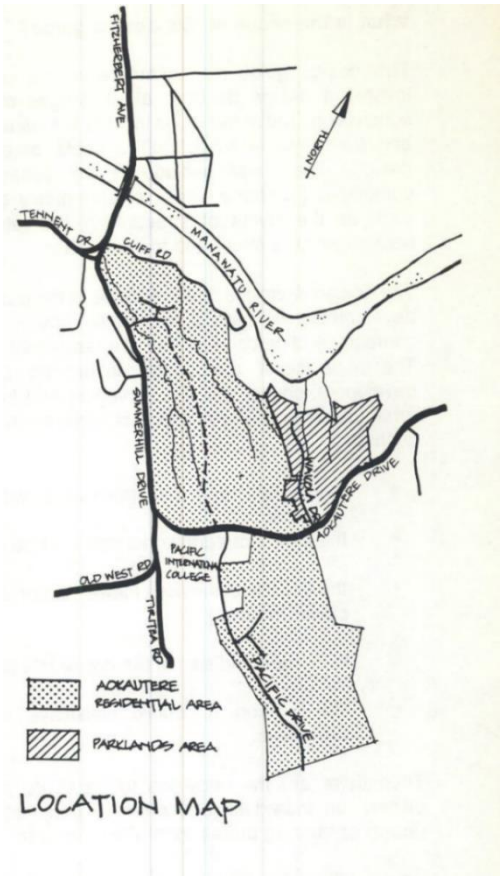
> The valley is contained so that there is a strong sense of intimacy and privacy with dwellings integrated into a matrix of trees and shrubs. [4]

3 Palmerston North Landscape Inventory 2011 Stage 2 P59.
[4] Ibid p34.

31. Another document referred to in submissions is the Palmerston North Aokautere Design Guide 1996 (**Attachment 2**) (**the Design Guide**). This deals more specifically with the Aokautere/Parklands area. It concentrates on the Parklands area but the map within the document includes Pacific Drive and the area subject to development. It states:

> This document has been primarily prepared for the Aokautere residential area. The area covered by this design guide is bounded by Cliff Road, Summerhill Drive, Aokautere Drive and Pacific Drive. It also includes the area identified for lifestyle blocks in the Parklands area. [5]

32. Figure 1 below is the location map showing the extent of area covered by the guidelines.



5 Aokautere Design Guide PN City Council June 1996 p1.

33. Moonshine Valley is not identified on the location map, although its southern boundary is shown as the interface with Aokautere.

34. The document states that:

> The Aokautere area is rapidly changing from a rural pastoral landscape into a more intensively developed residential suburb. [6]
>
> The Aokautere residential area is part of Palmerston North but with a distinct identity that takes advantage of its elevated views and rural surroundings.
>
> The elevated location means development will be prominent and for this reason houses are designed and sited to complement the landscape. The street and housing layout fits into the natural landform with development on the upper terraces and the main gullies left as open space, acting as corridors for conservation and recreation for all to enjoy.[7]
>
> Many of the broad scale site planning decisions about the overall layout of the Aokautere residential area have already been made.
>
> In Aokautere, the subdivision layout has largely followed the natural landform. This has resulted to date in minimal earthworks and a roading pattern that runs along the flat tops of the terraces. Gullies remain as either reserves or undevelopable land in private ownership. Most residential sections span between a street and a gully area. For this reason, many houses will have double 'frontages'. One side will face the street, and another will enjoy views towards the city or across the surrounding valleys. This relationship means that every house needs to appear part of two quite different settings. Visual and physical connections between the streets, the house lots and the gully reserves also become important if they are not to appear as isolated elements.
>
> Once the houses are built along the top of the terraces, gully areas identified for reserve purposes will be less visible from the street. To enhance

6 Ibid p1.
7 Ibid p3.

> accessibility to these important recreational areas, connections to the street need to be frequently spaced and visually prominent. [8]

35. These principles have been incorporated into the proposed development.

36. One of the guidelines to help maintain amenity is:

> Orientate main windows to avoid direct short-range overlooking of neighbours private open spaces.[9]

37. The Design Guide also deals with matters related to design of the existing and potential layout, recognising that:

> The overall vision for Aokautere sees key gully reserve corridors providing an important open space network for all to enjoy.[10]

and recognises that:

> Most residential sections span between a street and a gully area. For this reason, many houses will have double 'frontages'. One side will face the street and another will enjoy views towards the city or across the surrounding valleys,[11]

Further:

> Any built structures or elements that cut off the reserve visually or physically from the surrounding streets, walkways and private properties should be avoided.[12]

38. These principles have also been incorporated into the proposed development.

Parklands and a Transition Area

39. The Design Guide also states:

[8] Ibid p8.
[9] Ibid p12.
[10] Ibid p13.
[11] Ibid p8.
[12] Ibid p13.

> The Parklands area at Aokautere will be subdivided into larger lots than those in the Aokautere residential area and therefore requires a different design approach. This less intensive subdivision will allow the predominantly rural character to be maintained and some basic principles different to the more intensively developed residential area of Aokautere need to be adopted if it is to retain some rural character.[13]
>
> The Parklands area forms a transition between the more intensive subdivision and development associated with the Aokautere residential area and the less intensive neighbouring rural area.[14]

40. It is relevant to note that Parklands (as shown on the Figure 1 above), does not abut Moonshine Valley. It is also relevant to note that at the time (27 years ago) Parklands was unserviced, so large lots were necessary for waste-water disposal. It remains unserviced.

41. Further, the Design Guide notes:

> The main objective of the following guidelines is to maintain the predominantly rural character of the Aokautere Parklands area and to ensure a gradual transition between the rural zone and the more intensively developed residential area of Aokautere.[15]

42. As noted above, Parkland is not adjacent to Moonshine Valley and the transition referred to above does not refer to a transition between Moonshine Valley and Aokautere.

Other Reports

43. Another document that has been produced is an untitled report known as the Moonshine Valley Landscape and Visual Assessment (**Attachment 3**).[16] This report appears to relate primarily to a proposed subdivision in Whisky Way, although it contains extensive comment on Character and Design within Moonshine Valley that

[13] Ibid p17.
[14] Ibid p17.
[15] Ibid p17.
[16] Untitled, undated report known as the Moonshine Valley Landscape and Visual Assessment.

contribute to its identity. These are generally design features rather than factors external to the Valley, such as development on the Aokautere promontories. e.g.

> The road within the Valley defines the character of the area. The road is dominated by the soft verges, the expansive vegetation and the informal boundary treatment of the residential sections and driveways. This adds more to the rural character of the valley than any other feature.
>
> The character of the valley is significantly enhanced by the response of most residents to the boundary treatments of their properties. [17]

44. The Report notes:

> The area is currently zoned Rural in the District plan with a Rural Residential overlay, this ensures that subdivision is a controlled activity with the minimum lot size being 1.5ha.

45. It states:

> The residential development of the valley, however, has resulted in numerous (nearly half) of the current lots not adhering to the minimum lot size condition.[18]
>
> In summary the road represents a fluid, dynamic visual draw card for the area that preserves a rural characteristic through informal and substantial vegetation combined with soft edges and informal drainage.[19]
>
> The amenity level of the valley as a whole is rural in feel. The majority of the residents have bought into the idea of creating a vibrant wildlife habitat with secluded residences set within large sections. The varied topography and extensive vegetation enhances the feel and characteristic of the subdivision.[20]
>
> Section size is not a direct factor in giving a low score for absorption capacity, but it is a significant factor.[21]

[17] Ibid S4.1.
[18] Ibid 2.1.1.
[19] Ibid s4.4.
[20] Ibids4.6.
[21] Ibid s5.1.2.

46. This report concludes that: [22]

> • Moonshine Valley is a citywide Asset.
>
> • It offers a unique residential living experience within the context of the city.
>
> • The section size, topography, vegetation character of each section is different and offers a patchwork of varied environments and experiences.
>
> • The sustained actions of the residents over the last 20 years have helped create the varied environment present today, and this should be championed as an example of excellence.
>
> • The character of the road and road reserves offers a unique experience in residential subdivisions within the city.
>
> • The reserves anchor the native flora and fauna into the valley and raise the character of the valley significantly.
>
> • Population movement/ change and subdivision pressure will inevitably lead to a dilution of the character, however there is slack in the valley to allow creative development without impacting upon the visual character.

47. Another document that has been produced is the 'Palmerston North Landscape Inventory' 2011 (Attached as **Attachment 4**).[23] This appears to be based on a prior inventory prepared in 2008 that established the same Landscape Units.

48. The Inventory is a high-level document that classifies the whole city into 19 Landscape Units according to geographic processes. Moonshine Valley is recognized as Unit 9 and neighbouring Aokautere is included in Unit 15 (Northern Elevated Flats). The report contains Stages 1 and 2. Further stages are not within the report, which states:

> The Stage 3 evaluation will integrate landscape values arising from the three Stage 2 themes.

[22] Ibid 7.7.
[23] Palmerston North Landscape Inventory October 2011. Opus, Drakeford Williams. Anstey.

I. SUBMISSIONS

49. I have considered the submissions and further submissions for PCG. I have identified a number of key issues, which I address by reference to submissions in detail in **Attachment 5**. I have focussed on the submission points most relevant to landscape matters.

50. From review of the submissions, and the site visits and simulations I have carried out, I have further considered the proposed 11m high multi-unit dwellings on the ends of promontories adjacent to Moonshine Valley. I note that the District Plan refers a number of times to privacy.[24] The following are some of the references:[25]

> Achieving a pleasant environment within a site inevitably requires consideration of adjoining sites, particularly with regard to issues such as privacy…
>
> …multi-unit housing development often results in closer buildings and living, increased fencing and loss of visual connection, a reduction in permeable surfaces, and the removal of established vegetation. As such, the design of housing development needs to limit these adverse effects, to ensure it does not impact on the amenity standards or privacy of residents and fits within the character of existing neighbourhoods.
>
> The effects of activities and buildings on one site, on another, in amenity terms, particularly with regard to noise, overshadowing and privacy issues.[26]
>
> Potential adverse effects, such as overshadowing or loss of privacy, are often associated with infill sites and smaller multi-unit developments. However, intensification makes very good use of existing urban services and infrastructure and is a development option that provides for housing choices and needs.[27]
>
> Managing the intrusion of privacy on adjoining dwellings;[28]

[24] 10.1, Residential Zone Introduction.
[25] More references are contained in the District Plan but many relate to other specific areas.
[26] Ibid 10.2 Resource Management Issues.
[27] Ibid10.2 Explanation.
[28] Ibid policy 2.2.

10.6.1. (b) ii Effects associated with overlooking which may lead to actual or perceived loss of privacy for outdoor areas or dwellings on adjacent sites.

10.6.1. (b) iii Effects arising from the physical bulk of the building which may lead to a feeling of loss of privacy due to the perception that the building on the adjacent site is oppressive.[29]

51. I note that the 'Moonshine Valley Landscape Guidelines' refer to overlooking but only discuss it in relation to closely located houses. The Design Guide states:

> Orientate main windows to avoid direct short-range overlooking of neighbours private open spaces.[30]

52. And contain the following diagram:[31]

3.4 Maintain the physical amenity of immediate neighbouring properties.

- locate the dwelling to avoid excessive shading of the main internal and external living areas of neighbouring houses
- orientate main windows to avoid direct short range overlooking of neighbours private open spaces

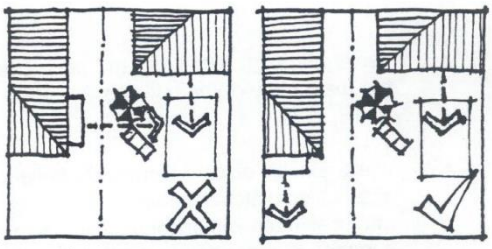


*Figure 2. Extract from Aokautere Design Guide 1996 (**Attachment 1**)*

53. The diagram illustrates adjacent houses, whereas the distance between proposed new houses and existing houses that may be overlooked in Moonshine Valley is generally over 100m. With existing topography and vegetation that will the planted or grow in the gullies to provide screening, the several locations where distant overlooking can occur will be generally screened. However, some views will be available which could affect privacy. For this reason, and to recognise the particular rural/residential character of Moonshine Valley, I have reached the conclusion that it would be appropriate to further control the effects associated with the houses identified on the structure plan on some parts of the promontory, to address overlooking.

[29] Ibid 10.6.1.Performance Standard (b) Overlooking Explanation.
[30] Aokautere Design Guide 1996 p 12.
[31] Aokautere Design Guide 1996 3.4 p12.

54. For this reason, I am of the view that development in this particular area would better accommodate houses which are typically found in the residential zone. The proposed 11m dwellings could be accommodated in specific locations on the promontories but in my opinion, they should be subject to an assessment criterion (to be worded by the Planner) that considers their effects on the privacy of Moonshine Valley houses.

55. Submission 41 from Brett Guthrie of 82 Moonshine Valley Road gives a comprehensive outline of the history of the area and planning provisions in the District Plan. The submission refers to DP 7.3.6 Explanation (p.19), which is:

> 3.6 To avoid subdivision within the Moonshine Valley Rural residential area into allotments less than 1.5 hectares in area". The submission also states that "Moonshine Valley Rural Residential Area is identified as a special character area (DP 7.3.6 explanation p.19) and, as such, is afforded some protection in the NPS-UD from such ill-placed intensification.

56. The submission also seeks a 15m setback to new lots adjacent the boundary of houses in Moonshine Valley and that these houses be restricted to 9m, which is the standard Residential Zone height limit.

57. In relation to this submission, as a preliminary point I note that the National Policy Statement on Urban Development 2020 (**NPS-UD**) does provide for intensification but the question here is really whether such intensification is appropriate in these locations.

58. The heart of the submitter's concerns appears to relate to landscape and visual effects on the Moonshine Valley area and I have addressed them as such. Further, I note that the provisions identified are informative as to the character of the Moonshine Valley area, but they do not relate to or control the development of adjacent areas. The accompanying explanation to Policy 3.6 in Section 7 of the District Plan refers to the special character and discourages subdivision within Moonshine Valley. However, it is relevant to note the PCG does not propose any subdivision within Moonshine Valley or to alter its 1.5ha minimum lot size.

59. While several studies noted within the submission refer to several Moonshine Valley reports and District Plan provisions, in my opinion it is the effect on amenity and

character from PCG that is the essential value that the submission seeks to be addressed. While the current provisions protect character through lot size within the Valley, amenity and character can be affected by activities outside the valley. For example, through overlooking, as is a concern of some of the submissions received in respect of effects on Moonshine Valley. I discuss these effects above, and again, further below.

60. I acknowledge that off-site activities can affect the character on a site e.g. activities outside Moonshine Valley can affect the character within Moonshine Valley, but the degree of effect is influenced by the nature of the adjacent activity and mitigating factors that exist. While it is accepted that no one may have 'ownership' of a view, some reasonable steps were taken regarding 'overlooking' effects on Turitea Valley. In my view similar steps can be taken to manage the effects of overlooking on the surrounding Moonshine Valley areas. Submission 41 (and other submissions) highlight similar issues as follows:

61. The submission expresses opinions on three main topics of relevance to my evidence:

(a) Multi-Unit, Multi-Story Housing;

(b) No Transition Area; and

(c) Inadequate Setback.

62. Topic 1 rejects three storey dwellings as inappropriate in this location, but does accept that single or double storey buildings are acceptable.

63. Topic 2 refers to a '*Transition Area*' and refers to the 1996 Aokautere Design Guide. Much has changed since then; the NPS-UD has come into existence and Parklands can no longer be described as 'rural' (which the transition area partly sought to protect).

64. Topic 3 seeks a 15m setback from the boundary with Moonshine Valley properties.

65. While I have concentrated on submission 41, it covers the main points, within my expertise, that are made in the other submissions as well. However, I have read the other submission points and understand the matters they are raising.

J. ANALYSIS

Topic 1

Multi-Unit, Multi-Story Housing.

66. There is potential for 11m high three storey dwellings to affect privacy of houses at the base of the escarpment in Moonshine Valley. Only dwellings close to the Moonshine Valley boundary would experience potential intrusion on privacy due to the height and closeness of the apartments. This is not to say that apartments or houses on the promontories would not be visible, particularly from houses at promontory level looking directly across Moonshine Valley from its northern slopes or valley floor, but at a distance of approximately 200m-400m it is my opinion their visibility does not mean an adverse effect.

Figure 5. Houses below the escarpment that may have their privacy affected due to proximity and visibility from 11m high apartments on the abutting promontories.

67. My analysis showed that only the dwellings closest to the escarpment edge threatened the privacy of houses at the base of the escarpment. A reduction in height due to potential privacy impacts on houses below them in Moonshine Valley was considered appropriate for all 11m apartments shown circled below in Figure 6:

Figure 6. 11m high apartments on the promontories abutting Moonshine Valley. I considered those that are circled had potential to affect privacy of Moonshine Valley houses below the escarpment to their northeast.

68. Not all 11m high buildings would affect privacy (only those circled) so I recommend that potential for them as consent-able structures remain in the provisions, with their effect on privacy on Moonshine Valley houses below the escarpment a factor to be considered.

Topic 2. Transition Area

69. Submissions ask for a 1ha lot size transition area on the promontories. With a combination of height control, setback and assessment criteria it is my opinion that a 1ha transition area is not appropriate and amenity effects can be sufficiently reduced.

Topic 3

<u>Inadequate Setback</u>

70. My cross section analysis showed that a setback of promontory houses from the boundary with abutting Moonshine Valley properties, in combination with assessment criteria related to height and privacy, would be beneficial in reducing the potential for effects on privacy on properties below the escarpment in Moonshine Valley. As part of my analysis I prepared cross sections at the following locations:

Figure 7. Cross section locations.

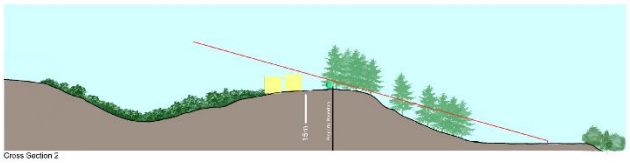


Figure 8. Example of cross section analysis (cross section 2)

71. In some cases topography provided intervening screening of promontory houses for houses below the escarpment in Moonshine Valley, in other cases vegetation provided screening. Vegetation was only relied on when it was within PCG land.

72. My conclusion was that a 15m setback, in combination with building height and an assessment criteria, would assist in reducing effects on privacy for houses below the escarpment in Moonshine Valley.

73. This recommendation has been incorporated into the latest proposed Structure Plan layout, shown as a black dashed line parallel to the Moonshine Valley 1.5ha minimum properties southern boundary shown in Figure 8 below.

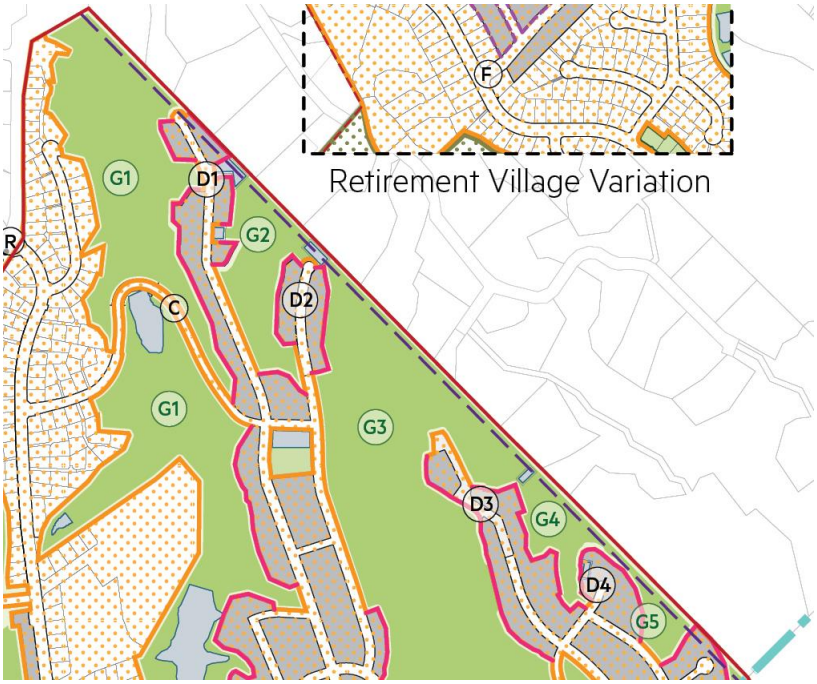


Figure 8. A 15m setback, as shown by the black dashed line, is recommended along the boundary with Moonshine Valley1.5ha minimum properties.

K. RECOMMENDATIONS

74. On review of the submissions and further assessment of the model I make the following recommendations for inclusion within PCG to address :

(a) The layout of the dwellings on the promontories should be reviewed with lots placed at least 15m from the Moonshine Valley/promontory boundary. This setback should only apply to the built up part of Moonshine Valley with a 1.5ha minimum lot size.

(b) Standard housing in the Residential Zone of 9m in height is a permitted activity adjacent to the Moonshine Valley Boundary. Multi units is restricted discretionary and therefore requires a resource consent. As part of that assessment, visual impacts on dwellings within Moonshine Valley should be assessed.

75. I understand Ms Copplestone has drafted an assessment criteria for that purpose.

76. The reasons for these recommendation is to limit overlooking effects. This is despite my view that such effects would likely be limited by intervening vegetation, but some

of this is within submitters land. These measures would address overlooking which could impinge upon privacy, restrict night lighting which impacts on rural/residential amenity, and help maintain Moonshine Valley's High Amenity Sense of Place.[32]

77. While vegetation will likely continue to provide general screening, the pine plantations that make up some of this vegetation will require felling in time, so screening will be rotational for certain views. Houses themselves are not an offensive item that should be hidden, but overlooking can occur through extra height adjacent to the Moonshine Valley boundary.

78. In my opinion, overlooking in this situation could have an adverse amenity and character effect within Moonshine Valley such that it is appropriate to manage these impacts through the plan provisions. Night lighting, glimpses or views from various locations and rotational exposure are effects that will occur and affect amenity. In my opinion, the recommended mitigation will reduce this to no more than minor.

79. Preparation of the visual simulations showed that it is more likely to be houses on the northern side of Moonshine Valley that will see the proposed development because they are at a similar level as the promontories. Houses on the valley floor and travellers along Moonshine Valley Road may gain glimpses of the proposed development, while houses on the southern side of Moonshine Valley and closest to the proposed development will only see glimpses which may overlook their properties. Both the increased setback and lowered height will limit these effects, which are distant.

80. Houses will still be seen on the promontories from the northern side of the Moonshine Valley because they are looking across at a similar height. I do not consider simply seeing a house as constituting an adverse effect, but dominance can be adverse. In my opinion, three storey dwellings on the northern boundary of the promontories could cause an adverse dominance effect but the reduction to two storeys, and increased setback, will reduce effects to less than minor.

81. Just as provisions relating to setbacks have been incorporated into the District Plan regarding Turitea Valley (particularly Valley Views Road) and Pacific Drive, I similarly recommend setbacks in this situation. The key differences in the two areas are that

[32] PNCC District Plan Section 7, Policy 7.3.5 Explanation.

there is extensive existing vegetation at Moonshine Valley and that views from Valley Views Road are not across at a similar level. The recommended setback and reduced height of the proposed northern groups of housing on the promontories within PCG will mitigate the potential for overlooking and dominance. These measures have now been incorporated into the proposed provisions.

82. The proposed Residential area on the promontory has also been amended to sit further back from the escarpment edge in order to limit overlooking down onto houses in Moonshine Valley

L. CONCLUSIONS

83. Having been involved in the design and evolution of the Structure Plan layout, I am satisfied that it addresses the landscape character of the site by recognising the gullies as a valuable landscape asset.

84. I am of the view that PCG and the proposed Structure Plan implements a comprehensive design that recognises the landscape constraints and opportunities of the Aokautere area, while enabling development in accordance with national direction. I have a made a number of recommendations to address specific submissions with regard to the potential for overlooking/amenity effects, and subject to these being implemented within PCG, I am of the view that the effects of development are able to be appropriately managed within the plan change area and the surrounding area.

John Hudson

15 September 2023

M. APPENDICES

- **Attachment 1:** Landscape Character and Natural Character Assessment, September 2023
- **Attachment 2:** Palmerston North Aokautere Design Guide 1996
- **Attachment 3:** Moonshine Valley Landscape and Visual Assessment (unnamed and undated)
- **Attachment 4:** Palmerston North Landscape Inventory 2011 (and Palmerston North Landscape Study 2008)
- **Attachment 5:** Submissions and responses regarding Landscape Character and Natural Character

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LANDSCAPE CHARACTER AND NATURAL CHARACTER ASSESSMENT

AOKAUTERE PLAN CHANGE

September 2023

Prepared by
Hudson Associates
Landscape Architects

TABLE OF CONTENTS

EXECUTIVE SUMMARY

1. Plan Change G: Aokautere Urban Growth (**the Plan Change**) seeks to rezone a new greenfield growth area in Aokautere for residential development and inserts an accompanying structure plan and provisions (objectives, policies and rules) into the operative Palmerston North City Council District Plan (**the District Plan**).

2. The Structure Plan intends to guide future growth and urban development in Aokautere by providing future housing supply through environmentally sensitive, coordinated, and comprehensively planned development of the Aokautere area. This report has been prepared to assess the appropriateness of the provisions of the plan change (including the Structure Plan) in terms of their likely effect on the landscape and natural character of the Aokautere area.

3. The existing landscape is characterised by its unique terrace topography with incised gullies which dissect plateaus, as well as pockets of indigenous vegetation, including within the gully systems.

4. Throughout the Plan Change development process (including preparation of the structure plan), careful consideration has been given to ensuring the integration of future development into this existing landscape by taking a 'landscape-led' approach. Ways in which this will be achieved include:
    - 'Gullies first' approach through the protection and enhancement of the gully systems.
    - Water sensitive design (**WSD**).
    - Visual and physical connections with gullies and waterways.
    - Provision of open space reserves.
    - Extensive pedestrian and cycling network, which connects various reserves.
    - Each residential precinct will have its own distinct character.
    - High-amenity streetscapes, which are integrated with the existing landscape and connected.

5. While it is acknowledged that development in accordance with the Structure Plan will lead to significant changes to the existing character of Aokautere, in our assessment such a change in character will be appropriate in this environment from a Landscape perspective, taking into account the measures referred to above.

INTRODUCTION

6. This assessment of landscape and natural character effects has been prepared as one of the specialist reports for a change to the District Plan for Aokautere, by the Palmerston North City Council (**Council**).

7. This assessment follows from and expands on the previous landscape report that was included with the s 32 material for this plan change. The reason for this updated assessment is to ensure that the information is consistent with updated best practice methodology for landscape assessments pursuant to 'Te Tangi a te Manu: Aotearoa New Zealand Landscape Assessment Guidelines', Tuia Pito Ora New Zealand Institute of Landscape Architects. These guidelines, released in July 2022 post-dated initial reporting. This report takes this opportunity to expand on and refine some of the assessment and reporting in the initial landscape assessment.

8. The purpose of the Plan Change is to provide for additional housing supply in Aokautere (and the City), to help meet growth projections for Palmerston North over the medium to long term.

9. The Plan Change covers approximately 454 ha of land between the foothills of the Ruahine/Tararua Ranges and State Highway 57 (**SH57**) that lies east of the Manawatū River and seeks to integrate with the existing surrounding neighbourhood areas of Turitea, Aokautere and Fitzherbert (Figure 1 and Figure 2).

10. The Plan Change involves rezoning Residential, Rural, Rural-Residential and Conservation/Amenity zoned land in Aokautere to a mix of Residential, Local Business, Rural, and Conservation and Amenity zones, with some land remaining rural-residential. The plan change also involves the introduction of new objectives, policies and rules that apply specifically to the identified Aokautere growth area, with development to be guided by a carefully crafted Structure Plan.

11. Development in accordance with the Structure Plan would provide for just over 1,000 new dwellings, including both conventional and medium density housing of varying densities.

12. A masterplan process informed development of the Structure Plan. The Masterplan expresses the desired spatial form and structure of the area. The Structure Plan embodies the principles and strategies identified in the Aokautere Masterplan Report. The eight principles include:

- Aokautere's special landscape is protected and enhanced. Development works with the natural pattern of gullies and plateaus.
- Design best practice sets a local benchmark for high quality housing and amenity-rich suburban lifestyles.
- Bush-clad gullies provide widespread access to open space. A network of ecological corridors and recreational trails complements the street layout.
- Connecting streets offer direct experience of the terrain. Major routes intermittently traverse gullies and hug the edges of plateaus.
- Networks of streets create permeable and connected neighbourhoods. Circuits increase resilience by offering a choice of pathways.
- A local centre has higher density, exceptional amenities and a broader range of dwellings. The neighbourhood centre is distinguished by more formal geometry.
- New and existing developments are knitted together. Outcomes improve as big-picture thinking replaces piecemeal subdivision.
- Aokautere is a mosaic of place-based identities. Streetscapes, lot sizes and building types combine to give each location a recognisable character.

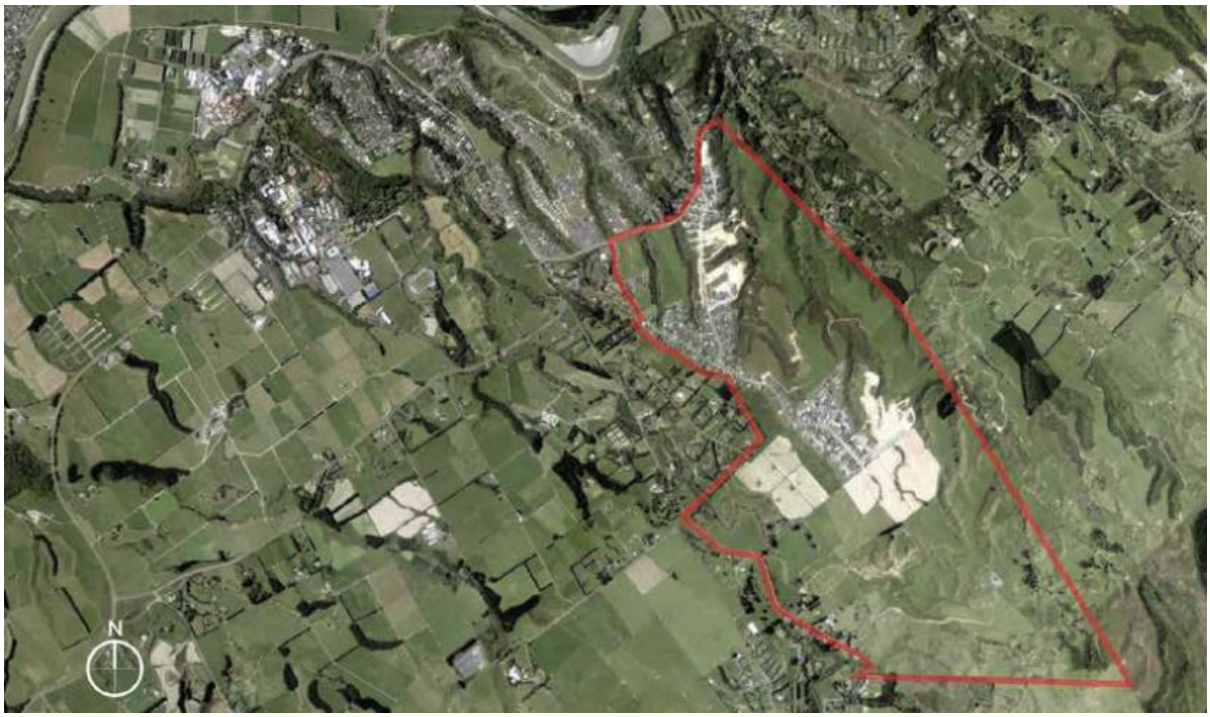


Figure 1 Structure Plan area in Aokautere

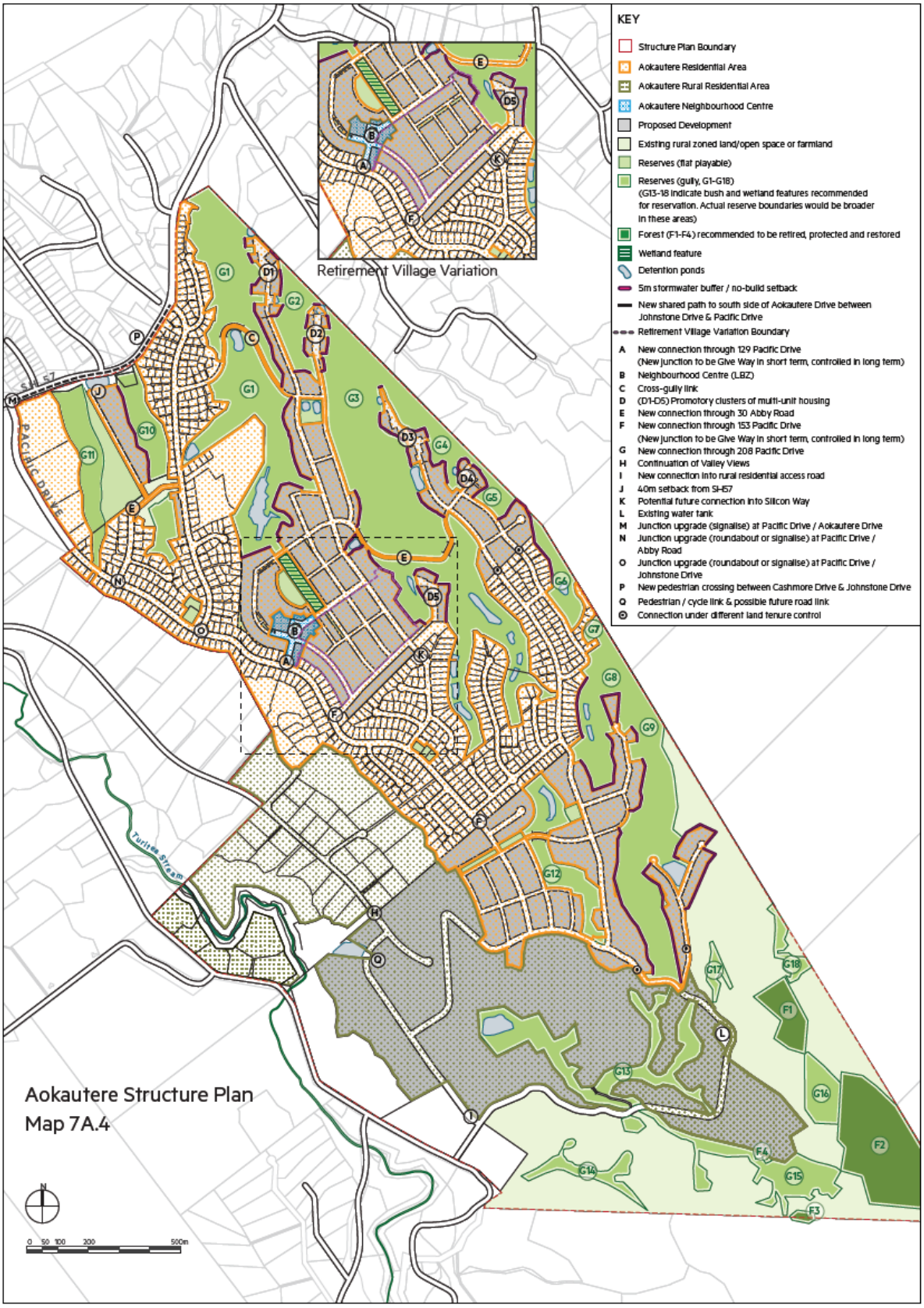


Figure 2 Aokautere Structure Plan

METHODOLOGY

13. This assessment has been undertaken using best practice guidance for landscape assessment as provided by 'Te Tangi a te Manu: Aotearoa New Zealand Landscape Assessment Guidelines', Tuia Pito Ora New Zealand Institute of Landscape Architects, July 2022.

14. The methodology used is best aligned with an area-based landscape assessment, which is typically a policy-driven assessment, as opposed to a proposal-driven assessment. Area-based assessments are higher level assessments which assess the potential effects of generic activities, where specific project details (such as with a resource consent proposal) are absent.

15. Hudson Associates was part of the multidisciplinary team whose views informed the design of the Masterplan and the formation of the Structure Plan. Field work was undertaken as part of this process to understand the site and context, as well as review of drone photography, study of contour information and GIS data, and close liaison with other specialists (including experts in urban design, ecology, stormwater engineering, traffic engineering, and planners). Liaison with the landowner for the Water's Block and Council Park and Recreation designers was also undertaken at this time.

PLAN CHANGE

16. The objectives of the Plan Change seek to ensure delivery of a well-connected, high amenity suburban residential environment, with variations in density, lot type and topology, supported by access to a generous network of open space and reserves which will be protected and enhanced.

17. The following outline in more detail some of the aims of the objectives and policies in the Plan Change which relate to landscape and natural character:
    - The natural values and ecological function of the gully system and natural features in Aokautere are protected from inappropriate subdivision, use, and development.
    - Minimising the trimming or removal of indigenous vegetation to avoid loss, damage, or disruption to the high scenic, amenity and indigenous biodiversity values associated with the gully network.
    - Ensure a high quality, integrated and safe built environment that is compatible with the surrounding environment.
    - Provide for an attractive, high amenity, pedestrian focused Neighbourhood Centre that helps to create a sense of place, while being well integrated with the surrounding landscape, roading network, and pedestrian and cycle access.
    - Avoid adverse effects of subdivision and development on the gully network, significant natural areas, and wetlands.
    - Provide for the formal protection and ongoing management of the gully network and wetlands.

RELEVANT STATUTORY PROVISIONS

18. The statutory planning context for the proposal is provided by the District Plan, Horizons Regional Council One Plan (**One Plan**) and the Act.

19. The purpose of reviewing the provisions is to help frame the landscape assessment. It is not to undertake a comprehensive appraisal of the provisions or a planning assessment against the provisions.

Operative Palmerston North City District Plan

20. The overarching resource management issues and objectives for the City are outlined under Section 2 of the District Plan. Objectives which are relevant to landscape include:

8. The distinctive rural and urban character of the City is recognised and a clear differentiation is provided regarding subdivision, development and servicing expectations within rural and urban areas.

10. The visual appeal of the City is enhanced.

17. The natural and cultural heritage features of the City are preserved and enhanced, including the margins of the Manawatu River and sites of significance to tangata whenua.

21. The District Plan addresses subdivision, greenfield residential development, the Rural Zone, the Residential Zone, and cultural and natural heritage through Section 7, 7A, 9, 10 and 17 of the District Plan (respectively).

22. The District Plan directs new development to be integrated with existing land use patterns, maintain amenity values, and protect habitats of local significance. Subdivision is to contribute to high-quality streetscapes and public open space, and coordinated residential growth. Residential development is to provide a diverse living environment with a range of housing types and densities, where natural characteristics of the site are worked with, and visual dominance of development is avoided.

23. Section 10 (Residential Zone) requires buildings and structures be set back from the edge of the escarpment above the Turitea Valley so as to reduce their visual intrusion into the valley. The height of buildings adjacent the escarpment edge of the Turitea Valley are also restricted by the District Plan so as to limit the impact on the skyline, as seen from the floor of the Turitea Valley.

24. In Aokautere, the operative District Plan provides for subdivision in the Residential zone as a controlled activity. Matters of control are limited under Rule 7.6.1.1 to existing buildings, lot size, shape factor, access, essential services, esplanade reserves, Pacific Drive extension area, street trees and earthworks. These performance standards are relatively rudimentary and enable a permissive subdivision consenting process.

25. The operative approach has led to ad-hoc development in Aokautere with resultant issues including lack of public connection to, and protection of, the gully network, poor connectivity between developments (including three waters and transport infrastructure), and a lack of accessible

community infrastructure and services to meet local needs. The Council has prepared and notified the Plan Change partly to address these issues.

Horizons Regional Council One Plan

26. Landscapes and natural character are addressed under Section 6.4.2 of the One Plan. Policy 6-6 is relevant to regionally outstanding natural features and landscapes (**ONFLs**), which are identified in Schedule G. Policy 6-8 and 6-9 address natural character.

Resource Management Act

27. Part 2, Section 6 of the Act sets out "matters of national importance", while Section 7 sets out "other matters". Considered in relation to this application are Section 6(a) which requires the preservation of natural character, Section 6(b) which requires the protection of ONFLs, Section 7(c) which requires that regard is given to the maintenance and enhancement of amenity values, and Section 7(f) which requires that regard is given to the maintenance and enhancement of quality of the environment.

EXISTING LANDSCAPE

28. To best enable the potential effects of the Plan Change to be understood, the landscape and natural character of the existing environment have been characterised.

29. The existing environment that is relevant to the Plan Change area is considered to be what is currently present within the landscape and as outlined in the operative District Plan zoning (Figure 3).

30. The Aokautere area is an important location to the south of the City connected by SH57 and occupying land between Moonshine Valley and Turitea Valley. Massey University's Turitea Campus, the Fitzherbert Science Area and IPU Tertiary Institute are nearby.

31. The landscape of Aokautere can be characterised as one of interfaces. At a broader scale there are interfaces between the foothills of the Tararua Ranges and the plains. At a more local scale interfaces exist between the extensive flat pastoral terraces and the eroded gullies that dissect them.

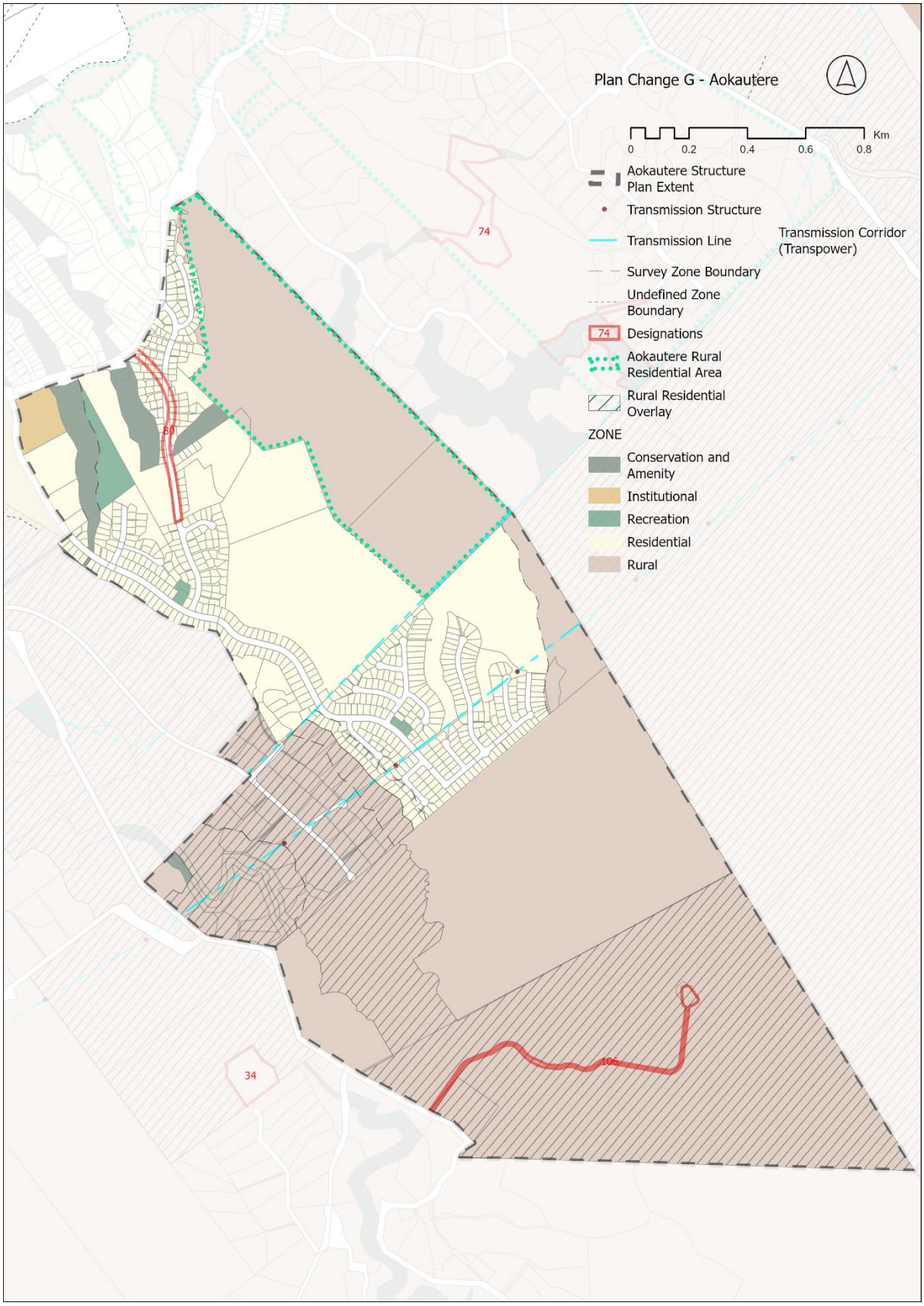


Figure 3 Operative District Plan zoning

Landscape Character

32. Landscape character is each landscape's distinctive combination of physical, associative, and perceptual attributes. The following section describes and interprets the landscape character and values of the existing Aokautere landscape.

33. Key landscape character attributes of the landscape context include:
    - The distinctive gully and plateau topography.
    - The combination of pastural land, tracts of exotic weeds, patches of indigenous vegetation, and residential areas.
    - Perception of unfinished suburban development.
    - All of Aokautere is Wāhi Tapu.

Distinctive natural features and landforms

34. The area is topographically complex, featuring gullies and ravines between flatter plateaus. There are five narrow promontories within Aokautere, they are north-facing and surrounded by regenerating native bush (Figure 4).

35. The gullies are a defining feature of Aokautere (Figure 5). They help to distinguish it from other areas of Palmerston North, which are flat and undissected. They also play an important diversity role across the area.

36. Key visibility into and around Aokautere highlights the importance of escarpments as landmark features. Together views of the gully systems, along with distant views towards the mountainous backdrop of the Ruahine and Tararua Ranges, contribute to the sense of place that defines Aokautere.

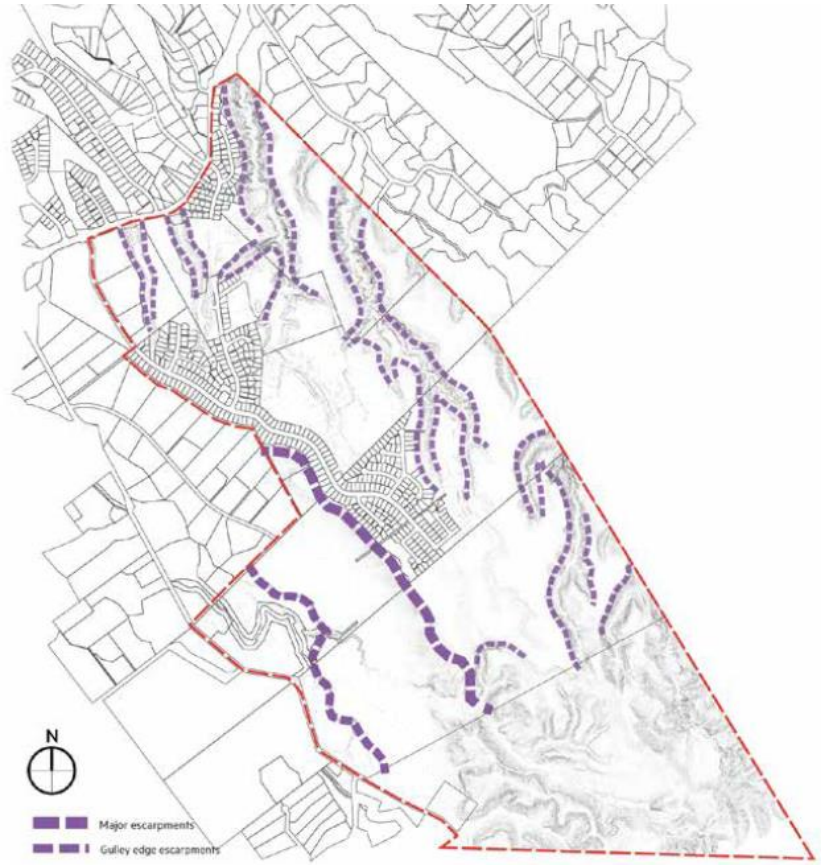


Figure 4 Structure Plan area illustrating escarpments

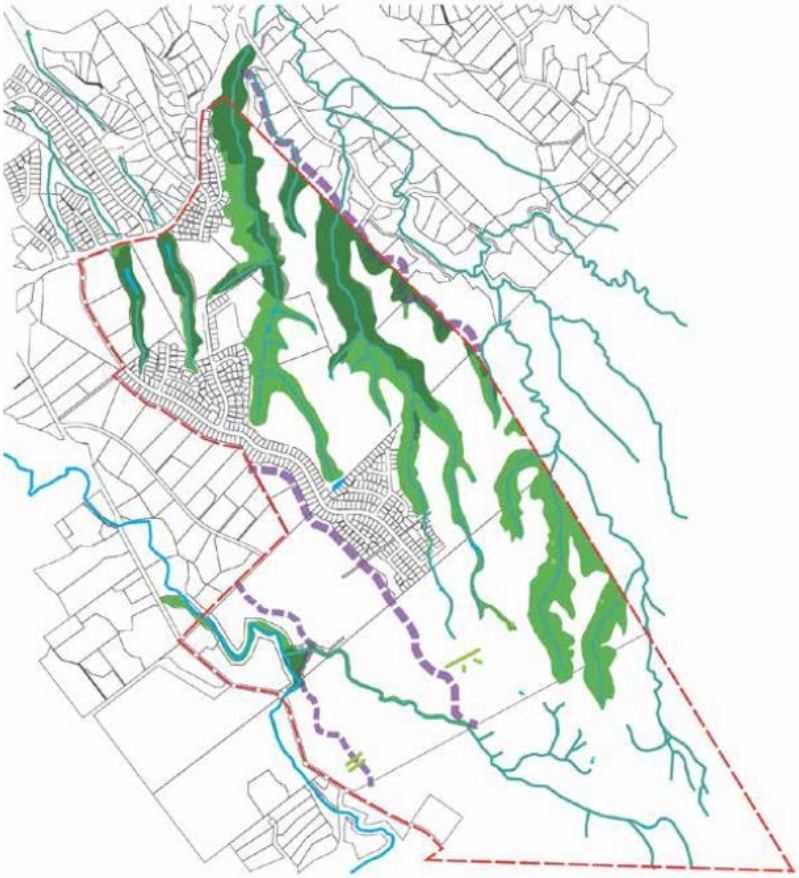


Figure 5 Structure Plan illustrating gully systems

Distinctive vegetation patterns

37. Prehuman vegetation in Aokautere is predicted to be tawa-rimu forest on the elevated terraces and hill country, with native conifer forests in the gullies. The vegetation today has regenerated following clearance. Therefore, it is secondary vegetation, rather than primary forest.[1]

38. There are nine gullies in Aokautere with various ecological attributes. The health and vitality of the gully system contributes to the life-supporting capacity of the Manawatū River. It also provides habitat corridors for wildlife and contributes to the amenity of Aokautere (Figure 6 and Figure 7). These gullies have been attributed with different levels of ecological constraint from low to very high. Very high levels of ecological constraint indicate areas that are unsuitable for development.[2]

Figure 6 Photograph of gully system in Aokautere

[1] Aokautere Structure Plan: Ecological Features, Constraints and Restoration. Forbes Ecology (2020).
[2] Ibid

Figure 7 Photograph of gully system in Aokautere

39. The polygons in the ecological constraint map are colour coded, with red representing areas of very high constraint, blue are high, yellow are moderate, and violet are of low ecological constraint (Figure 8).[3]

40. Although the predicted pre-human forest compositions are no longer present in Aokautere, a stand of kānuka forest is present in Gully 4 and this is classed by the One Plan Schedule F as a Threatened Ecosystem type. Accordingly, the kānuka stand has been classed by the ecology expert as having very high constraint.[4]

41. Gully 1 is identified as an area of high ecological constraint, as it has advanced secondary forest, which is indicated by trees of lowland tōtara and tall kānuka.[5]

42. Indigenous vegetation is confined to small patches in gully landforms and on terrace rises. Gorse is also present in Aokautere and covers approximately 24 ha, mostly in the gully systems.[6]

43. The gully systems in Aokautere also feature a range of freshwater habitats, including permanent, intermittent, and ephemeral streams.[7] Four gullies

[3] Aokautere Structure Plan: Ecological Features, Constraints and Restoration. Forbes Ecology (2020).
[4] Ibid
[5] Ibid
[6] Ibid
[7] Ibid

contain reaches of permanently flowing water, with eels and koura observed. Nine gullies contain intermittently flowing reaches, and five gullies contain only ephemeral waterways.[8]

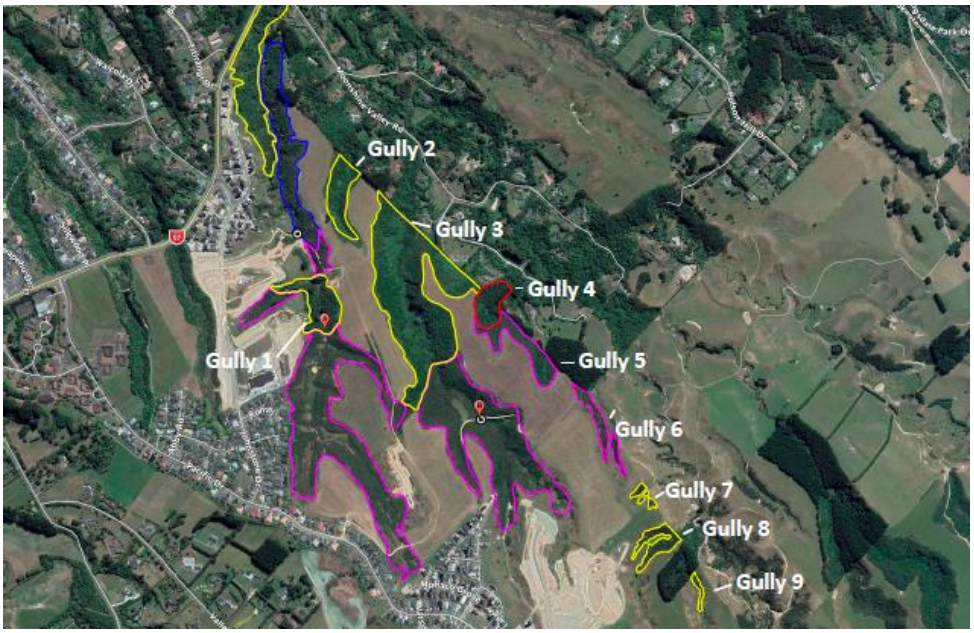


Figure 8 Map illustrating level of ecological constraint within the different gullies

Land use patterns

44. Aokautere is a peri-urban area with greenfield land. Zoning in the District Plan includes Rural to the south, with some of this zone covered by a Rural Residential Overlay. The rest of the Plan Change area is currently predominantly zoned Residential, with some pockets of land zoned Conservation and Amenity Zone and Recreation Zone. The existing zoning generally does not distinguish based on topography, such that gully areas generally have the same zoning (rural or residential) as the flatter plateau land that they intersect, except for the gully areas near SH57 which form the Manga o Tane and Adderstone reserves (and which are zoned to reflect their reserve status).

45. Currently there is ad-hoc fragmentation of land within Aokautere due to current patterns of development relying on high numbers of cul-de-sacs and long rights-of-way to access properties.

46. The highly legible landscape pattern of gullies is defined further by the relatively undeveloped nature of the gullies, with their dark threads of vegetation. These contrast with more conventional rural and residential uses on the elevated plateaus.

[8] Aokautere Masterplan Stream Hydroclass Classifications, Forbes Ecology (letter addressed to PNCC, Michael Duindam, 14 April 2023).

47. A network of existing public walkways meander alongside some of the vegetated gullies. These walkways provide secondary access for pedestrians through to neighbouring parks and to areas of development within Aokautere. They also provide a means for experiencing the natural landscape.

48. Aokautere is visible from several adjacent areas. From Moonshine Valley, views of Aokautere are characterised by a major escarpment and a rural plateau. From Turitea Valley, the outlook is more mixed and includes existing residential development, rural elements, and vegetated gullies.

Current suburban development

49. Palmerston North is a fast-growing city and is running out of space to build new homes. Aokautere has been identified as a growth area for decades, with some land rezoned for development in the 1990s. Most of rezoned land has now been fully built out. Due to the lack of an overall plan, much of this earlier development was ad-hoc, with many cul-de-sacs and long rights-of-way, which has led to a disconnected neighbourhood.

50. The suburb of Aokautere currently feels unfinished, which was reflected in early community consultation in 2019.

51. Aokautere differs from the flat-gridded suburbs that typify Palmerston North. The gullies cross Aokautere from north-west to south-east, producing a street layout that is organic but also highly directional. Aokautere's broken terrain gives many properties a commanding view and direct access to open space. However, the landscape also reduces permeability, particularly in an east-west direction.

52. Development in Aokautere has emerged with minimal investment in high-quality green open space. Likewise, existing housing mostly 'turns its back' on the gullies.

Cultural associations

53. Te Ao Turoa prepared a cultural impact assessment on behalf of Rangitāne o Manawatū (**Rangitāne**). Aokautere is one of Rangitāne's earliest settlements. The area's attractions included the Tararua Ranges and terraces suited for cultivation. Aokautere Pā is on the eastern bank of the Manawatū River.

54. As mana whenua, Rangitāne view of all Aokautere as Wāhi Tapu, being a valued cultural landscape containing many interconnected locations, elements, and conditions. These include urupa, former settlement sites and trails, along with natural features and forces. Accordingly, Rangitāne have a close interest in the impact of urbanisation on the local landscape and ecology.

Natural Character

55. Natural character takes into consideration the physical attributes and perceptions of naturalness of the landscape context. The following section describes and interprets the natural character and values of the landscape.

56. Key natural character attributes of the landscape context include:
    - Nine gully systems with various freshwater habitats.
    - Presence of regenerating indigenous vegetation.
    - Some modifications present in the gullies, including erosion, fill and weed species.

Health of waterways

57. Ravines within Aokautere have been formed over time by the passage of water. Today streams of various types and quality exist within the area.

58. There is a mixture of permanent, intermittent, and ephemeral streams in the gullies.[9] In some places, there is extensive bank erosion, sedimentation, and perched culverts.[10]

59. The gully network has also been degraded by earthworks and the filling of gullies, with a history of environmental compliance issues. Further degradation has been caused due to a lack of integrated stormwater management and the related effects this has on the surrounding environment, including the gully network.

[9] Aokautere Masterplan Stream Hydroclass Classifications, Forbes Ecology (letter addressed to PNCC, Michael Duindam, 14 April 2023).
[10] Aokautere Structure Plan: Ecological Features, Constraints and Restoration. Forbes Ecology (2020).

KEY CONSIDERATIONS

60. A key consideration of this assessment is the characteristics and values of the landscape context. In Aokautere, the characteristics and values of the landscape are particularly attributed to the gully and plateau system, existing areas of indigenous biodiversity and the diversity of land uses (including, rural, rural residential, residential and conservation).

61. The following elements were given particular consideration as part of the Plan Change:
    - Maintaining Aokautere's unique character established by its gully and plateau topography.
    - Protection and enhancement of indigenous vegetation, including vegetation in the gullies.
    - Treatment of water runoff and stormwater management.
    - Treatment of the elongated terraces that separate and border the gullies.
    - How urban areas within the Structure Plan will complement the existing landscape qualities, while managing potential effects from residential development.

ASSESSMENT OF EFFECTS: LANDSCAPE AND NATURAL CHARACTER

62. This section considers the nature and magnitude of effects from the Plan Change on the landscape and natural character of the existing environment identified in the previous sections of this report.

Landscape character effects

63. Landscape character effects from the Plan Change on the environment are discussed in the following section.

Strengthened policies for amenity and quality of the environment

64. New policies have been proposed to recognise the ecological, indigenous biodiversity and landscape values of the gully network within Aokautere and afford protection of those values through management of effects, and a focus on protection, restoration and enhancement.

65. Further, there are policies to avoid adverse effects on the gully network, set appropriate bulk and location standards which recognise character and amenity values, and discourage activities which will have an adverse impact on the character and amenity of areas within the Aokautere Structure Plan.

66. Altogether, these policies will ensure that the amenity and quality of the environment within Aokautere will be maintained and enhanced, where possible.

Protection of natural features and landform

67. The implementation of the Structure Plan focuses on highlighting the natural landscape characteristics of Aokautere by making them a feature of development. It also centres around protecting and enhancing those natural areas and landscape features.

68. Although the Plan Change will result in urban intensification, it takes a landscape-led development approach, which requires the coherence of gullies and plateaus to be maintained. As such, an anticipated outcome of the Plan Change is that development in the gullies will be restricted, stormwater will be managed sustainably, and gully vegetation will be restored. In addition, public access will be enabled to the gullies and high-amenity streetscapes will be created, which will include stormwater and planting that is functionally linked to the gully systems.

69. Under current zoning, many of gullies are zoned residential. The Plan Change proposes to rezone the gullies as part of the Conservation and Amenity zone, affording them protection. Previously, some gullies have been filled with considerable amounts of soil, this will be an improbable outcome under the Plan Change.

Protection and enhancement of the gully systems

70. Significant and ongoing compliance issues have been a feature of Aokautere. This primarily relates to earthworks and the filling of gullies. The Plan Change seeks to address this through a planning framework that avoids inappropriate development and adverse effects on the gully network. The Plan Change also seeks to enhance biodiversity and water quality outcomes. Protection and enhancement of the gully systems will enable high value ecology and amenity.

71. While the Plan Change will introduce more housing into Aokautere, the proposed housing will be limited to the promontories and Turitea Valley, to minimise changes in landform through earthworks and to avoid adverse effects to the gully systems.

72. By protecting the gully systems, the Plan Change provides the opportunity for indigenous vegetation to cover more than 10 percent of the urban

area.[11] Enrichment plantings in gorse areas, planting grasslands and weed control in regenerating forests could be used to help achieve this level of cover.

73. Further urbanisation of Aokautere will result in more hard surfaces and increased stormwater runoff. To address this, WSD will be incorporated using raingardens, swales, and detention basins. Together these features will improve water quality and reduce gully erosion. They will also contribute to attractive, high-quality streetscapes.

Increased connection with the gully systems

74. Under the Plan Change proposal, future development will respond sensitively to the escarpments, ensuring that public visibility and connectivity to the gully landform becomes an integral part of overall spatial structure.

75. Development in accordance with the Structure Plan will recognise the existing gully landscape character as a positive feature and enhance the relationship to this through road design, block layout, stormwater design and recreational amenity.

76. In several areas the roading layout will abut the gully edge rather than following the centre of the terrace. This ensures that continuous housing along the gully edges is avoided, thereby protecting the public views along and across the gullies that are characteristic features of the context.

77. Retaining public views and access to the gullies through roading design and lot layout design will enable increased connections between people and the gully systems. Additionally, roading layout is designed to allow interaction with the gullies by crossing them in selected locations. These physical and visual connections with the gully systems will add value to Aokautere's amenity and sense of place.

Extensive network of reserves and open space

78. Additional residential development proposed by the Plan Change in currently rural areas will reduce the open characteristics attributable to Aokautere. However, in accordance with the Structure Plan, development will provide different types of open spaces, which will be distributed across Aokautere. These include natural gully reserves, flat playable reserves,

[11] A recommendation made in the ecology report.

detention basins, and other stormwater systems, including street-based swales and raingardens (Figure *9*).

79. Six new or existing reserves will provide an appropriate level of recreational amenity. Each reserve is to be within a 400m walk zone. In addition, some 197 ha of natural gullies and rural open land with recreational trails will complement these reserves.

80. Open space has been designed in conjunction with the stormwater collection and retention system to allow for multi-use of the space where feasible. For instance, in some locations, detention basins have been designed into the playground/open space areas. As detention ponds need to provide for stormwater levels that are only occasionally experienced, they can also function to enhance an open space or playground most of the time.

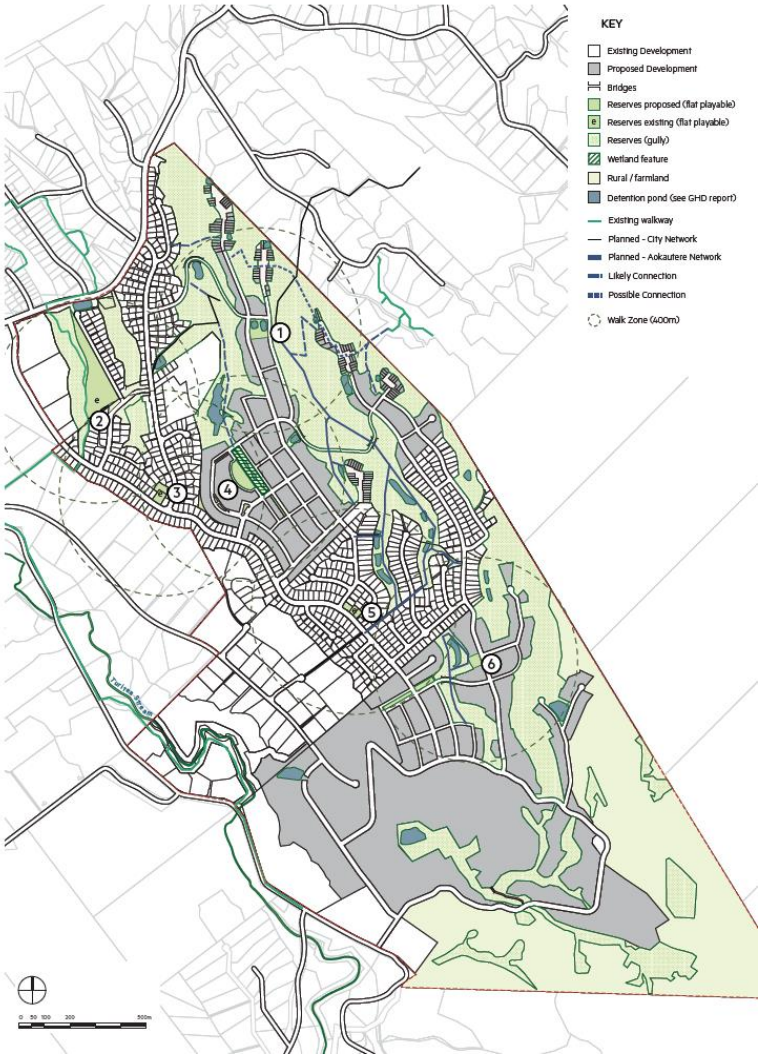


Figure 9 Structure Plan illustrating open spaces and reserves

Extended pedestrian and cycle network

81. Aokautere's recreational pathways are yet to reach their full potential. There is scope to extend the network and improve pedestrian and cycling connectivity throughout the area.

82. Currently, areas of steep-sided land restrict high levels of connectivity and access to gullies is limited. However, there is the opportunity to create recreational trails through the gullies. Such routes will increase connectivity by introducing strategically placed gully crossings.

83. If developed in accordance with the Structure Plan, , Aokautere's network of recreational trails would be almost as extensive as its street system. Plateaus and gullies will interlock to form alternating bands of housing and open space. This arrangement will give many residents direct access to off-road pathways and areas of regenerating bush.

84. Pedestrian and cycling opportunities will also be created through roading design, with footpaths and shared paths (Figure 10).

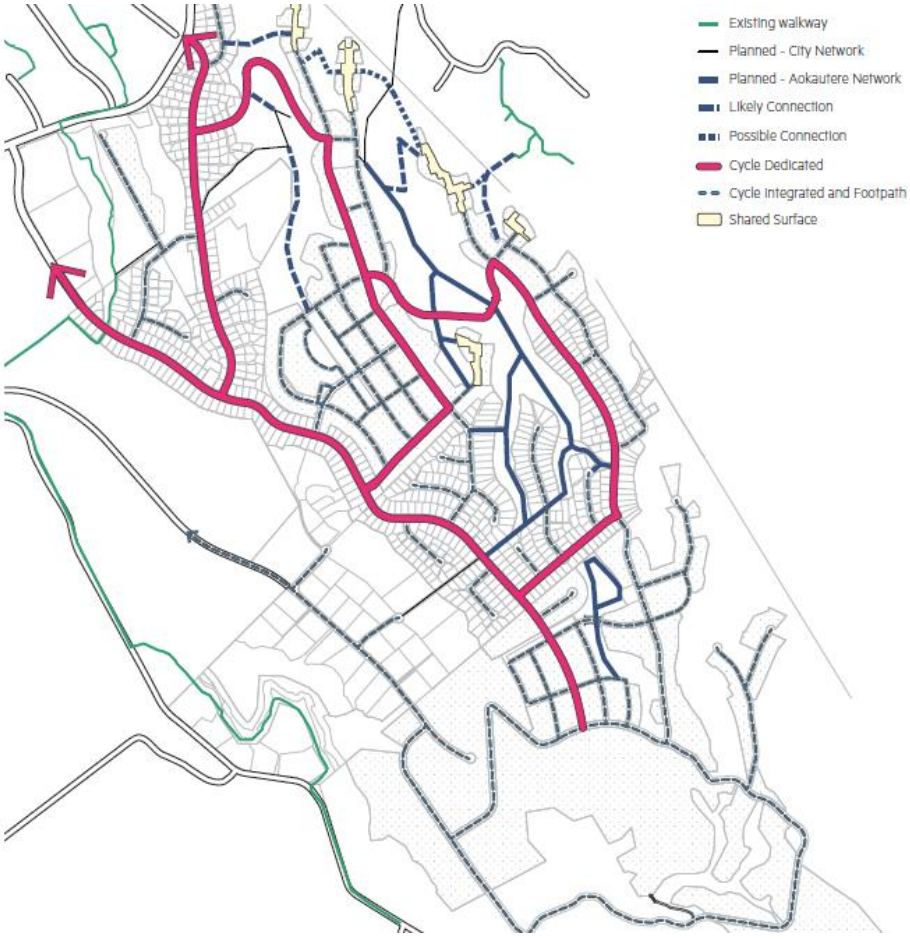


Figure 10 Structure Plan illustrating pedestrian and cycle pathways

High amenity urban landscape

85. Development in accordance with the Structure Plan would result in the open, rural characteristics typical of plateau areas in Aokautere to transition to an urban form through residential development. This change will be significant.

86. However, this new character will be represented by a high amenity landscape. Together open spaces, recreational paths, vegetated gullies, amenity street planting and WSD will ensure Aokautere is a desirable place to live. As a result, the residents of Aokautere will be able to feel connected to the surrounding landscape.

87. A strong urban design, high amenity focus has been taken, including the provision for different residential densities and street typologies to increase streetscape amenity.

88. Street planting will complement Aokautere's natural ecology, while providing a high-quality urban environment. The planting will add diversity by reinforcing the character of the different street types found throughout the subdivision.

Unique character areas

89. Suburbs are often criticised for their homogeneity. Streets of single-family homes can be particularly monotonous when development occurs rapidly and appeals to a narrow demographic profile. Current housing development in Aokautere lacks diversity.

90. Assisted by Aokautere's topography, the Structure Plan will create residential precincts with distinct qualities. Memorable residential neighbourhoods will be established through a 'character areas' approach, providing distinctive, legible locations supporting a range of housing densities.

Well-connected suburb with thoughtful layout

91. Development of greenfield areas in accordance with the Structure Plan would result in existing, ad-hoc fragments of development being merged into a coherent entity. The overall layout and alignment of the movement network in Aokautere is heavily influenced by several key factors, including establishing connected streets where routes link to other routes, topography, land stability, and enabling public access along the top edges of gullies.

92. As shown on the Structure Plan, sensitively designed cross-gully routes prevent the plateaus becoming giant cul-de-sacs. Most locations are accessible from two directions. Streets will feed into a network of cycleways and recreational trails, which increase travel options.

93. Two gully crossings are proposed, which will require construction in the gullies. An additional gully crossing for the extension of Abby Road will also occur, this has already been consented. These crossings will provide necessary links between peninsulas that allow for multiple access, and they will also overcome the current situation in Aokautere whereby the entire existing development is essentially a cul-de-sac. The northern crossing will link from Johnstone Drive, while the centre crossing will link from near the neighbourhood centre across to the extensive north-eastern peninsula.

94. In addition to providing for essential traffic circulation, the cross-gully links allow for public experience of the gullies, their topography, and the native vegetation along the northern route. Subject to safe engineering, it is anticipated that these road crossings will follow gully topography and therefore preserve the gully landforms.

95. The ends of promontories will provide for suburban low-density, with an option for multi-units, and will provide a destination at the ends of the plateaus. The layout will include shared street surfaces and enable people to enjoy the proximity to the surrounding natural environment.

Potential visual effects

96. Despite its elevation in relation to Palmerston North City and SH57, external views into the Aokautere are limited. This is from a lack of elevated viewpoints and due to the extended flat nature of the plateaus.

97. The edges of the terrace above Moonshine and Turitea Valleys can be seen, but visibility beyond these is difficult. Elements of development may be partially visible from small areas of Moonshine Valley, including elevated parts of the multi-storey developments at the northern end of the terraces, if such development was brought forward. New housing on the most western plateau will also be visible from Coutts Way and Johnstone Drive. This will mark a change to the current rural views from these areas.

98. While dwellings on the ends of the promontories will experience views across the surrounding natural landscape, the visual impact of the additional height of these buildings on adjacent neighbourhoods will be mitigated by topography and gully vegetation, as well as distance. Building height may also be limited in some locations, or setbacks imposed where detailed analysis shows the effects will be greater.

Community and iwi consultation

99. Consultation was undertaken with Rangitāne, key agencies/stakeholders and the wider community throughout the development of the Structure Plan. Consultation has indicated that there is broad support for residential housing capacity within Aokautere by the affected landowners.

100. Rangitāne have expressed that they would like their longstanding association with the area to be expressed through placenames, artworks, and interpretive material. Development in accordance with the Structure Plan provides an opportunity for this to occur in an integrated manner.

101. Rangitāne also supports and seeks an active role in the restoration of indigenous ecologies within Aokautere's gully systems. Healthy waterways are a key part of this environment. To this end, Rangitāne favour raingardens and other WSD.

102. While the Plan Change will result in further urbanisation, the gully ecosystems provide an opportunity for the community to act as kaitiaki of indigenous fauna and flora in Aokautere. The protection of existing biodiversity and the enhancement of degraded areas in the gully system will enable interrelationships among te hauora o te tangata (the health of the people), te hauroa o te joiora (the health of the indigenous biodiversity), te hauroa o te taonga (the health of species and ecosystems that are taonga) and te hauroa o te taiao (the health of the wider environment).

Summary

103. It is acknowledged that the Plan Change will likely result in significant changes to the existing landscape character of Aokautere, with open space rural land to become residential in character. While rural attributes contribute to the existing character of the landscape, it is the underlying topography of plateaus and gullies which truly make this landscape unique. The Structure Plan proposes to work with the existing landscape and reinforce this landform pattern where possible.

104. Development in accordance with the Structure Plan will create a unique identity for Aokautere that incorporates sustainable best practice, including landscape-led approaches, protection and enhancement of the gullies, WSD, connectivity, walkable neighbourhoods and high-amenity streets with street planting that will contribute to the strengthened biodiversity corridors and green links in the gullies.

105. The Structure Plan will produce a high-quality public realm with improved visual and physical connections to Aokautere's waterways and gullies, and the local street system will be complemented by a network of off-road trails, which link residential properties and public roads to extensive open space corridors.

106. Overall, the Plan Change, including development under the Structure Plan, would provide a different amenity to that which is existing. However, Aokautere's changed landscape character will be represented by high quality residential development and protected gully systems, which will maintain and enhance the area's amenity and quality of the environment.

Natural character effects

107. Natural character effects from the Plan Change on the existing environment are discussed in the following section.

Protection and enhancement of freshwater habitats

108. Under the existing zoning in the District Plan the gullies are generally zoned Rural or Residential. Whereas in the Plan Change the gully systems, including their freshwater habitats, are zoned Conservation and Amenity, enabling them to be protected and enhanced.

109. Under the Plan Change the gully systems will benefit from ecological restoration work, including restorative native planting, connectivity with the wider ecological system, and WSD.

110. Part of the Plan Change is focused on looking after wetlands and native biodiversity within Aokautere's network of gullies. The Plan Change will include formal protection and ongoing management of the gully network, by way of zoning and eventually vesting in Council.

Water sensitive design

111. The gullies in Aokautere have had issues with erosion, which has the potential to be exacerbated by further residential development. However, the Plan Change proposes a comprehensive, integrated stormwater strategy, which will ensure that stormwater quality and quantity is managed to avoid further impact on the freshwater receiving environments within the gully network.

112. WSD will protect natural features and incorporate them into stormwater management. The Plan Change and Structure Plan incorporates planted swales, raingardens, permeable surfaces, and detention basins as part of its WSD strategy.

113. Stormwater management will be undertaken in a sustainable manner to maintain ecosystem health. Use of permanent hard structures, such as culverts, will be avoided where possible. Where such structures are unavoidable, these will be designed to facilitate fish passage for all species actually and potentially present. Existing impediments to fish passage will be modified to restore connectivity between habitats.

114. The Plan Change also proposes a 5m top-of-slope setback from steeper gully walls to enable the construction of a perimeter stormwater swale, to avoid direct overland flows over gully edges. Downstream of detention facilities, stormwater discharge will be piped into receiving gullies. These measures will provide erosion protection for sensitive gully slopes.

Summary

115. Inherently, modification adversely affects natural character. For the Plan Change modification will occur as rural land is developed for residential housing. While rural land is still modified and not in a 'natural' state, it is considered less modified than urban development which, comparatively, has more modified natural elements, patterns and processes, e.g. more humanmade structures, hard surfaces and disrupted hydrological processes.

116. However, the Plan Change provides an opportunity to balance these potential adverse effects by protecting the gully systems from further development and stormwater issues, as well as by enhancing the gullies through restoration work, including native planting.

ASSESSMENT AGAINST THE POLICY FRAMEWORK

117. The following section provides an assessment of the appropriateness of the Plan Change provisions from a landscape perspective.

Operative Palmerston North City Council District Plan

118. It is observed that Section 2 of the District Plan outlines several objectives which are relevant to landscape. The Plan Change will be consistent with these objectives.

119. The Plan Change embraces the unique characteristics of the area, including through the recognition of distinct character areas. The clear differentiation of the character areas will contribute to ensuring future subdivision and development enables a clear distinction between rural and urban character areas.

120. The visual appeal of Aokautere will be enhanced through high-amenity streetscapes, revegetation of the gullies, development embracing the complex and unique topography of the area, and careful lot and roading layout and design.

121. The natural and cultural heritage features of Aokautere will be preserved and enhanced through the protection and enhancement of the gully systems and through consultation with Rangitāne.

122. As part of the Plan Change, performance standards in the District Plan have been expanded to include:

- compliance with the Structure Plan;
- implementation of Structure Plan design principles;
- specific earthwork requirements;
- protection of the gully network (through management of stormwater run-off and set backs from the gully edges);
- protection of wetlands and significant natural areas; and
- bolstered natural hazard requirements.

123. These revised performance standards in the Plan Change will better enable the Council's aspirations for a sustainable suburb in a high-quality landscape setting to be achieved within Aokautere.

124. New objectives and policies in the Plan Change will enable the landscape and natural character of Aokautere to be better protected and enhanced.

These are all appropriate. Some provisions which will help to ensure this occurs provide for the following:

- Recognising the ecological, indigenous biodiversity and landscape values of the gully networks.
- Protecting, restoring, and enhancing the gully network.
- Avoiding adverse effects on the gully network.
- Ensuring there is no increase in stormwater effects on surrounding areas.
- Integrating subdivision with the landscape and natural gully systems.
- Providing opportunities for differing densities and types of housing.

125. It is assessed that the Plan Change will better enable the District Plan to protect and enhance the gully systems within Aokautere. It will also ensure that future development within Aokautere will result in a quality and high amenity environment. From a landscape perspective, the provisions are appropriate, as are the objectives of the Plan Change.

Horizons Regional Council One Plan

126. It is observed that Policy 6-6 of the One Plan (regionally outstanding natural features and landscapes) is not relevant to the Plan Change, as there are no identified ONFLs relevant to the Aokautere area.

127. Policy 6-8 and 6-9 address natural character. They require that natural character of rivers and their margins are preserved and protected from inappropriate subdivision and development. It also directs that the natural character of these areas is restored and rehabilitated where appropriate and practicable.

128. From a landscape perspective the Plan Change appears to be consistent with the One Plan as it will not significantly disrupt natural processes or existing ecosystems and will provide for the restoration of natural character in the gully systems, which will improve the natural character of the gullies.

Resource Management Act 1991

129. The preservation of natural character (Section 6(a)) of wetlands, and lakes and rivers and their margins is directed as a matter of national importance under the Act.

130. The Plan Change affords more protection to the natural character of the gully systems than the operative District Plan by zoning the gullies as Conservation and Amenity Zone. Specific provisions in the Plan Change also address the preservation of natural character of wetlands and areas of indigenous biodiversity within the network of gullies by way of formal recognition and protection.

131. The protection of ONFLs (Section 6(b)) is also directed as a matter of national importance under the Act. There are no ONFLs relevant to the Plan Change.

132. The maintenance and enhancement of amenity values of natural and physical resources are outlined in Section 7(c) and the maintenance and enhancement of the quality of the environment in Section 7(f). It is considered that the existing amenity and quality of the environment will be maintained and/or enhanced for the following reasons:

- Natural gully systems will be protected and enhanced.
- The aesthetic coherence of the plateau and gully topography will be maintained.
- High-amenity streetscapes will be provided for through street planting and careful lot layout.
- Distinct character areas, street typologies and varied housing types will contribute to the mature urban character of Aokautere, avoiding homogeneity.
- Connectivity between housing areas will be improve current ad hoc development.

187. In terms of landscape and natural character, it is considered that the Plan Change is the most appropriate way to achieve the objectives of the Act.

CONCLUSION

188. The Plan Change has the potential to result in some adverse effects (or environmental costs) by increasing urban development in an area with predominantly rural attributes, such as by increasing hard surfaces and stormwater runoff, creating tracks and roads within the gullies, and earthworks.

189. However, it is considered that these costs are outweighed by the positive effects (environmental benefits) of the Plan Change, including providing open space reserves for the public, the formal protection and enhancement of the gully systems, WSD, improving connectivity within Aokautere, remedying ad hoc fragmentation of land, and minimising earthworks by restricting development to the plateaus.

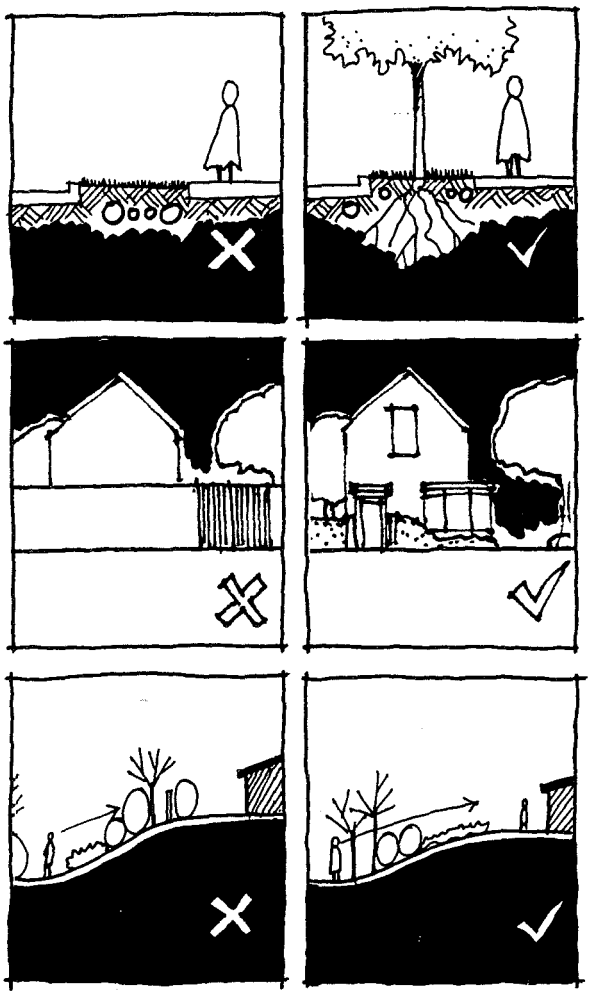
190. While it is acknowledged that the Plan Change will result in a significant change to the existing landscape character of Aokautere, it will ensure future development is well integrated into the existing and anticipated future landscape context. The unique landform of the area, which is a key attribute that contributes to the character of the area, will be maintained. The Plan Change is also consistent with the relevant statutory provisions in terms of landscape and natural character.

191. From a landscape perspective, the Plan Change is the most appropriate way to achieve the objectives of the Act, including preservation of natural character, and maintenance and/or enhancement of amenity values and quality of the environment.

Attachment 2

Palmerston North

Aokautere Design Guide



PALMERSTON NORTH CITY COUNCIL

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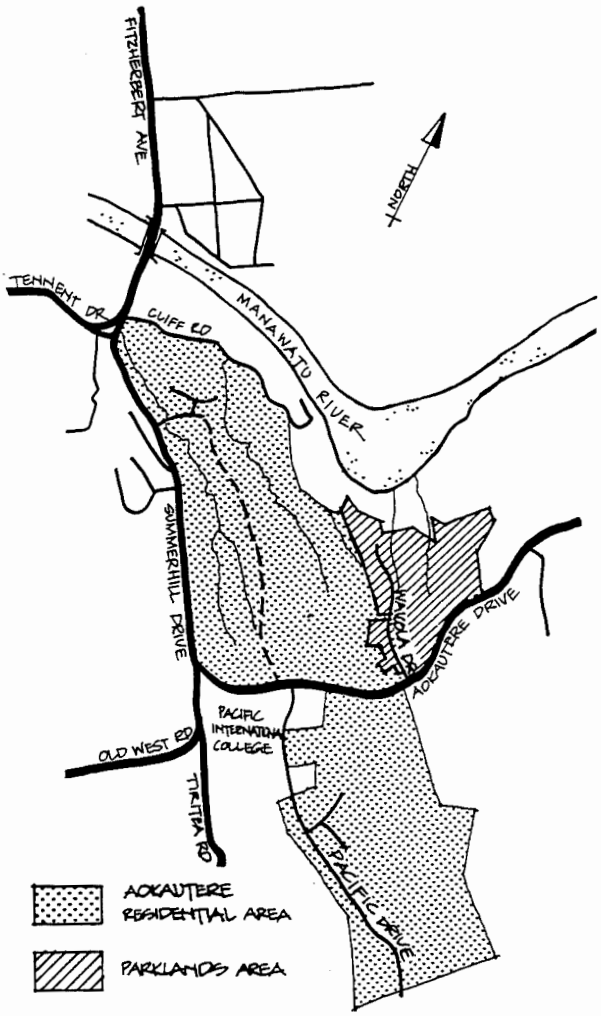
June 1996

Palmerston North

Aokautere Design Guide

These guidelines are for anyone involved in the planning, design or construction of any aspect of subdivision or development in the Aokautere residential area. If you are building a house, creating a garden, designing a street layout or planning a reserve, these guidelines are for you.

This document has been primarily prepared for the Aokautere residential area. The area covered by this design guide is bounded by Cliff Road, Summerhill Drive, Aokautere Drive and Pacific Drive. It also includes the area identified for lifestyle blocks in the Parklands area. (Refer to adjacent location map showing extent of area covered by these guidelines.)

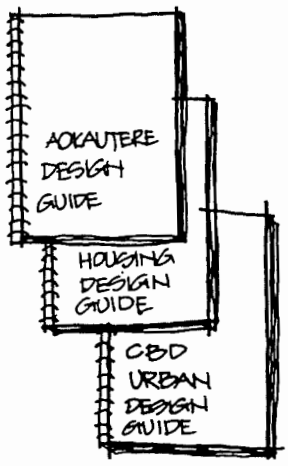


LOCATION MAP

What is the purpose of design guidelines?

A series of design guidelines are currently being prepared for Palmerston North. The guidelines provide clear information and advice which complements the regulatory requirements contained in the District Plan. They encourage the wise use of land and resources to create a high quality environment which meets the needs of the people who live and work in Palmerston North.

The Aokautere Design Guide joins two similar documents, namely; the Urban Design Guidelines for the central business district and the Housing Design Guide for residential infill development in Palmerston North. All of these design guides are available from the Palmerston North City Council.



THESE GUIDELINES ARE ONE OF 3 SETS OF DESIGN GUIDELINES AVAILABLE FROM THE PALMERSTON NORTH CITY COUNCIL

The Aokautere area is rapidly changing from a rural pastoral landscape into a more intensively developed residential suburb. While the District Plan seeks to control the undesirable effects of change through rules and regulations, many other effects will result from the way in which new residents shape their immediate environment through many gradual small-scale changes. These guidelines provide design advice to allow people to make informed decisions at all the stages of residential development so that the end result benefits the suburb as a whole, making it a desirable place to live for years to come.

There is also a very practical reason for these guidelines. The soils of the Aokautere area have the potential to become relatively unstable when they come in contact with water. By changing the underlying landform or sealing the surface, these actions may change the way water moves through the soil leading to possible land stability problems if the water is not controlled in some way. Good design in this sense is therefore not only what looks good and feels comfortable, but also what is structurally sound.

What is the scope of this design guide?

This design guide for Aokautere covers issues which involve a design decision at all stages of residential subdivision. These decisions include the visual (aesthetic) and the physical (structural) aspects of a residential design. They also include those aspects that in combination create a sense of community and identity, such as the layout of streets and the relationship of houses within a street and to each other.

The design decisions that are made in the early stages of development will have a major influence on the quality, character and perceived value of a residential subdivision. These decisions are mainly influenced by property developers, council officers, surveyors and landscape or urban designers. They include subdivision design issues such as :

- where the streets and open spaces will be placed,
- the extent of earthworks that may be required,
- the location of services (sewer, water, stormwater, power, phones),
- the shape and size of the house lots and,
- the location of public walkways and cycleways.

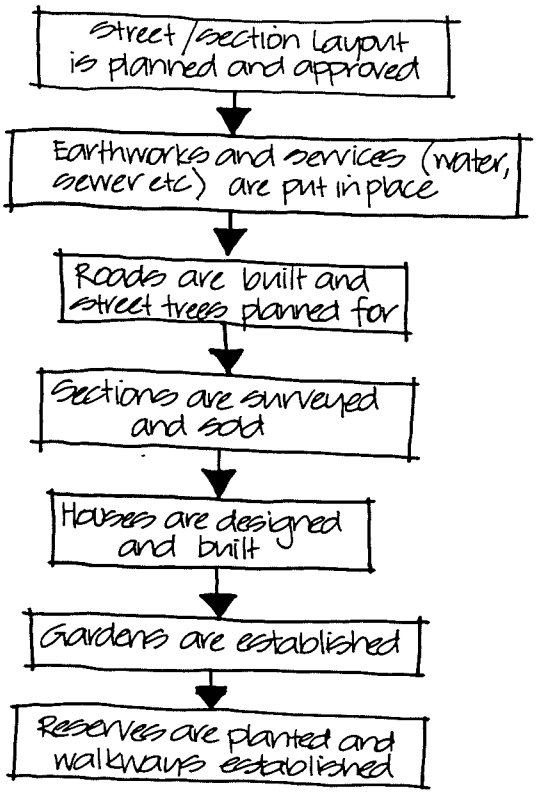
Then there are the decisions to be made by property owners on individual lots, often in conjunction with a design or building professional which include :

- where the house will be placed on that particular section,
- the character/design of the house (*style, shape, materials used*)
- the treatment of the surrounding landscape (*planting, paving, building fences, walls or decks*)

Collectively these decisions will determine the quality and character of the residential area in the years to come. Some of the most important features of Aokautere have already been determined with the planning of the streets, sections and reserves, however the final environment will depend on many individual design decisions and projects as the sections are developed.

The first step in creating a high quality place to live is to have a vision for Aokautere that is compatible with the surrounding landscape. The following section looks at the unique features of Aokautere which help to determine a common vision on which these guidelines will be based.

THE TYPICAL STAGES OF RESIDENTIAL SUBDIVISION



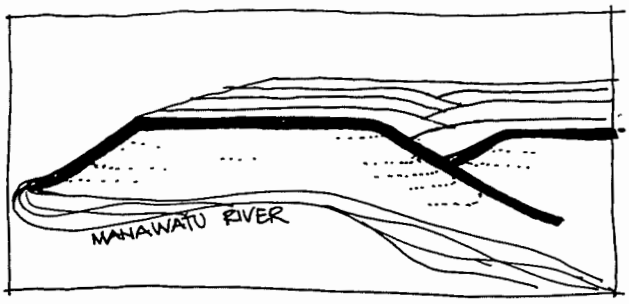
AT EACH STAGE THE DECISIONS MADE WILL DETERMINE THE QUALITY OF THE SUBDIVISION

What is special about Aokautere?

What attracts people to live in Aokautere? Firstly, it is relatively undeveloped and therefore provides the opportunity to start building "from scratch". It also provides the opportunity to do things in a considered way from the outset to create a high quality living environment and a unique identity that is not always possible in an established suburb.

The other attraction of Aokautere is its location. It is elevated above the city in a rural landscape with views over the not-so-distant city. While relatively close to the main urban area, Aokautere is separated from this area by a high terrace shaped by the Manawatu River. This gives the feeling of being part of Palmerston North city while also offering a distinct character close to a rural environment.

The character of Aokautere comes from the natural shape of the land which has been left relatively intact during recent subdivision. This shape of the Aokautere landform is the result of erosion from streams and waterways which have cut across the main terrace plateau to drain into the Manawatu River. This elevated river plateau is dissected by steep-sided valleys formed as a result of this water movement.



THE AOKAUTERE LANDFORM
IS A RIVER TERRACE DISSECTED BY VALLEYS

The elevated nature of the subdivision brings with it added challenges and responsibilities - elevated sites mean houses are more prominent in the landscape than houses built on flat land. There are also potential problems of stability and construction associated with building near the edge of a terrace or slope. These guidelines provide advice on how to effectively respond to these challenges for siting and design of development in this situation.

A vision for Aokautere

The Aokautere residential area is part of Palmerston North but with a distinct identity that takes advantage of its elevated views and rural surroundings. The elevated location means development will be prominent and for this reason houses are designed and sited to complement the landscape.

The street and housing layout fits into the natural landform with development on the upper terraces and the main gullies left as open space, acting as corridors for conservation and recreation for all to enjoy.

1 Geotechnical considerations
(Soil and Slope)

Throughout the country, natural processes of erosion are operating, which are accepted as relatively continuous processes. In the Aokautere area, natural processes of erosion and landslip may be aggravated by human activities which modify the existing landform or drainage patterns. This section provides guidelines to assist the developer and landowner of residential lots in developing the land in a way that should help maintain and enhance the slope stability of the property.

The guidelines in this section are intended for those areas identified as "developable" in the Palmerston North City Proposed District Plan. It excludes those areas identified in the Proposed District Plan as "undevelopable" or subject to controls relating to the Cliff Protection and River Terrace Protection lines. (Refer to Section 10 - Residential Zone and Section 22 - Natural Hazards for further information in relation to your particular property.)

Aokautere soil qualities

The soils of Aokautere are made up of marine sediments, with near-surface layers of ash and loess. Their fine particle content makes them relatively unstable when they come in contact with water and the weak sands and silts in the soil structure make them sensitive to erosion. The soils are generally very slow to take up water and take a long time to drain which makes them typically wet and soft in winter; and dry and hard in summer.

The soils which make up the slopes and gullies of the Aokautere area may be prone to instability if disturbed. They are particularly sensitive to water erosion where their natural drainage patterns (the way the water moves through or over the soil) are altered. This often occurs when the natural landform is altered through earthworks.

Many of the newly developed residential sections back onto gully slopes. Slope instability may be aggravated by the subdivision developer or the section owner, particularly if uncontrolled earthworks are undertaken or slopes are inadequately drained of surface water or groundwater (due to rain or irrigation).

Factors influencing the stability of a slope include:

- the angle of the slope (steep slopes are more susceptible than shallow slopes)
- soil type and strength (soils containing clay and ash are likely to be weaker)
- the presence of previous erosion

- surface water (could cause erosion)
- the presence of permanent seepages (drainage)
- the removal of vegetation cover

THE MOST LIKELY CAUSE OF SLOPE FAILURE IS INADEQUATE DRAINAGE OF SURFACE WATER OR GROUNDWATER

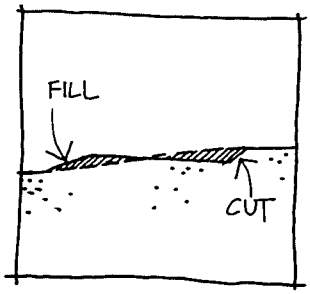
Guidelines

Earthworks and Drainage

The following guidelines are provided to assist the landowner to improve and enhance soil stability in the vicinity of gully and valley side slopes located on "developable" land. They are grouped under two broad categories, earthworks and drainage.

1.1 Earthworks

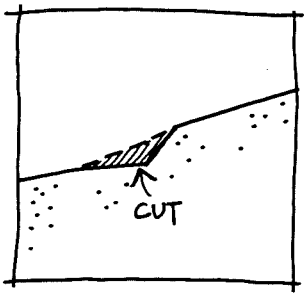
Ill-conceived and uncontrolled earthworks may exacerbate soil instability. Professional advice should be sought and appropriate City Council and Regional Council approvals may need to be obtained if considering earthworks activities within residential lots. Council approvals may need to be sought if you are considering earthworks in this area including :



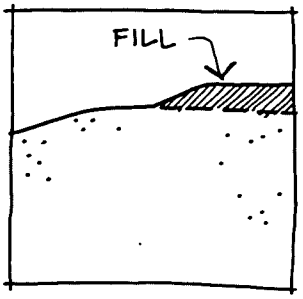
BENCHING TO FORM A ROAD OR DRIVEWAY

- cutting and benching to form a house foundation, building platform, garage, swimming pool or other structure
- cutting and benching to form a driveway or pathway
- excavating to form a basement
- cutting into or removing the toe of a slope, particularly if the site was subject to a previous slip
- adding fill material to the top of a slope or on sloping ground

  As a rule of thumb - cut faces should not be formed steeper than 18°



REMOVING THE TOE OF A SLOPE

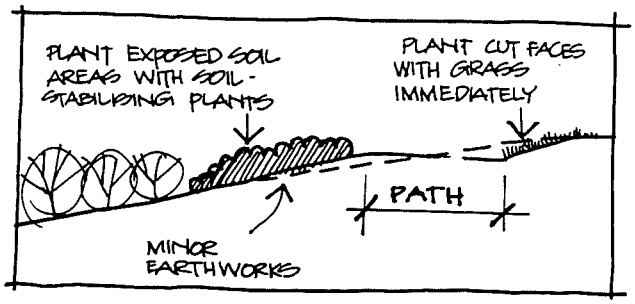


ADDING FILL TO THE TOP OF A SLOPE

- forming trenches across or down slopes, particularly if laying underground services on sloping or unstable ground.
  This includes sewer pipes, stormwater pipes, water mains, power and telephone cables and household services.
- building a retaining wall
- building a house or structure close to a slope or escarpment

NOTE : Activities occurring near any land identified as "undevelopable" in the Palmerston North City District Plan are subject to specific controls and/or prohibitions. You are strongly advised to consult with City Council staff before planning any work adjacent to these identified areas.

If earthworks are required, ensure exposed soil areas are immediately revegetated by hydro-seeding or sowing with grass initially and then planting with suitable species selected from the Plant List in Section Four. See this section for landscape treatment and maintenance of slopes following earthworks.

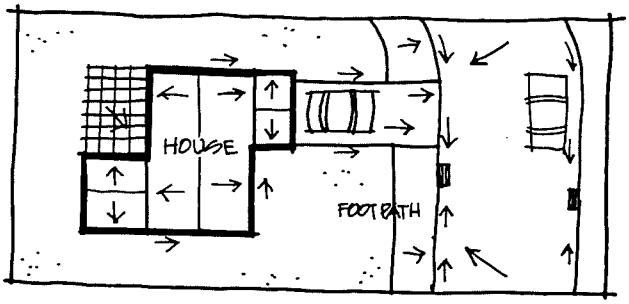


REVEGETATE ANY AREAS OF EXPOSED SOIL WITH SOIL-STABILISING PLANTS

1.2 Drainage

Uncontrolled discharge of water either onto gully or valley side slopes or into the ground near such slopes may lead to instability. To reduce the likelihood of this occurring, the guidelines below should be followed :

- Drain all surface water (from rainfall or taps) into the stormwater mains or other approved outfalls. This applies to water from roofs, sealed and paved areas (e.g. driveways, patios, tennis courts) and gardens.

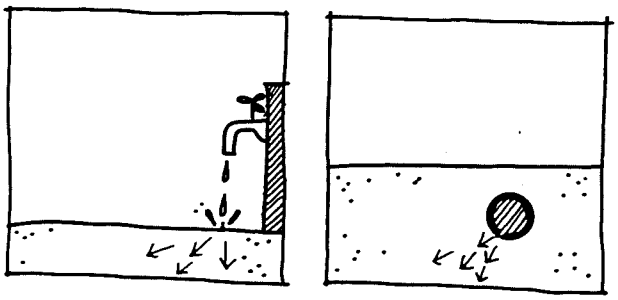


DRAIN ALL SURFACE WATER INTO THE STORMWATER MAINS

- Alternative forms of disposal must have Council approval and could include disposal of surface water through sealed pipes or open drains lined with concrete or steel.

- Do not drain stormwater onto neighbouring properties as this could lead to instability of both your own and your neighbours property

- Keep water and sewer pipes well maintained, and repair any leaks immediately. Any water or sewage leaking from pipes will quickly saturate the surrounding ground, making it susceptible to slope instability.



FIX ANY LEAKING TAPS OR PIPES IMMEDIATELY

- Where groundwater seepages are evident on slopes, suitable drainage should be provided such as subsoil drains in gravel trenches wrapped in filter cloth.

- Avoid unnecessary watering of plants that may saturate side slopes or feed surface water into areas prone to instability - guidance on suitable species is provided in the Plant List at the end of this guide

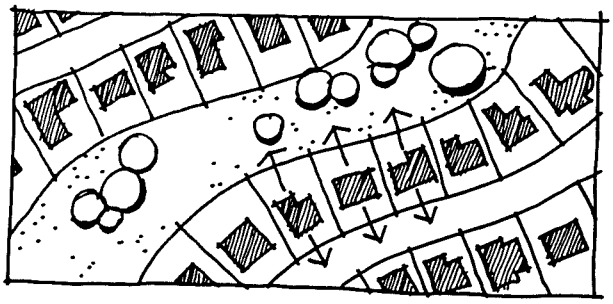
Professional advice should be sought and appropriate Council approvals obtained in most if not all of the above circumstances. In addition it should be noted that the Building Regulations 1992 (clause E1) imposes a statutory obligation on property owners to safely dispose of stormwater without creating a nuisance.

2 Subdivision and Street Layout

Roading patterns and lot boundaries determine the shape and the quality of the streetscape and the structure of public open space. When these patterns are decided, developers should consider the future visual character of the suburb as well as the practical issues of access and servicing.

Many of the broad scale site planning decisions about the overall layout of the Aokautere residential area have already been made. However, there is still scope to refine the details of these layouts. This section provides guidelines for property developers, surveyors, design professionals and council asset managers to review and refine the details of any proposed areas which are yet to be finalised.

In Aokautere, the subdivision layout has largely followed the natural landform. This has resulted to date in minimal earthworks and a roading pattern that runs along the flat tops of the terraces. Gullies remain as either reserves or undevelopable land in private ownership. Most residential sections span between a street and a gully area. For this reason, many houses will have double "frontages". One side will face the street and another will enjoy views towards the city or across the surrounding valleys. This relationship means that every house needs to appear part of two quite different settings. Visual and physical connections between the streets, the house lots and the gully reserves also become important if they are not to appear as isolated elements.



FRONTAGE TO BOTH GULLY AREA & STREET

Once the houses are built along the top of the terraces, gully areas identified for reserve purposes will be less visible from the street. To enhance accessibility to these important recreational areas, connections to the street need to be frequently spaced and visually prominent. Otherwise the reserves could become isolated and potentially unsafe. Access to these reserves should also be obvious so all residents have ready access to this public open space. An inter-connected system of walkways between reserves and streets also improves the opportunity for recreational use and enjoyment by residents and others.

Guidelines

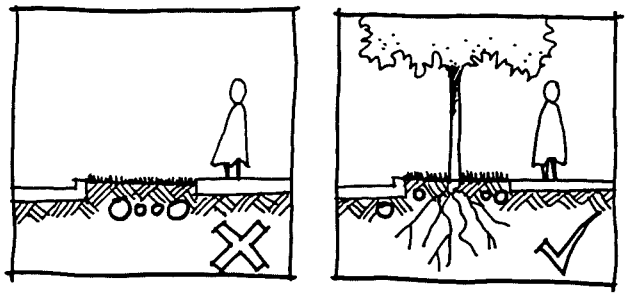
2.1 Road and Footpath Network

- avoid earthworks and plan for roads and paths to follow the natural landform wherever possible

- where earthworks are unavoidable, they are to be kept to a minimum and blended back into the shape of the natural landform avoiding abrupt changes in angles or levels

- allow for future street trees in any new road layout by providing for grassed areas in the berm on either side of the road or in a median strip in the centre of the road (where provided)

- ensure any driveways and kerb crossings are located to allow street trees to be planted at predominantly regular intervals on each side of the street.

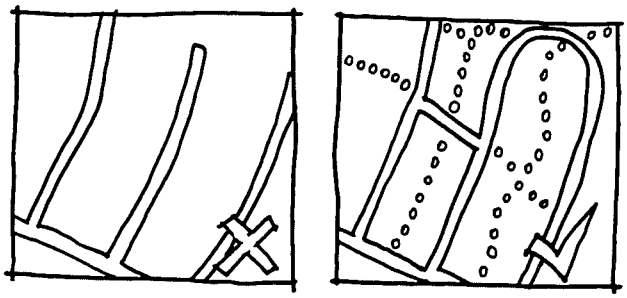


LOCATE UNDERGROUND SERVICES TO ONE SIDE OF THE BERM TO ALLOW FOR STREET TREES

- locate any underground services to the side of any grassed berms (not the centre) so they may be used for street tree planting

- inter-connect street and reserve areas wherever possible

- plan for a system of public walkways and cycleways which links through all main reserves and streets



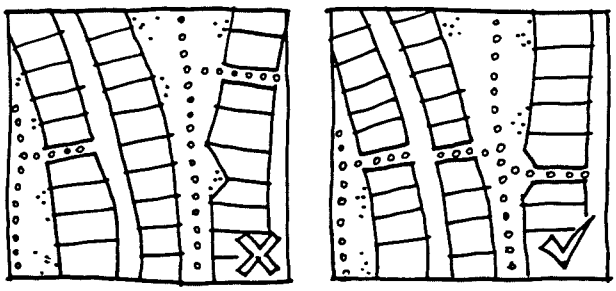
INTER-CONNECT STREETS, RESERVES & WALKWAYS

2.2 Reserves and open space layout

- plan for reserves to be visible and accessible from the street

- connect new reserves with adjacent reserves or other areas of public open space including streets

- set aside flat areas for children's playspace that are visible from the street and nearby houses and are within a short walking distance from most houses

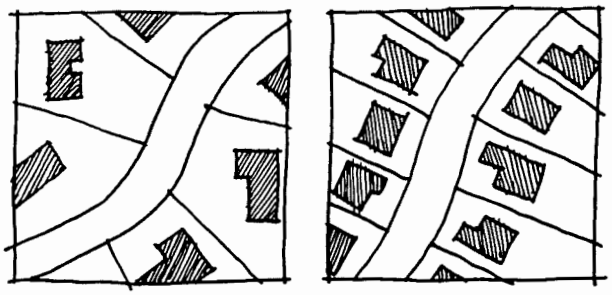


OPEN SPACE / WALKWAYS LINKED ACROSS GULLY AREAS INTO STREETS

3 Site Planning and Dwelling Design

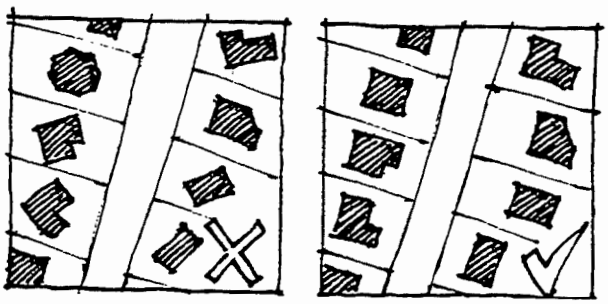
Once the roads and section boundaries have been set in place in a new residential subdivision, houses are built and gardens are established. Design decisions that are made for each section will contribute not only to the quality of individual homes but also to the amenity of neighbouring properties and the character of the street and the area as a whole. Initially, the existing landscape of unmodified ridges and gullies determines the area's character. As development proceeds, the identity and amenity of the new suburb will depend more on the design of the streetscape buildings and planting.

In the older existing suburbs of Palmerston North, large sections with extensive gardens often enable one dwelling to appear 'distanced' from the next. At Aokautere the section layout has been largely dictated by the landform. Building sites are concentrated on the flat land at the tops of the terraces. Because this land is so valuable, many sections will be relatively small. Combined with the generous scale of modern housing, this distribution will encourage strips and pockets of high density housing with each house appearing in close proximity to its neighbours. In Aokautere this can be exacerbated by the elevated nature of the area.

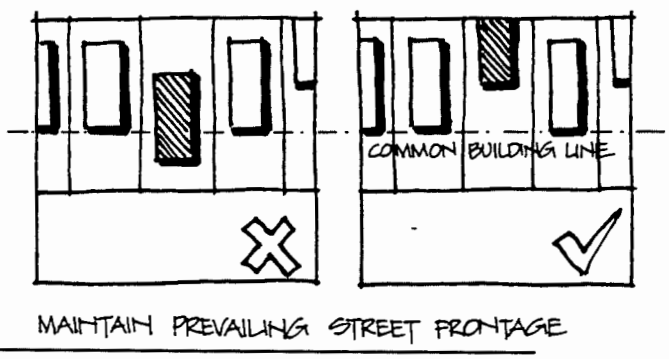


In this situation it will not be possible to view each house in isolation. Dwellings will be seen primarily as groups of houses so it is important to ensure that each house has a positive visual relationship to its neighbours. Privacy and sunlight will need to be protected by the careful placement of doors and windows. Sometimes a solid blank wall may provide the most "neighbourly" interface with an adjoining property.

Visual consistency has become difficult to achieve as the variety of building styles and materials increases. However, a favourable relationship can be formed by adopting a common scale, orientation and alignment among houses. For this reason, the shape and siting of each house should be such that its main walls are parallel or perpendicular to their near neighbours. A common alignment also encourages houses to fit together efficiently and helps to produce outdoor areas which have useful shapes and dimensions. Viewed from the street, or the opposite side of the gully, rows and clusters of houses will appear as a unified feature.



A consistent treatment of the street boundary will provide a definable street character. If this consistent approach is slightly different for each street, each will have an identity to distinguish it from other streets. On some streets, dwelling fronts are located along a common building line which defines a strong street edge. On other streets the front boundary edge is defined with planting or simply left as lawn with the possibility of street trees in the berm. A



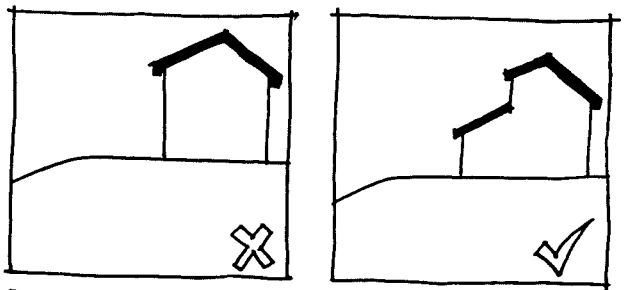
consistent approach within each street that is different from street to street will create an identity for Aokautere that breaks up the uniformity that could otherwise occur with houses of a similar age and style.

NOTE: A number of properties in the Aokautere residential area are subject to identified building line restrictions. Any such restrictions should have been defined at the time of subdivision approval, and care should be taken that buildings do not encroach beyond this line.

Guidelines

3.1 Maintain the distinct natural landscape character of the Aokautere area.

- design the form of the houses near the top of slopes to fit into the surrounding landform rather than contrast with it



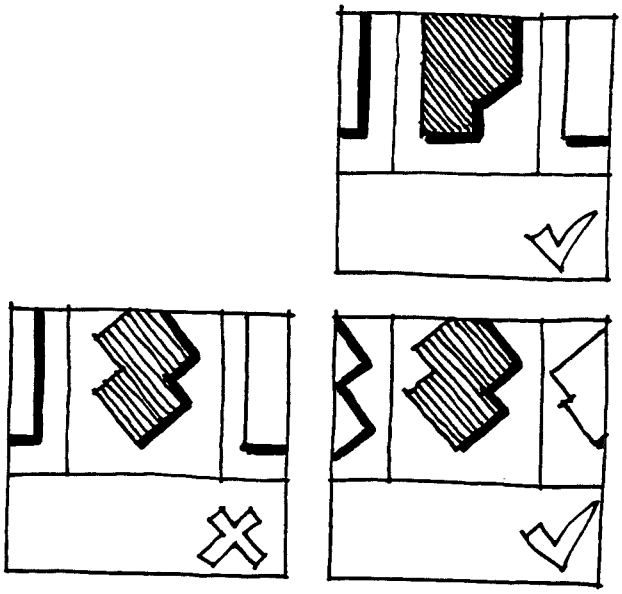
DESIGN THE FORM OF THE HOUSE TO FIT INTO THE SURROUNDING LANDFORM

3.2 Create a strong visual connection between houses in each street.

- treat the street edge in a way that is consistent with the prevailing street edge - the street edge may be defined by walls or planting or left open with lawns to the street. Be aware of the prevailing pattern in the street and design accordingly.

- align house frontages parallel with the street edge when streets are curved and/or no clear pattern of alignment exists (see sketch on previous page)

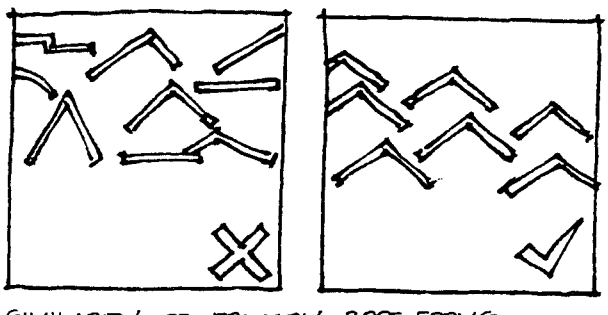
- align the main walls of the house parallel with the walls of neighbouring houses - secondary forms such as side rooms and decks could be placed on an angle to this main form (see adjacent sketches)



PARALLEL ALIGNMENT OF MAIN WALLS

- use a common roof type and pitch over the main body of the building

- use a similar or complementary building style which matches common dimensions and uses materials or construction details common to other houses in the street

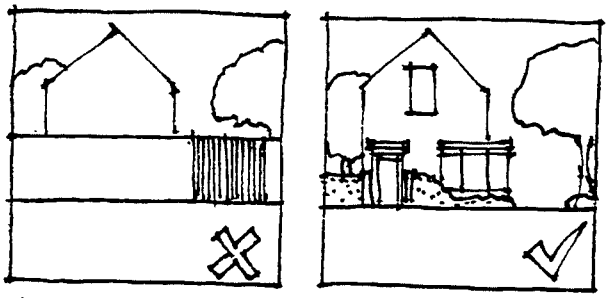


SIMILARITY OF PRIMARY ROOF FORMS

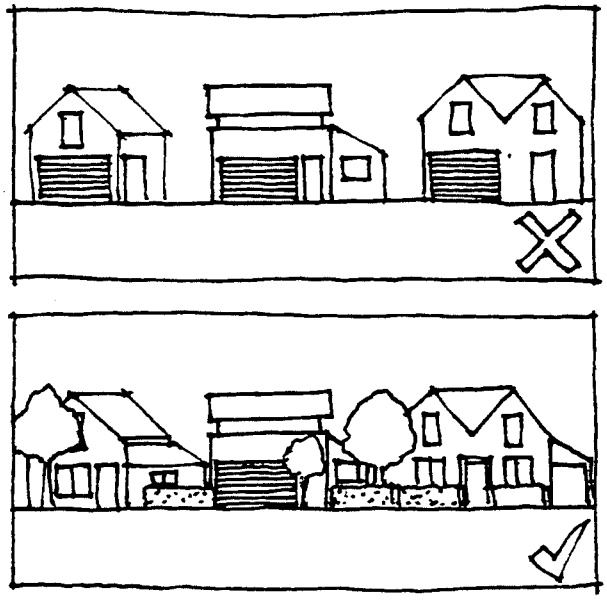
- plant street trees using a consistent species in each street appropriate for the size of the street - see Plant List for suitable species for different situations

3.3 Create a lively street frontage with a visual connection between the dwelling and the street.

- ensure at least one principal living area has a view out over the street
- ensure the dwelling entrance is clearly visible from the street
- avoid the repetitive use of continuous high blank walls and garage doors along the street frontage



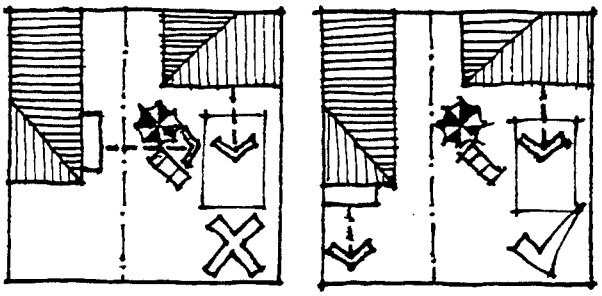
VISUAL CONNECTION WITH THE STREET



STREET FRONTAGE TREATMENT

3.4 Maintain the physical amenity of immediate neighbouring properties.

- locate the dwelling to avoid excessive shading of the main internal and external living areas of neighbouring houses
- orientate main windows to avoid direct short range overlooking of neighbours private open spaces



SUNNY OUTDOOR SPACE WITH ACCESS FROM MAIN LIVING AREA OF HOUSE

4 Landscape Treatment and Maintenance

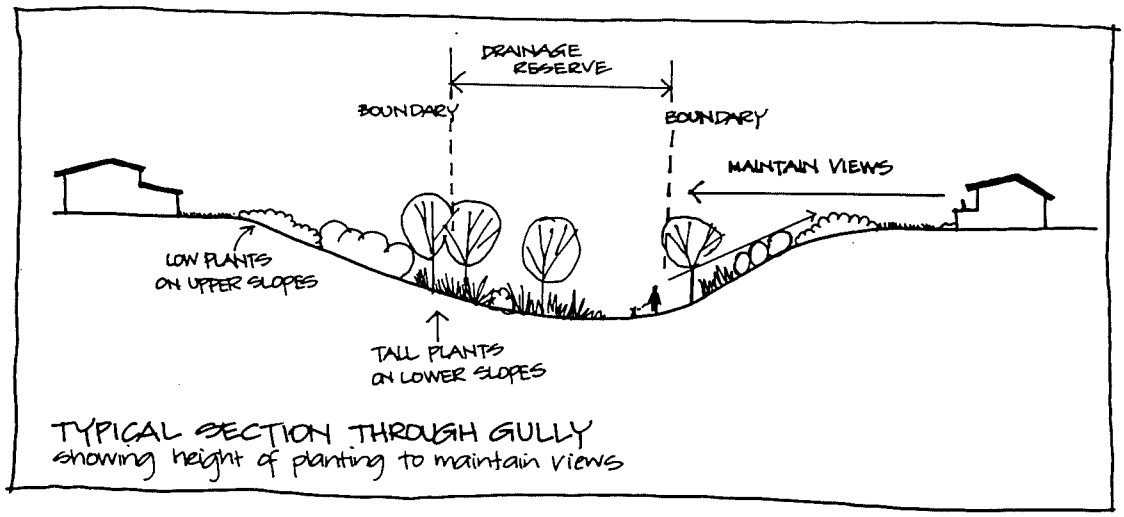
The way in which the spaces around the houses, in the reserves and within the streets are treated has an influence on the visual quality and potential value of the residential area. Street trees for example are a valued feature of Palmerston North streets. To enhance the streetscape, property owners and developers in the Aokautere area are encouraged to provide street trees in newly developed streets once building development is completed. The Council itself will only be in a position to provide street trees as and when funding is allocated.

Landscape treatment in this section concentrates principally on planting in streets and private properties. It also includes the design and placement of hard landscape features such as fences, walls, decks and paving.

NOTE : The way in which garden areas are maintained (watering, mulching, cultivation and drainage) may have implications for soil stability and erosion prevention - see section one for further guidance.

The overall vision for Aokautere sees key gully reserve corridors providing an important open space network for all to enjoy. It is important that these identified gully reserves are an integral part of the community; that they are safe and accessible to all residents. Any built structures or elements that cut off the reserve visually or physically from the surrounding streets, walkways and private properties should be avoided.

The guidelines encourage the use of low planting rather than fences, walls and high planting at the boundaries between private land and reserve. Views across the gullies to other houses are encouraged to be kept open with low planting on the upper slopes and taller planting in the gullies. This will enable views into and across the gullies.



TYPICAL SECTION THROUGH GULLY
showing height of planting to maintain views

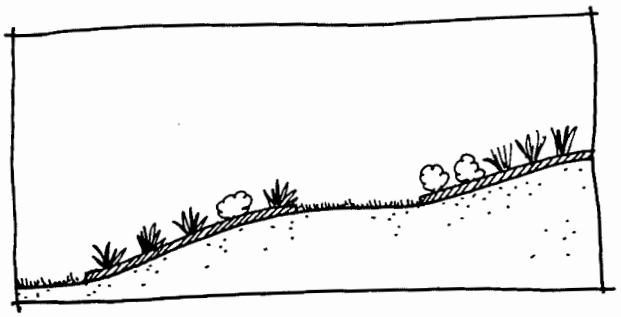
Guidelines

4.1 Improve the stability of both natural and formed slopes.

- maintain the natural landform and minimise the need for earthworks in any landscape plan

- plant trees and shrubs on any exposed slopes - refer to Plant List for guidance on suitable species
  Bare slopes can be hydroseeded or sown with grass in the short term to provide a protective cover.

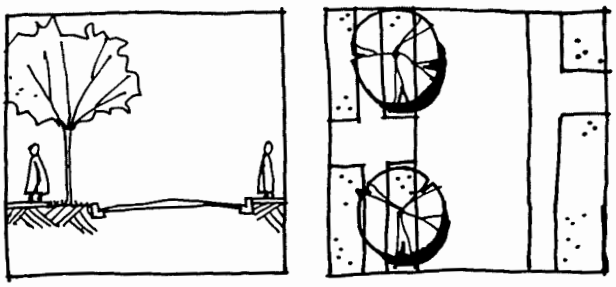
- sow grass or spread bark mulch on planted areas until a total plant cover is established
  Geotextile fabric may be used as a protective surface layer but only on slopes that are prone to ongoing surface erosion until planting is established.



PROTECT EXPOSED SOIL SLOPES WITH PLANTS AND MULCH OR SOW WITH GRASS

- select plants that do not require watering except a minimal amount when first getting established
  This will reduce the risk of slope instability through soil saturation or erosion - refer to section one for further details.

- drain all surface water from paved areas such as driveways and patios into the stormwater mains or other approved outfall

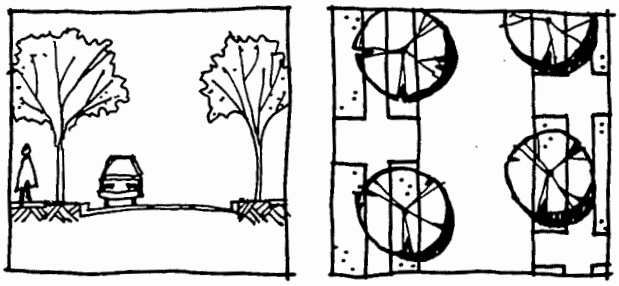


- do not drain stormwater onto neighbouring properties as this could lead to instability of both your own and your neighbours property

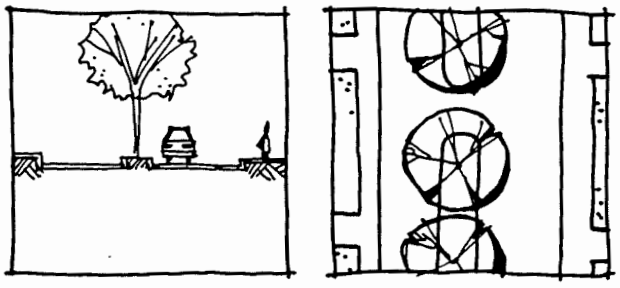
4.2 Create a distinct identity for each street.

- plant street trees using the same species within a street of sufficient size and spacing to create a continuous canopy which begins 3m above the ground.

- Trees can be planted in the grass berm between the footpath and the road on either side of the street or in a median strip in the centre of the street (if provided).



PLANT STREET TREES IN THE BERM EITHER SIDE OF THE ROAD OR...

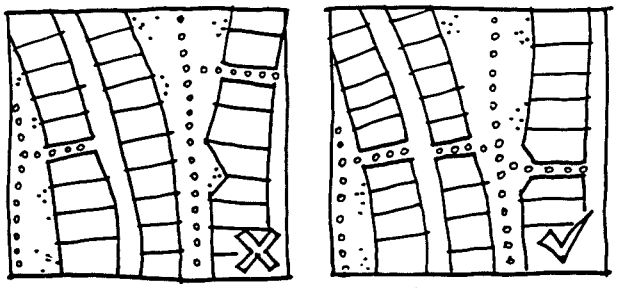


IN THE CENTRE MEDIAN STRIP

In some streets it may be more desirable due to maintaining sun and views to plant small trees or a small number of strategically placed specimen trees for maximum effect eg. at the entrance to a street or at the head of a cul-de-sac. Allowance needs to be made for trees when streets and services are planned. (See section two for further guidance.)

4.3 Create a safe, accessible open space network

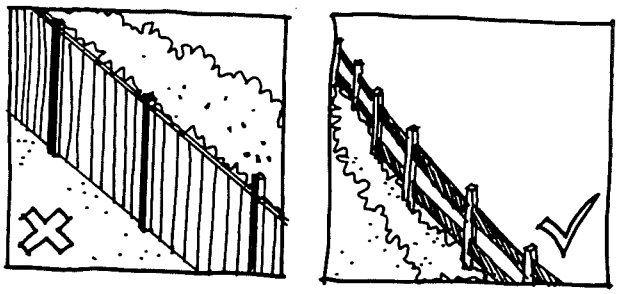
- allow for a public walkway/cycleway system when planning the subdivision layout that connects the identified reserve network into all major streets in the area including several exit points from particularly long reserves with no or limited street frontage (*see section two for further guidance*)



OPEN SPACE / WALKWAYS LINKED ACROSS GULLY AREAS INTO STREETS

- maintain views wherever possible into and across gullies by planting low plants at the top of slopes and taller trees in the gullies - refer to sketch Page 13 and Plant List for appropriate species

- use low planting or simple low post-and-rail fences at the boundary with the gully reserves rather than constructing high, solid fences or walls which shut out views into and out from the reserves

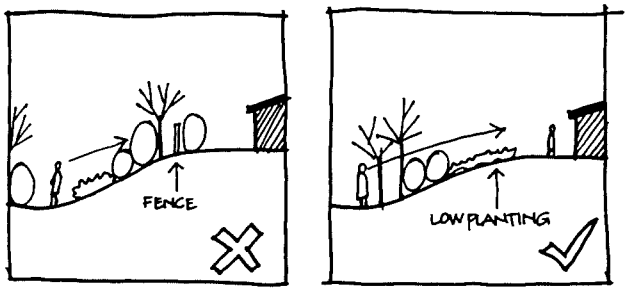


AVOID HIGH, SOLID FENCES AND PLANTING AT BOUNDARY

4.4 Create a high quality visual environment for identified gully reserves that emphasises the natural character and minimises any hard visual edges between public and private land.

- locate structures away from the top of the slope (ie. locate houses, walls or fences away from the slope edge or design in sympathy with the slope - refer to sketch on page 11)

- use planting rather than fences or walls at the boundary between private land and the reserve - refer to Plant List for suitable species

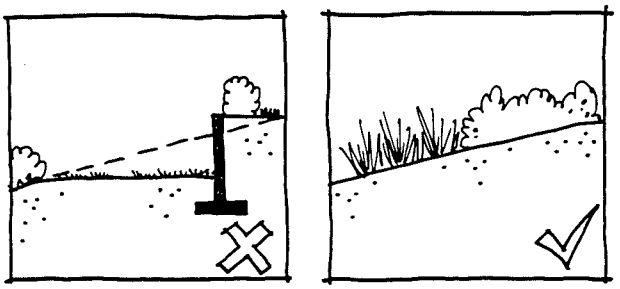


KEEP VIEWS OPEN TO GULLY RESERVES

- avoid retaining walls where possible or if unavoidable :

  - use terracing rather than high, single face walls;

  - ensure walls follow the natural contours of the land rather than angled across a slope



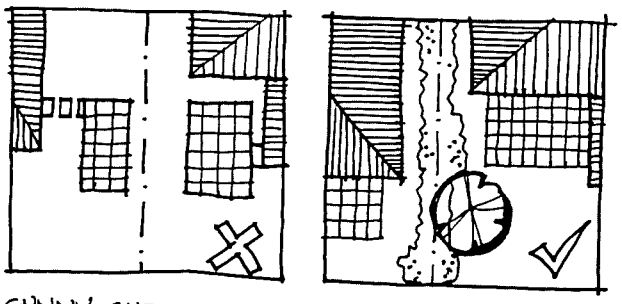
AVOID ALTERING THE NATURAL LANDFORM

NOTE : The construction of retaining walls or terracing of slopes is not permitted on any land identified as "undevelopable" in the Proposed District Plan. Consult with Council planning staff before considering any such works.

4.5 Create a high quality living environment in the immediate surroundings of the house.

- plant low maintenance plants around the house and at the boundary with the reserve to maintain privacy and to define property boundaries with the minimal use of fences and walls - see PLANT LIST

- plan a sunny, sheltered private outdoor space with a direct physical connection to at least one of the main living areas within the house eg. doors opening out to a deck or paved area



SUNNY, SHELTERED, PRIVATE OUTDOOR LIVING SPACE WITH ACCESS DIRECTLY FROM HOUSE

- ensure any stormwater from your property is managed in a way that does not lead to instability problems on your or your neighbours property (refer to 4.1 above and Section One for further details)

5 Aokautere Parklands Area

The Parklands area at Aokautere will be subdivided into larger lots than those in the Aokautere residential area and therefore requires a different design approach. This less intensive subdivision will allow the predominantly rural character to be maintained and some basic principles different to the more intensively developed residential area of Aokautere need to be adopted if it is to retain some rural character.

The essential difference between the Parklands area and the residential area of Aokautere is the balance of landscape elements (vegetation), compared to structural elements (roads, houses and other buildings). The Parklands area is dominated by landscape elements and these are to be encouraged if the area is to retain its rural character.

The Parklands area forms a transition between the more intensive subdivision and development associated with the Aokautere residential area and the less intensive neighbouring rural area. The dominance of landscape elements over built elements in the Parklands area will be important to retain if this transition between the rural and residential areas is to be maintained.

While the Parklands area remains largely unserviced, it will be the responsibility of the lot-owner to provide any effluent and stormwater disposal from within the site. This brings with it the additional responsibility of ensuring soil stability is not adversely affected by any new development.

The main objective of the following guidelines is to maintain the predominantly rural character of the Aokautere Parklands area and to ensure a gradual transition between the rural zone and the more intensively developed residential area of Aokautere. Any new buildings should be sited and designed so they will not detract from the rural character or effect the soil stability of the area.

A framework of vegetation using both native and exotic plants should be established between houses to connect with the gully system - whether in private ownership or reserve. This framework planting should provide a screen between houses on each lot and between houses and the street.

Guidelines

5.1 House Siting and Design

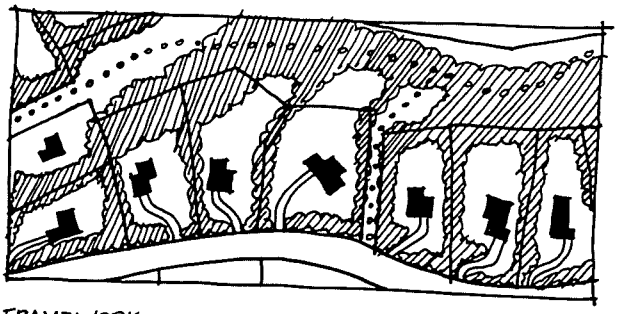
- use planting to form a screen and "green" framework between neighbouring properties and the road - refer to Plant List for guidance on suitable species

- site the house back from the road edge, or any prominent locations such as escarpments or gully slopes

- design the house to fit into the surrounding landform avoiding earthworks where possible (refer section 3.1 for further guidance)

- do not dispose of any stormwater or sewage in proximity to valley side slopes or escarpments

NOTE : In considering the siting and installation of effluent disposal systems, seek professional advice and gain Council approvals. Any uncontrolled discharge onto or near side slopes could lead to slope instability.



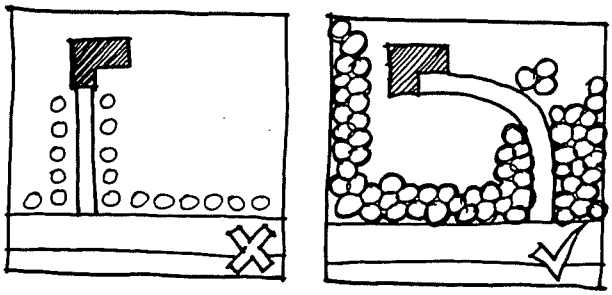
FRAMEWORK PLANTING TO CONNECT INTO GULLIES & TO SCREEN HOUSES & THE STREET

5.2 Landscape Treatment

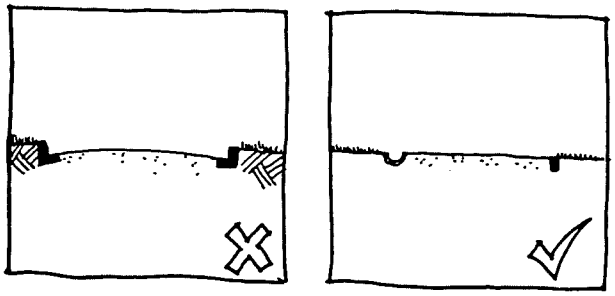
- ensure planting dominates the view from the road by using species consistent with neighbouring properties to obscure any buildings or driveways

- construct driveways to curve away from the road and use planting to screen any buildings from the road

- construct driveways using an asphalt or gravel surface with lined drainage channels or timber at sides flush with the surrounding ground - avoid the use of any raised kerb and channel edges



CURVE DRIVEWAY AWAY FROM ROAD, DENSE FRAMEWORK PLANTING TO SCREEN HOUSE FROM ROAD & NEIGHBOURS

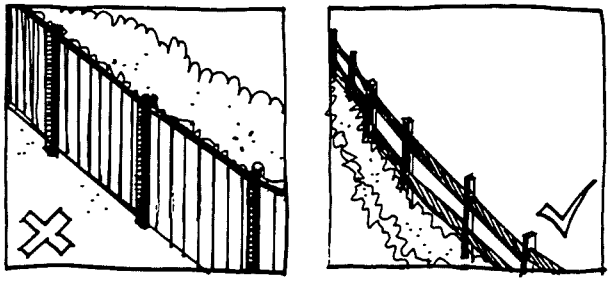


DRIVEWAY EDGES & DRAINAGE CHANNELS FLUSH WITH SURROUNDING GROUND LEVELS

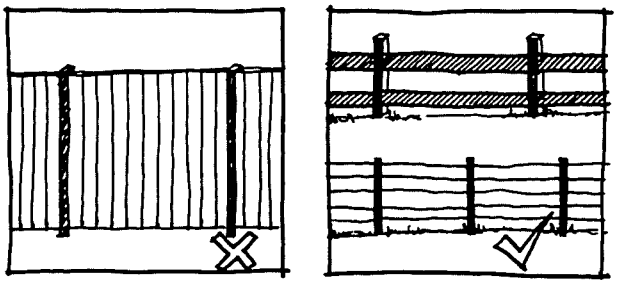
- plant gullies using native species (see Plant List - Parklands framework planting) to act as ecological 'corridors' and form a screen between properties and the road

- avoid constructing high, solid fences at the road frontage - if fences are required, use post and wire or post and rail fences in keeping with the predominantly rural character of the area

- avoid extending any house details such as brick/concrete walls or light fittings out to the road frontage (this is the reverse design principle for the more urban situation)



USE LOW PLANTS AND LOW FENCES AT GULLY RESERVE BOUNDARIES



USE LOW POST & RAIL OR POST & WIRE FENCES

Plant List

Aokautere Residential Area and Parklands Area

The plants in the following list have been selected for their hardiness to drought and winds and for their soil stabilising properties. Most of the plants listed for the reserve and gully area are New Zealand native species while those suggested for street trees and private properties include many non-native ornamental species.

Many more plants could be included - check with your local plant nursery for plants suitable for Aokautere soils and climate.

Street Trees

The broad objective when planting street trees is to create a distinct identity for each street and providing interest and scale. A hierarchy of streets can be established by planting large trees in wide, arterial roads in the berms at either side of the street or in a central median strip where provided. Smaller trees could be established in small local streets and cul-de-sacs to provide local character and emphasise the road hierarchy.

The following lists a selection of trees suitable for each situation. Those marked with an asterisk (*) are frost tender when young so should be planted with some overhead cover amongst other plants and/or using larger than average (well-grown) plants.

Large Street Trees (over 10m high) :

Acer platanoides	NORWAY MAPLE
Alnus cordata	ITALIAN ALDER
Eucalyptus ficifolia*	RED FLOWERING GUM
Fagus sylvatica	ENGLISH BEECH
Magnolia grandiflora	EVERGREEN MAGNOLIA
Metrosideros excelsa*	POHUTUKAWA
Platanus acerifloia	LONDON PLANE
Platanus orientalis	ORIENTAL PLANE
Tilia x europaea	LIME

Medium Street Trees (up to 10m high) :

Alnus glutinosa	BLACK ALDER
Eucalyptus sideroxylon 'rosea'	PINK FLOWERING GUM
Fraxinus oxycarpa 'Raywoodii'	CLARET ASH
Gleditsia tricanthos 'inermis'	THORNLESS HONEY LOCUST
Liriodendron tulipifera	TULIP TREE
L. tulipifera 'fastigiatum'	UPRIGHT TULIP TREE
Melia azederach	INDIAN LILAC/BEAD TREE
Ulmus parvifolia	CHINESE ELM

Small Street Trees (up to 5m high) :

Arbutus unedo	IRISH STRAWBERRY TREE
Metrosideros kermadecensis*	KERMADEC POHUTUKAWA
Sophora microphylla	KOWHAI
Sorbus aucuparia	ROWAN

Aokautere gullies and Parklands framework planting

The following plants are suitable for planting in the Aokautere gully areas and as framework planting in the Parklands area. Once established, these planted areas will act as corridors of open space for amenity and conservation (soil and birdlife) purposes. Planting the gullies with these species will emphasise the underlying landform of Aokautere and will help stabilise slopes and take up excess moisture.

In general, views across the gullies should be maintained by planting low species at the top of the slopes and taller species on the lower slopes. Moisture loving species such as flaxes and sedges should be planted as an understorey to the tall trees in the gullies and to take up excess moisture in boggy areas.

Many of the species listed are representative of the species that would have been found growing naturally in the Aokautere area prior to land clearance last century.

LOWER GULLY SLOPE

TREES

Acacia melanoxylon	TASMANIAN BLACKWOOD
Alectyron excelsus	TITOKI
Beilschmiedia tawa	TAWA
Cordyline australis	CABBAGE TREE
Dysoxylum spectabile*	KOHEKOHE
Knightia excelsa	REWAREWA
Plagianthus regius	RIBBONWOOD
Podocarpus totara	TOTARA

GRASSES AND FLAX

Carex flagellifera	SEDGE
Chionochloa conspicua	GREEN TUSSOCK
Chionochloa rubra	RED TUSSOCK
Cortaderia toetoe	TOETOE
Dianella intermedia	NZ BLUEBERRY
Phormium tenax	NZ FLAX
Phormium cookianum	MOUNTAIN FLAX

MID SLOPE (in Aokautere gullies and framework planting in the Parklands area)

MEDIUM TREES - predominant species

Acacia longifolia	LONG-LEAVED WATTLE
Brachyglottis repanda	RANGIORA
Kunzea ericoides	KANUKA
Melicytus ramiflorus	MAHOE
Pittosporum tenuifolium	KOHUHU
Pseudopananx arboreum	NZ FIVE FINGER

to be interspersed amongst predominant species

Carmichealia odorata	SCENTED BROOM
Coprosma lucida	KARANGU
Coprosma repens	TAUPATA
Coprosma robusta	KARAMU
Cordyline australis	NZ CABBAGE TREE
Corokia cotoneaster	COROKIA
Corynocarpus laevigatis	KARAKA
Dodonea viscosa	AKEAKE
Griselinea littoralis	BROADLEAF
Hebe stricta	KOROMIKO
Leptospermum scoparium	MANUKA
Macropiper excelsum	KAWAKAWA
Myoporum laetum	NGAIO
Olearia paniculata	AKIRAHO
Pittosporum eugenioides	LEMONWOOD
Pittosporum colensoi	RAUTAWHIRI
Pseudopanax lessonii	FIVE-FINGER
Sophora microphylla	NZ KOWHAI

UNDERSTOREY PLANTS (to be mass-planted in groups to prevent erosion of exposed soils in the gullies and to take up excess moisture)

Carex secta	PUKIO
Chionochloa conspicua	GREEN TUSSOCK
Coprosma acerosa	SAND DUNE COPROSMA
Coprosma propinqua	MINGIMINGI
Cortaderia richardii	SOUTH ISLAND TOETOE
Cortaderia toetoe	NORTH ISLAND TOETOE
Dianella intermedia	NZ BLUEBERRY
Phormium cookianum	MOUNTAIN FLAX, WHARARIKI
Phormium tenax	NZ FLAX, HARAKEKE

UPPER SLOPES

The purpose of the following plants is to ensure there are no hard, visually distinct edges between the upper and lower slopes. This will be achieved with the use of planting to form any required boundary definitions and the minimal use of structures (walls or fences). Planting will be low to ensure views across the gully to the other side.

SHRUBS

Corokia cotoneaster	COROKIA
Coprosma propinqua	MINIGMINGI
Hebe townsonii	
Hebe 'inspiration'	
Hebe odora	BOXWOOD
Hebe 'James Stirling'	
Hebe speciosa	NAPUKA

GRASSES / FLAX

Astelia chathamica	CHATHAM IS. ASTELIA
Chionochloa flavicans	SNOW TUSSOCK
Cortaderia richardii	SOUTH ISLAND TOETOE
Carex flagellifera	SEDGE
Carex comans	BLUE/GREEN SEDGE
Carex testacea	ORANGE SEDGE
Libertia ixioides	NZ IRIS
Oryzopsis lessoniana	BAMBOO GRASS
Phormium cookianum	MOUNTAIN FLAX

PRIVATE PROPERTY

(See also list for Upper Slopes above)

Any of the plants in the previous lists can be included in the home garden where there is space. The following lists plants that are predominantly exotics (non-native). They have been selected for their drought tolerance and ornamental qualities.

LOW ORNAMENTAL SHRUBS (from 0.5 to 1.5m high)

Agapanthus orientalis	AGAPANTHUS
Ceanothus 'Yankee Point'	CALIFORNIAN LILAC
Choisya ternata	MEXICAN ORANGE BLOSSOM
Cistus lusitanicus	ROCK ROSE
Cistus 'Silver Pink'	
Convolvulus cneorum	
Convolvulus mauritanicus	
Cotoneaster conspicuus	
Erica carnea	HEATH
Euryops pectinatus	
Geranium (VARIOUS SPECIES)	
Grevillea 'Robyn Gordon'	
Lavendula (VARIOUS SPECIES)	LAVENDER
Phormium 'Emerald Green'	DWARF GREEN NZ FLAX

Rosmarinus 'Blue Lagoon'	
Senecio monroi	
Viburnum davidii	DAVID'S VIBURNUM

GROUNDCOVERS

(To be mass-planted in groups for full ground coverage to prevent erosion and dissipate surface water where soils are exposed)

Agapanthus orientalis	AGAPANTHUS
Arthropodium cirrhatum*	CAPE REINGA LILY
Coprosma acerosa	SAND DUNE COPROSMA
Coprosma x kirkii	
Cotoneaster horizontalis	
Dimorphotheca (VARIOUS SPECIES)	AFRICAN DAISY
Felicia amelloides	
Grevillea 'Bronze Rambler'	
Lithospermum diffusum	
Pimelia prostrata	NZ DAPHNE
Rosmarinus lavandulaceus	PROSTRATE ROSEMARY

LARGE SHRUBS (1.5 - 3m high)

Chaenomeles speciosa	FLOWERING QUINCE
Cotinus coggygria	SMOKE BUSH
Magnolia stellata	STAR MAGNOLIA
Viburnum tinus	
Viburnum japonica	

TREES (specimen/shade)

Sophora microphylla	KOWHAI
Betula pendula	SILVER BIRCH
Cornus florida	AMERICAN DOGWOOD
Gleditsia tricanthos inermis	THORNLESS HONEY LOCUST
Malus 'Jack Hurnm' (& others)	CRAB APPLE
Melia azedarach	BEAD TREE/INDIAN LILAC
Prunus serrulata 'Kanzan'	FLOWERING CHERRY

1 Introduction

1.1 Role of this document

This report has been commissioned to provide a basis for reviewing of the planning provisions for the Moonshine Valley area, to define a more robust and coherent development and urban design framework for the valley.

In order to assess the capacity the first task is to determine an overall set of Landscape values that are associated with the valley. This will help place the valley into the context of Palmerston North and the area in general.

The second element of the report aims to determine the sensitivity of different parts of the valley to development and change. The aim here is to determine the capacity to absorb growth, to determine the level of a ‘tipping point’ whereby irrevocable change would occur that would diminish the character of the valley.

1.2 Background to the report

Moonshine valley is a distinctive residential area within Palmerston North. It has in the past come under development pressure and there is an acknowledgement that this development pressure is likely to increase in the near future. The visual characteristic of the valley is an important aspect of the ‘quality’ of the valley.

The residents and many other people think it is “unique” to the town and region due, in part, to the planning regulation that limited plot size to a minimum of 1.5ha, whilst this is undoubtedly a factor the planning legislation alone has not produced the valley we see today, it is in no small part a direct result of the endeavours and commitments of the residents to site development, planting etc.

Whilst there is potential to protect the character of the valley through planning regulations it will come under pressure from the desire of its residents (current and future) to maintain the status quo. The future character and ‘uniqueness’ of the valley is inevitably dependant upon the strength of feeling and unity of the residents.

1 Introduction

1.3 Report Structure

Part 2 Description of the Valley

- Setting the valley into the Palmerston North context.
- Historical development of the valley.
- Assessment of the city wide planning legislation and the relevance of it to Moonshine Valley.
- Definition of the identity of the valley, its sense of place.
- Assessment of the recent subdivision application for 7 Whisky Way.

Part 3 Definition of the Valley landscape

- Description of the multiple, complex landscape components that define the valley; including topography, hydrology, ecology,
  vegetation and heritage.
- Identification of 'sensitivity level' to help design a structural framework to guide development.
- Landscape analysis. Both general analysis and site specific.
- Identification of representative viewpoints and descriptive analysis to determine the 'character' of the valley.
- Identification and summation of the key features to define the Landscape character of the valley.

Part 4 Determination of the Landscape Absorption capacity

- Loss of vegetation.
- Adverse effects of boundary treatments.
- Adverse effects of earthworks or roads.
- Adverse effects on ecological and natural landscape areas.
- Amenity values of the valley.

Part 5 Analysis of the Landscape Absorption capacity

- Score of 1 or 2 Low Absorption capacity
- Score of 3 to 5 Medium to High absorption Capacity

Part 6 City design guides 'Comparative studies".

Part 7 Conclusions and recommendations

Part 8 Individual property site visit checklist

2 Description

2.1 Setting the valley in context

2.1.1 General information

Moonshine Valley is situated on the Southwest outskirts of the town located off Aokautere Drive, State Highway 57, which links Palmerston North to Ashhurst the Manawatu Gorge and routes across the ranges.

The area is currently zoned Rural in the District plan with a Rural Residential overlay, this ensures that subdivision is a controlled activity with the minimum lot size being 1.5ha.

The residential development of the valley, however, has resulted in numerous (nearly half) of the current lots not adhering to the minimum lot size condition. Although some of this anomaly is a result of historical subdivision and some of the undersize lots are seen as not belonging within the valley boundaries.

The scale of the residential properties, the variety of vegetation cover, the topography, the presence of reserves within the valley and the commitment of the residents to establish and protect the environment make the character of the valley stand proud from the ‘normal’ residential subdivision character of the region and the town in general.

2.1.2 Palmerston North Landscape Study 2008

The area has been assessed in the 2008 Palmerston North landscape Study that was undertaken by Opus International Consultants Ltd and in their report is known as Unit 9, the findings of that report are included within this section.

Moonshine valley is a relatively incised valley that sits within the broader Northern Elevated Flats Unit. The valley broadens out into three branches further upslope. The valley sits within a pattern of multiple similar land parcels, which alternate between residentially developed and pasture land. Areas that have remained undeveloped occupy areas where the contours and land patterns have made it difficult to develop for residential purposes. A parallel and contrasting development to Moonshine Valley can be seen in Polson hill, which offers an assessment tool to characterize the character of the valley, and contrast this with other residential development in the area and town.

Access to the valley is secured from the state highway 57 known as Aokautere Drive; a local access road serves the properties in the valley and provides access to the council owned reserves within the valley. The road is narrow with soft verges and has been planted by natural processes and the endeavour’s of the residents to provide a pleasant low spec approach to the valley, which, while being far from rural in characteristic offers a pleasing approach to the houses and provides a pleasant tranquil context to the residential lots. A comparison with the road here and the equivalent in Polson Hill helps provide an understanding of the character of the area.

2 Description

2.2 Historical Development of the Valley

2.2.1 Natural history

The natural development of the valley has been linked to the flow of the Manawatu River and the Tararua ranges. The valley is replicated within the area and most of these spaces which are unsuitable for residential development have been adopted as public walkways.

Following European settlement the native bush was cleared and the lots were sold for farming settlements.

2.2.2 Human influence

Initial European colonization of the region was focused around Foxton, Levin and Shannon, however following attacks from Ngatitoa tribe the Rangitane took refuge inland in the bush.

Between 1840 and 1860 trade along the Manawatu river encouraged inland settlement.

In 1864 250,000 acres of land was purchased by the government, on this land the town of Palmerston, later with the prefix ‘North’ was established.

Development of the infrastructure in the area was rapid with the first road through the gorge completed in 1872 and the wellington to Longburn railway completed in 1886 and extended to the Gorge in 1891.

The township of Fitzherbert was established under a proclamation made on 22 June 1867, it had an area of 40000 acres stretching from Linton to the Gorge, up to the crest of the ranges from the river. Shortly after this date at an auction in Wellington, rural and suburban sections in the township were sold. The area, which today is Moonshine Valley was one such section and is 193 acres. It was not sold in 1876 but there is record of it being sold to private owners on the 16th January 1883.
In 1964 the township was amalgamated in to the Palmerston North area, with the aim of expansion for “close urban development”

2 Description

2.2.3 Residential subdivision history of the valley

Richard and Nancy Parker developed the Moonshine Valley residential subdivision that is evident today in the 1980's. The name Moonshine Valley came from Mr. Parker at the time of subdivision.

"The valley remained largely treeless, apart from a few remnants of native bush, while it was grazed by sheep and cattle over the decades, until it was subdivided into 'lifestyle' properties from 1988" (p70 A history of Moonshine Valley P.J. Collins 2006)

The subdivision of the valley proceeded in three phases with the sales from the first phase funding the subsequent phases. The initial owners soon began the process of removing gorse and other invasive species and replacing with native trees and shrubs.

A developer covenant was placed on the valley to control the character of development; this covenant is due to expire in February 2011.

2.2.4 The reserves within the valley

The inclusion of two reserves within the valley confines offers unparalleled opportunities for the effective establishment of stable and viable communities of native flora and fauna. The reserves whilst partially accessible are relatively low key and offer minimal appeal for residents of the city, consequently the tranquility of the valley is preserved with minimal increases in vehicle movements within the valley due to visits to the reserves.

Moonshine Valley reserve straddles either side of the valley road and has some resident built walkways within the reserve for public access. The extent of the 'reserve' extends beyond the confines of Moonshine Valley and into the neighbouring pastureland. Due to the contours associated with this gully the land is not farmed and therefore adds significantly to the viability of the habitat available.

In regards the council reserve, the council description of the reserve states:

'It is a large reserve cut into two sections by Moonshine Valley Road. Most of the reserve is covered in native planting and there is also a stream that runs through it. Manga O Tane Walkway goes through this reserve".

2 Description

The area of the reserve is 2.3772Ha across both sides of the road. In 2001 a walkway was proposed to link Moonshine Valley Reserve with Manga O Tane reserve and Tutukiwi Reserve. However this has to date not been realized, but is still a stated aim of the council parks and reserves strategy.

Tutukiwi reserve is located at the end of Moonshine Valley Road, it has a link to Polson Hill Drive, however, this is not accessible for visitors. The area of reserve is 14.2274Ha. There are restrictive covenants imposed on the reserve and fencing covenants.

The council purchased the reserve for its high conservation and visual amenity value. The reserve is named after the Maori name for a rare Orchid that grows in the valley. A landscape concept was prepared in 1995 by council Landscape Architects for the reserve. Prior to the current name, the reserve was known as Moonshine Valley Wetland.

The reserve has two private rights-of-way access points, one is from Whisky Way and the other is from Moonshine Valley Road. The Mangaotane stream runs through the reserve and two ponds have been formed. Most of the reserve is covered in native forest with species such as Totara, Rimu and Kahikatea
A wetland management strategy was prepared for the reserve in 1996 and the findings of this are summarized below.

The residents of the valley have planted significant quantities of native plants within the reserve in order to increase biodiversity.

A Wetland Strategy for the Tutukiwi reserve dated from the time of the subdivision of the valley into rural residential properties (1996). Comments “that it is recognized that the residents are a “well educated and environmentally aware community”.

The reserve was established under the 1977 Reserves Act with the primary purpose being for nature-based recreation. The report calls for the creation of a designated gate as an entranceway, the establishment of a formal accessible footpath and access for dogs, bikes and horses to be prohibited.

In regards environmental management the report calls for organized pest control strategy and coordinated weed control.

Planting of the ponds with native vegetation was recommended along with bank stabilization through planting and natural retainers.

Community consultation with the residents was undertaken during the course of preparing the report to establish strategies for establishing and enhancing ecosystems and habitat creation. It is important to note that even at this early stage in the development of a ‘community’ that the importance of natural habitats was recognized and seen as a priority.

2 Description

2.3 Assessment of the city wide planning legislation and relation to the valley.

2.3.1 Statutory Context, district plan PNCC

The district plan is the primary tool for directing the planning policy of the town and within this document the area known as Moonshine valley is located within the Rural Zone. All subdivisions within the Palmerston North City District require resource consent

Within the Moonshine Valley a minimum lot area of 1.5 hectares is required. This shall include 5000m2 of contiguous land, which does not exceed 11 degrees in slope, for the purpose of a building platform

City wide goals- the Council 10 year (long term community plan) adopted in 2009 initiates policy leading towards the creation of a city where it is easy to live and work, with lifestyle, economic and leisure opportunities. A city that is striving towards a sustainable model and a city that attracts, fosters and retains businesses. Within this context it is important to place Moonshine Valley in the alternative lifestyle it allows and the impact it can have on establishing an attractive city and a sustainable approach to lifestyle.

Section 9 Rural Zone, Objectives and Policies

“The land in the rural zone is varied ranging from flat areas on both sides of the Manawatu River, through to the rolling land at the foothills of the Tararuas, to the actual ranges themselves.” (PNCC District plan 9-3).

The rural zone is the subject to numerous pressures including the effects of Urban Growth and the effect of the loss of productive land due to intrusion of urban development and these are important considerations dealt with by the District Plan.

Objective 1 is of relevance to the valley and aims to protect rural land from adverse effects of unnecessary and unplanned urban expansion

The valley is self contained in form and any development within could not really be described as uncontrolled, however as some submitters raised; there is enough space within the town to ‘develop’ without compromising the fundamental rules of the valley in regards the minimum lot size.

Of particular relevance here is policy 1.2 where there is a requirement to fully utilize the existing urban land before the rural land is released for urban purposes. This policy should deal with subdivision applications but would not prevent development of the existing lots that are as yet undeveloped.

2 Description

Objective 2 aims to encourage effective and efficient use and development of the natural and physical resources of the rural area.

Adverse effects of activities in the rural area are to be avoided, remedied or mitigated, this can include noise, visual and traffic orientated impacts.

Objective 3 aims to enhance the quality and natural character of the rural environment.

Policy 3.2 encourages the adoption of sustainable land use practices.

Policy 3.3 aims to control adverse visual effects on the rural environment of activities that disturb the land surface, introduce buildings, remove and/or process natural material.

Any future development of Moonshine valley, even within the confines of the baseline of 1.5ha minimum lot size could potentially have an adverse effect on the character of the valley and may without due care be in conflict with these policies. The recent subdivision application within the valley would result in the loss of vegetation and the cumulative effect of multiple buildings on a prominent corner site. The loss of vegetation is a homeowners right within the confines of the district plan and this was seen by some submitters as a precedent for development by arguing that the loss of natural resources was minimal, as it had already been diluted. As mentioned at length here, the valley has significant vegetation and in the scale of the valley may not seem significant, however viewed over time and in multiple occurrences can lead to a significant dilution of the character and appeal of the valley.

Performance conditions of permitted activities

Separation distances of dwellings and accessory buildings is a key area of consideration in the rural zone, dwellings are a permitted activity provided they comply with certain performance conditions, including;

1. Site size
2. Separation distances
3. Height
4. Access
5. Numbers of dwellings in relation to lot size

All of these performance conditions can be viewed as of significant importance to the valley and the ability of the individual sites at the micro level and the valley itself at the macro level to absorb and cater effectively to urban intervention and subdivision.

2 Description

Section 7 Subdivision, Objectives and Policies

Section 7 of the district plan deals with proposed subdivision in the Rural Zone and any development needs to adhere to the performance conditions set out under R7.16.1.2 (7.53)

Of particular relevance is item (B) the minimum lot size applicable to rural zone subdivision. The standard requirement being 4ha minimum, however there are exceptions to this rule including moonshine Valley, where the minimum lot size is 1.5Ha and including the requirement for the 5000m2 contiguous land for a building plot and a designated area for effluent disposal. Other areas have a minimum size of 1Ha

Other sections of the district plan of relevance to Moonshine Valley include:

Section 17 Cultural and natural Heritage
Section 20 Transportation objectives and policies

2.3.2 The Resource management Act 1991 Amendment 2010

The Resource Management Act is the primary national planning tool that looks at an effect-based method for determining the acceptability and suitability of resource consent applications. The RMA regulates access to natural and physical resources such as land, air and water, with sustainable management of these resources being the overriding goal. Landscape assessment is an important tool in assessing the ‘effects’ of residential growth and subdivision. The RMA is the guiding force for generating local level legislation as described above with the council district plan.

The act enables local authorities and planning bodies to assess the effect of development on a range of factors including Iwi, built and cultural heritage, ecology, landscape and the presence of local populations.

Section 6 of the RMA relates to the protection of outstanding natural features and landscapes.

Section 7 of the RMA includes the requirement to take due regard towards the maintenance and enhancement of amenity values and the maintenance and enhancement of the quality of the environment.

2 Description

2.4 Review of the subdivision application submitted 2010 for number 7 Whisky Way, Moonshine Valley

Throughout the history of Moonshine valley as a residential subdivision there has been applications submitted for subdivision consent, the most recent of these was received in 2010 regarding 7 Whisky Way which successfully applied for authority to subdivide into two residential lots including the existing dwelling. The application was not well received by the majority of residents and from a Landscape Design point of view had a number of flaws, which ultimately were not deemed sufficient under the legislation of the RMA to prevent this application. The concerns raised were focused around the 'potential' and 'probable' removal of the existing shelterbelt vegetation which would screen any house due to the fact that it would obscure north facing solar gain. The effect of this removal is not significant from a habitat point of view as it was a single species conifer hedge, of poor condition and limited viability, however when viewed from a point of view of visual intrusion from dwelling(s) from the road then the impact is much more significant.

The application contained glaring omissions in regards details of mitigation from a Landscape point of view and in fact relied on preserving the status quo. This policy surely is flawed, with it being an easy assertion to make that the hedge would NOT survive a house build.

Two houses stacked in front of each other with (potentially and probably) minimal vegetation forming a boundary to the road will push the character of this part of the valley away from the portrayed image of the majority of the properties in the valley and move the character towards a more suburban feel. Of course this needs to be tempered by the overall size of the site and the proximity to the reserve, which will preserve the 'rural' theme overall. The key issue is the relationship of dwellings to the road and the stacking effect of multiple houses in such close proximity to the road.

2 Description

2.5 Definition of the identity of the valley, its sense of place

The current context of the valley is of widely spaced, well vegetation residential properties with a mixture of house styles and sizes. In general the visual prominence of the dwellings is far less significant than other residential subdivisions within the area context, for example Polson Hill or the city in general. The topography of the subdivision helps to establish the dwellings into the context of a rural environment due to the sleep inclines unsuitable for development and therefore left open for vegetation cover. Of course having free land that is not developed does not necessarily produce the equivalent of Moonshine Valley, and could have easily been left as pasture or weed filled left over space.
The fundamental difference between this subdivision and other residential areas in the town is three fold:

1. The commitment of the community to establish and maintain an effective ecosystem that allows human habitats to co-exist with effective natural ecosystems. Including planting and replanting of native species and effective invasive weed removal programs.

2. The presence of two council owned reserves that have low usage and low specification in terms of management intervention.

3. The topography of the valley creating a micro-climate that allows effective plant and wildlife establishment.

The landscape character of the valley is augmented by nearby reserves and walkways which offer effective habitats for native species and provide natural corridors which are vital for the effective creation of sustainable wildlife communities affording connections to significant spaces such as the esplanade and the river.

2 Description

2.6 Moonshine valley context: comparison with adjoining residential areas

Further along the Aokautere Drive heading towards Ashhurst is the residential development known as Polson Hill. In contrast to Moonshine Valley the residential subdivisions are situated at the top of a hill, the subdivision is comparable in size and the number of residential lots to moonshine Valley. At the entrance of the subdivision there are some properties which share boundaries to both subdivisions, however, the majority of the two sets of residential lots are separated from each other by a wide stretch of land that is either planted with conifer plantations or is undulating pasture land. The forestry plantation screens both subdivisions from each other and extends largely along the entire length of the ridge. The Tutukiwi reserve forms a partial connection to Polson Hill.
There is limited opportunity to view either subdivision from the other, due to the topography and the vegetation cover; however the hilltop prominence of some of the houses on Polson Hill are very visible from various positions within the context of the area. Once entry to Moonshine Valley has been made this is not the case, where most of Polson hill is hidden from view. Moonshine valley in the context of the area is low key and difficult to discern due to the topography, conspicuous residences and the extensive vegetation cover.

2.7 Urban Walkway context

As urban growth continues the network of steeply sided valley walkways will continue to prove vital remnant habitats for wildlife connectivity and viability and will need to be protected. Residential subdivision inevitably reduces the capacity of the urban environment to accommodate wildlife through the removal of garden habitats and consequently significant numbers of mature trees. The tendency to remove front garden vegetation in favour of low maintenance
gardens and high fencing can also exacerbate the loss of habitat.

R1 Representative viewpoint 1.

The **road** within the Valley defines the character of the area. the road is dominated by the soft verges, the expansive vegetation and the informal boundary treatment of the residential sections and driveways. This adds more to the rural character of the valley than any other feature.

3 Definition

3.1 Introduction

It is impossible to define the character of a landscape ecosystem such as Moonshine Valley without looking in detail at the constituent parts. During the course of writing this report numerous site visits were undertaken within the site and the neighbouring areas to determine the factors that make up the character of the valley. Under general headings the findings are summarized below. Greater detail is found in appendix 1, this looks at the character of each individual site through a standardised site visit checklist and photographic record.

3.1.1 Topography

The landscape study of 2008 identified the area as a relatively incised valley that sits within the broader Northern Elevated Flats unit. It offers a distinct valley landscape of sloping sides and broad valley floor, with gentle rolling bush and pastoral grassland.
The topography of the lower valley and the extensive planting helps contribute to a contained feel for the valley; in contrast, the upper valley has a much more open characteristic.

3.1.2 Hydrology

There is a stream, which the residents know as Moonshine Valley Stream, but is also known as Bryant's creek that meanders through the valley on route to the Manawatu River. The Maori name for the stream was Mangaotane and is recorded on a map dated 1859. Today the stream adds significantly to the character and ecosystem of the valley, it is a prominent feature of the Tutukiwi reserve.

The roadside of the valley is characterized by open drainage channels dealing with storm water dispersal and this is a feature of the valley that connects the urban edge with the rural character of the wider area.

3.1.3 Ecology

The ecology of the valley is highly modified and until the subdivision in the 1980's was pastoral fields. There was remnant vegetation and this has been supplemented by recent planting by the residents and the council/ other bodies in the reserves.
Important habitat for a wide variety of native species and this is supplemented by the proximity to city reserves and walkways.

3 Definition

3.1.4 Vegetation

The last 20+ years has seen a systematic replanting of the valley with native species largely undertaken by the residents but also by other bodies such as the City Council and Department of Conservation. There are still large areas of pasture, largely rough pasture and on the slopes or on sites where there are no houses. There are significant stands of invasive species such as gorse, however the residents are active in their pursuit of controlling and it is being used as a nurse crop for native species.
The reserves contribute significantly to the vegetation character of the valley, the inaccessible nature of much of the reserves adds to the viability of the vegetation as a habitat and resource.
The presence of significant levels of vegetation helps to create a sense of space and soften the residential structures and presence.

3.1.5 Heritage and archaeology

The history of the area that was subsequently named “Moonshine valley” is well researched and written in the book by PJ Collins dated 2006 and this has been quoted in previous sections of this report. The final section of the book addresses the matter of archaeological evidence in the valley of earlier habitation. Largely centered around farming heritage and the pioneering times it provides a tentative link to the past as there is little physical evidence evident today.

3.1.6 Reserves and walkways

A description of the reserves within the valley has been given in section 2.2.4, however it is important to note that the reserves within the valley connect with a significant network of undeveloped corridors in this area of the town and provide a safe network of connected spaces for native flora and fauna to thrive and helps connect the ecosystem of the valley to further afield natural features such as the Manawatu River and the Esplanade.

3 Definition

3.2 Landscape characterisation

3.2.1 Site by site summation (section 8)

During the course of research for this report multiple site visits were undertaken to assess on a site-by-site basis the character and quality of the valley's residential properties. Please refer to the field note sheet for each property within the appendix (section 8) to this report.
A summary of the survey is included in the supplementary document, and aids the understanding of the selection of representative viewpoints. The field survey provided information relating to the
following categories:

- A brief description of the landscape character.
- Physical description of the site and the conditions of the survey
- A checklist of Landscape elements and characteristics; for example landform, land-use, land cover, watercourse, easements, services.
- A checklist of residential elements and characteristics; for example dwelling form, style, size, prominence to the road, boundary treatment and sense of urbanity or ruralness expressed through design.
- A checklist of vegetation cover and physical characteristics of the site

3.2.2 The character of the road as a contributing factor to the valley

There is a single access road to the valley, supplemented by a secondary private road that serves a minority of properties. The main road serves the majority of the properties and the two reserves. The road is identified as a key feature in two representative viewpoints, which are discussed in section 3.3. this section deals with the general characteristics of the road and the relationship of the dwellings to the road.

The road serves a significant number of properties and the two reserves yet has a distinctly low specification feel with soft verges, open drainage, undulating form and significant variation in vegetation cover ranging from mown grass, to meadow grass to native and exotic shrub and tree species.

In addition to the often widely spaced residential properties there are numerous pasture fields providing a backdrop to the road, this is particularly evident along the secondary private road. The predominant treatment of the boundaries to these properties is of post and wire rural agricultural fencing, which provides an attractive rural character to the valley.

3 Definition

3.2.3 The roadside presence of the residential properties

Many residents have addressed the road in a positive manner and this is a factor that sets the valley aside from the majority of residential areas in Palmerston North.

Other residential areas such as Kelvin Grove show a preference for high fencing, large expanses of asphalt or concrete, prominent garages and reliance upon sanitised soft landscaping of mown grass and shrub/ tree species enclosed within a sea of bark mulch nuggets.

Moonshine valley residents in contrast, generally address the street presence of their houses in a much more informal manner. The road boundary as mentioned above is often informally planted or left unmown as a natural habitat, where it is mown it is often with a longer time between mows and a higher cut. The soft edges of the road increases the sense of informality and this extends to the property boundary, often through the use of field fencing and earth bund mounding.

There is often a reduced reliance upon Asphalt and/ or concrete for driveways, with loose gravel being an alternative. The access drives are often of minimal width to reduce the visual dominance.

The residences as is traditionally the New Zealand vernacular are of varied design and size, although the majority are large, sometimes double storey and do offer a visual intrusion. Some however are virtually obscured from the road by vegetation and earthworks.

Mown grass is a feature but less prominently than other areas of the town, and is often partially or fully obscured by the other design aspects mentioned in this section.

In many cases the visual intrusion of the dwelling from the road is softened by the presence of native or plantation vegetation in the background to the houses, this is a feature that a series of large sections can offer and would be dramatically restricted were multiple subdivisions to occur.

3 Definition

3.2.4 Vegetation cover of the residential properties

The area of land parcels in the valley varies considerably and many are below the 1.5ha minimum. Despite this anomaly the sections are generally of sufficient size to sustain both residential landscape cover and a more ‘natural’ mix of native shrubs, plantation forestry and wild bush.

The distance between dwellings in the valley varies within the range of 50metres to 112metres with the majority being over 75metres. Such distances allow opportunity for vegetation to be established. The residents have taken this opportunity to plant a range of species and this has enabled the residential properties to blend within the valley without dominating the valley in a way that other residential areas with smaller plot sizes cannot.

The vegetation cover of the properties is also increased by the extensive planting on areas of sections unsuitable for building; again this is an advantage of the topography and the large plot sizes. However it is the resident’s choice to initially replant and today preserve the native bush on these sections. It is their prerogative and if it was their desire then these areas could easily be left as pasture or ignored spaces dominated with weed/ invasive species. It is a credit to the resident’s endeavours that these areas are so successful. Likewise the area benefits from the presence of the council owned reserves which add to the mix of vibrancy and habitat spaces.

3.2.5 Visitor Perception: through colour, scale and texture

The valley has a low visual presence from Aokautere Drive, with the church being the dominant feature. The dominance of vegetation reduces the visual impact of the development.
The character of the road has been described earlier in this report and as such stands apart from the standard type of roads present within the city. The road provides a pleasant foreground and focal point to the residential subdivisions and would provide a positive impression on a visitor to the valley.

3.3 Site visit checklist

Section 8 contains a detailed assessment of each of the properties within the valley along the two roads. Whisky Way properties with the exception of number 7 have also been assessed.
The following items have been used to assess the individual sections in order to quantify in a standard form the characteristics evident and relevant to the valley:

- Size and ownership status of the section
- Topography
- Structures present within the site
- Site boundary treatment
- Vegetation cover
- Landscape Pattern: scale, colour, enclosure, visual dynamic, tranquility
- Street presence(a 1-5 grading system was used with 1 being low presence 5 being high)
- Capacity to absorb development (a 1-5 grading system was used with 1 being low capacity 5 being high)
- Photographic record of key features
- Unique features of the site and characteristics are recorded within the checklist in note form

R2 Representative viewpoint 2.

The presence of two large city council owned **Reserves** significantly helps to enhance and preserve the semi-rural characteristics of the valley and would help alleviate some of the negative visual impacts that potential subdivision would deliver. Though not all!

4 Absorption Capacity

4 Determination of Landscape Absorption Capability

With reference to the recent application for a subdivision of number 7 Whisky Way a number of submissions were raised which addressed the potential and perceived ability of the valley to absorb future development and some of the points raised are summarized below:

Visual and Amenity:
- loss of peace and tranquility
- loss of flora and fauna
- loss of aesthetic value that is inherent with large sections
- contrary to the character of the area
- Eroding of the valley's rural landscape and uniqueness

Other matters of relevance raised by submitters included:
- lack of 'urban' trappings such as streetlights, pavements
- Increased traffic flow
- Cumulative loss of openness, rural character, outlook and privacy.

4.1 Boundary Fencing and boundary planting

The character of the valley is significantly enhanced by the response of most residents to the boundary treatments of their properties. With few exceptions the boundaries are of low visual impact and rural in character. Often the fences are diminished or even hidden behind vegetation, which is predominantly native and substantial enough to partially or fully screen the dwellings from the road.

Urban 'stonewalls or timber palisade fencing is a rare exception and is often hidden from the road or at the extremities of the valley. Monoculture conifer hedging that is a common field boundary feature of agriculture in New Zealand is not significantly represented in Moonshine Valley with just a couple of examples.

The over-riding treatment is variety and native species which highlights the strength of desire from the residents to create a haven for wildlife.

4.2 Loss of vegetation cover

An obvious consequence of residential subdivision is the loss of existing vegetation. Few sites within the valley could be developed without losing some vegetation cover. The size of the sections and the amount of vegetation cover present on most of the sites suggests that to subdivide one property into two would have little visual impact on the overall valley however the cumulative effect of multiple subdivisions could have a significant impact on the valley.

The presence of open spaces within the individual sections offers opportunities for creative insertion of dwellings whilst preserving the existing vegetation, particularly if there is significant vegetation that adds to the character of the valley and is more significant to the valley as a whole than just the individual property.

4 Absorption Capacity

4.3 Adverse effects created by boundary planting and fencing

The majority of the residential properties within the valley utilize a varied palette of native vegetation to provide a separation between the residence and the road. In most cases the dwelling is set well back from the road; however where this is not the case the dominance of exotic vegetation and ‘manicured’ lawns shifts the character emphasis from rural to suburban.
It is a likely consequence of subdivision that the dwellings would become visually closer in relationship to the road and consequently it is likely that there would be a directly attributable increase in the quantity of exotic species and suburban characteristics.
The close knit community present within the valley has probably led to many residents refraining from erecting huge and monotonous timber close boarded fencing that is such a feature of many other residential areas of the city.

4.4 Adverse effects created by Earthworks and roads

In a similar vein to the issues discussed in section 4.3, residential subdivision within the valley will have a significant impact on the current contours of the sections and the character of the roads present in the valley. The character of the road is considered in representative viewpoints 1 and 3 In summary the road represents a fluid, dynamic visual draw card for the area that preserves a rural characteristic through informal and substantial vegetation combined with soft edges and informal drainage.
In regards contours of the sites, there are few (if any) sections I the valley that do not gain in character from presence of varied contours. As most of the level changes have significant vegetation associated with them any disruption or loss of features would have a significant visual effect.
The road is often separated from the dwelling by informal earth mounding with planting associated, this often leads to informal driveways accessing the properties from the road. As subdivision occurs there could be pressure to remove these mounds and replace with fencing and/ or mown grass/ exotic species.

4 Absorption Capacity

4.6 Amenity

The amenity level of the valley as a whole is rural in feel. The majority of the residents have bought into the idea of creating a vibrant wildlife habitat with secluded residences set within large sections. The varied topography and extensive vegetation enhances the feel and characteristic of the subdivision.

R3 Representative viewpoint 3.

In conjunction with the rural image presented by the road with its soft outlook, the residential properties address the road in a city unique way that is predominantly soft, informal of intimate scale and decidedly lacking in the normal manicured feel of other parts of the city. Subdivision would inevitalby change this density of dwelling clusters.

5 Absorption Analysis

5 Analysis of Landscape Absorption Capacity score

Each of the properties within Moonshine Valley has been assessed against a variety of set parameters, the findings of which are presented in Section 8 in a site visit checklist; the aim of the assessment has been to quantify a figure based upon the perceived ability of the property to absorb development. This assessment has been based purely from a visual impact point of view. A 1 to 5 scale has been used with 1 representing a low ability to absorb change and 5 being a high ability. Due to the nature and complexity of the sites, some of the properties have been given multiple classifications, for example 1 and 2 or 2 and 3. An explanation of the representative figure is given within the checklist for each property.

5.1 Score of 1-2: Low development capacity

The individual lot assessment sheets recorded a total of 16 properties that had either a 1 or 2 score for the capacity to absorb change, being a low ability. A further four sections had a dual score of 1 and 2, 2 and 3 or 1 and 3. this dual scoring represents the complexities of the individual sections, despite this complexity there is some commonalities within the sections that has helped determine the low score, these are detailed and explained below:

1. Section location

The majority of the sections where there is a low capacity to absorb change are located in visually prominent positions within the valley, for example the first few sections from the valley entrance, close to the main road or occupying prominent raised levels of the valley sides.

2. Section size

Section size is not a direct factor in giving a low score for absorption capacity but it is a significant factor. Despite the planning legislation, not all of the sections within the valley adhere to the 1.5ha minimum size rule and it is no surprise that many of the low scoring sections are smaller than this figure. One notable exception is property number 54, which is 1.68ha, however due to the contours and the relatively limited street frontage of this section it was deemed as visually unsuitable to easily absorb development.

3. Previous subdivision

Some of the sections (numbers 17, 19, 21) have previously been subdivided and this has rendered further subdivision visually unacceptable within the context of the valley, hence the low scores.

4. Special heritage features

For example the structure in property number 17.

5. Topography of the sections

Many of the properties that were given a low development capacity score during the on-site appraisal contained significant contour level changes within the sections; this was often associated with the valley sides or the stream flow throughout the valley. Whilst contours do not necessary prevent development and may infact strike an opportunity with potential sub dividers it is a fair assertion to suggest that in Palmerston North where land pressures are relatively low, other “easier’ to develop sections would be utilized prior to the exploitation of these contoured sections.

5 Absorption Analysis

5.2 Score of 3-5 medium to high development capacity

1. Section Location

Six of the nine properties that were given a high development capacity score are rear sections or remote from the roads or neighbours. This seclusion is often as a result of plot size, vegetation or contour profile of the sites. It is based on the current situation and does not take into account the potential actions of residents of neighbouring properties removing vegetation; however it has attempted to ascertain the impact of the current owners removing vegetation from within their site.

2. Section size

Eight of the nine sections are larger than the permitted minimum lot size of 1.5ha, with the exception of number 30 which is 1.22ha; however this section is remote from the road as it is a rear section and on the valley slope.

3. Significant flat space

An important factor used to determine absorption capacity has been the presence of significant flat space often currently in grass or meadow that could be used to accommodate a dwelling. Often this space is in close proximity to the current dwelling and consequently would place a second dwelling far too close to the existing dwelling (too close for the comfort of the current owners or too close to prevent visual stacking of the properties which would have significant visual impact). No account has been made of the role of these spaces for drainage or storm water or other service requirements.

4. Vegetation screening to the road or neighbouring properties

Many of the properties within the valley have significant roadside vegetation that currently softens the visual impact of the existing properties. Some of these properties have significant space behind this screen that is currently the foreground (and garden) to the property. The insertion of a second dwelling into these spaces would (potentially) result in the (expected) loss of existing vegetation, particularly where the relationship of this space is orientated towards the north.

The factors mentioned here have been used to determine the capacity to absorb development and consequently the orientation and scale of green space has determined the capacity to absorb. It is important to place this factor into the context of other factors such as overall vegetation cover and potential proximity of existing and potential dwelling

5 Absorption Analysis

5. Shared neighbour with the reserve, the impact of the visual screen from the reserve

The presence of the reserves within the valley helps to anchor the dwellings into a well vegetated framework that has been enhanced by the activities of the property owners who have planted their properties over the past 20 years.

Due to the development restricted nature of the reserves it is unlikely that the vegetation would be removed on any significant scale and therefore it is a likely assumption that this vegetation will continue to provide a frame or backdrop to current and potential residential development.

Similarly the reserves could be used to soften the visual effect of a subdivision within one property to another and can consequently affect the absorption capacity score given for each section. However from a planning point of view it appears wrong that mitigation for development should be provided by an independent property.

5 Absorption Analysis

5.3 Special features that determined development capacity

The factors mentioned in the two previous sections have helped determine the capacity of a section to absorb development from a purely visual point of view. It is important to note that some of the properties that have a high capacity to absorb would be inevitably hindered from development by the fact that they are rear sections that are currently accessed from a shared driveway ‘through’ another property, for example number 51 is a large rear section with significant space to accommodate a second dwelling. It is accessed via a drive that cuts through number 57. Consequently there are planning and traffic management issues that would need to be assessed to determine the suitability of development within this section.

Any development here would in all probability result in the upgrading of the access way and this upgrading could provide visual intrusion that would diminish from the character of the valley.

R4 Representative viewpoint 4.

There are significant open spaces within the residential properties that (from purely a visual amenity perspective) could accommodate residential subdivision, however this could result in loss of privacy, vegetation removal un-suitable boundary treatments and dwelling stacking. All undermining the character of the valley.

6 Design Guides comparison study

6. City design guides comparative study

The Aokautere design guide published by Palmerston North City Council in 1996 addressed the issue of effective, creative and sympathetic design for the residential growth area of the city in the 1990's; Aokautere. Some of the issues identified and discussed in that document and some of the guidelines produced have relevance in the Moonshine Valley.

Prior to the urban growth in Aokautere the area was a rural pastoral landscape, similar to the historic nature of Moonshine Valley. In Aokautere the intensity of development in the 1990's could have resulted in significant changes in drainage and soil stability issues if the design guide had not been produced to encourage a more responsive design protocol.

Any potential intensification of the residential density within Moonshine Valley could replicate some of these issues, as a predominantly soft landscaped valley becomes intensified and domesticated potentially resulting in significant reduction of vegetation cover and the replacement with hard landscape solutions, engineered drainage and mown grass.

The residential development of Aokautere was an opportunity to create suburbs from scratch; Moonshine is not in the same position as the residents have created such a striking habitat through the extensive planting. Consequently it is important that the guidelines for Aokautere are adapted for Moonshine to protect the character and natural features.

The soil characteristics, which become unstable with moisture penetration, are shared between Aokautere and Moonshine Valley, significant vegetation loss could increase instability, so it is imperative that residential expansion works with the existing vegetation rather than against it. In this case Moonshine Valley has a significant advantage over the example of Aokautere at the start of its residential expansion period, due to its significant levels of vegetation.

7 Conclusions and Recommendations

7.1 General planning considerations

Moonshine valley is a product of design rather than nature; it is the result of hard work commitment and endeavour. It is however potentially at a tipping point, planning legislation can be used to help manage change for maximum gain, but it can only represent part of the solution and the strong community spirit present in the valley today needs to be used to assist legislation decision making and implementation.

A community is ever changing and the change of ownership that is an inevitable feature of life could provide a catalyst for change, it is not certain nor probable that change will be good or bad, in all likelihood it will be a combination of both.

It is already evident in the valley that as properties change hands the desire to preserve the character of the valley is diluted. The example here is the recent house building on number 17 which has resulted in the erection of a dwelling some would say out of character with the valley being a large house on a small plot and timber boarded fencing more in character of a suburban environ. Equally the small lot size has resulted in the removal of vegetation in all likelihood as a result of the desire to allow natural light unhindered into the dwelling.

The imminent subdivision at 7 Whisky Way will likely result in the removal of a mature hedge and replacement with low growing species that do not screen the stacking of properties from the road.

It is the incremental changes which will cause the change, individually insignificant but collectively they will change the character of the valley without careful consideration.

Recommendations:

- Undertake a comprehensive ecological assessment of the valley for public and private spaces.
- Identify trees and groups of trees of valley significance to provide protection through the notable tree programme.
- Liaise with the community to gauge feeling and support for legislation to preserve the character of the valley.
- Encourage residents to set up covenants on their property to help protect the character of the section
- Work with the residents and the regional authority to eradicate invasive species

7.2 Roadside/ access- design treatment

During the resource consent hearing for the subdivision at 7 Whisky Way traffic engineers determined that the road along Moonshine Valley would be capable of accommodating a significant upturn in traffic under the current design conditions, and that the necessity of upgrading the road would not be a factor determined by subdivision on the scale likely in the valley.

It is imperative that in order to preserve the overall character of the valley that the road is protected in its current condition. The soft verges, narrow lane widths, informal drainage and extensive planting enhance the (semi)rural feel of the valley.

Whilst traffic engineering considerations would allow the preservation of the status quo it is likely that increased resident pressure would result in the domestication of the character of the road through the adoption of formal (sealed) drives and entrances, formal residential scale boundary fencing and the encroachment of exotic garden vegetation with immaculate presentation onto the roadside verge and viewing zone from the road.

7 Conclusions and Recommendations

It is normally a difficult planning route to restrict individual taste and desires in regards soft landscaping, however in the case of Moonshine Valley the character of the road is one of the fundamental amenity values that needs preserved. Consequently design guidelines need to be created to restrict the incremental decay of the status quo regardless of population pressure.

Recommendations:

- Sealed driveways are resisted and the specification in regards widths is kept to a minimum.
- Fencing guidelines should restrict design with preference for field boundary treatment or post and rail timber fencing, maximum height 1m
- Existing earth bunding should be protected and encouraged as an alternative to timber fencing.
- Exiting native vegetation should be preserved where possible. Additional native species planting should be encouraged over exotic species
- An informal boundary of lower intensity mowing should be encouraged to provide a rural aspect to the roadside rather than close mown verges.
- High timber boundary fencing between properties should be discouraged with softer vegetated alternatives of field boundary style being encouraged.

7.3 Vegetation- preservation, enhancement and pest plant eradication

Recommendations:

- Preservation through protection and maintenance of native vegetation either group or individual species.
- Educational training to encourage residents to plant native rather than exotic
- Help to eradicate invasive species and encourage replanting in natives
- Community nursery scheme and sharing of native seedlings for new residents.
- Encouragement (or legislation) to encourage a more relaxed approach to mowing along the roadside and peripheries of the sections.

7 Conclusions and Recommendations

7.4 Building design and setting

The design of any future subdivision residential properties should work with the characteristics and features of the site rather than adopt a ‘slash and burn’ approach. Features of prominence beit vegetation or landform should be preserved and incorporated into the design. Pattern book architecture should be resisted with the focus towards individual style and design responding to the constraints of the site.

Recommendations:

- An existing site character assessment to be undertaken prior to subdivision to ascertain the key features of the site.
- Site master-plan connecting the design for the house to the setting, strategy generation. Working with a qualified Landscape Architect.
- Architect designed dwelling design to respond to the features identified by the master-plan as worthy of preservation.
- Instigate peer review design panel assessment of the designs to address design suitability and appraise response to site constraints, also to assess any likely degradation proposed of the site features deemed worthy of protection.
- Production of a detailed landscape plan and maintenance strategy that is monitored over a short-medium timescale.

7.5 Reserves

The reserves are key features of the valley, but are currently under utilized and perceived by residents as a detrimental factor of the valley due to lack of maintenance and unsavory activities. A review of the role of the reserves in both a local and city wide context needs to be undertaken to identify a broad strategy for the enhancement. This strategy should seek to identify council led solutions to readdress the burden of responsibility away from the residents to the council.

Recommendations:

- Review of the reserve provisions for this part of the city.
- Review of the condition and character of the reserves
- Undertake a user survey of the reserves
- Identify connections available to expand the reserves
- Assess the boundary treatments of the reserves to address resident concerns
- Raise the profile of the reserves through activities, street signage and car-park approach to provide a better visitor experience and attract additional usage.
- Produce educational information to highlight the reserves as a feature of the city to encourage visits and working bees.

7 Conclusions and Recommendations

7.6 Recommendations from the Aokautere design Guide that has relevance to Moonshine Valley consideration to intensify development:

Road and footpath network
- Avoid earthworks and follow the natural landform.
- Avoid abrupt changes in angles or levels.

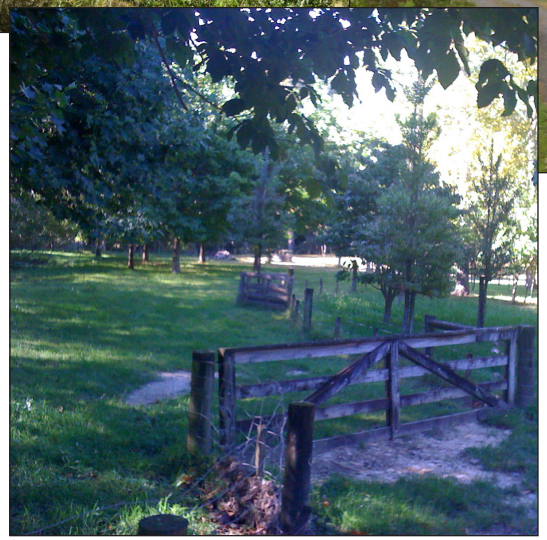
Site planning and dwelling design
- Allow landform to dictate design and layout.
- Protect privacy and sunlight penetration.

Landscape Treatment and Maintenance
- Preserve gulley corridors for open space network.
- Maintain the natural landform.
- Locate structures away from the top of the slope.
- Adopt the use of planting or simple post-and-rail fences rather than constructing high solid fences or walls.
- Use planting rather than fencing to define the boundary between private land and reserves.

7.7 Conclusion

- **Moonshine Valley is a citywide Asset.**
- **It offers a unique residential living experience within the context of the city.**
- **The section size, topography, vegetation character of each section is different and offers a patchwork of varied environments and experiences.**
- **The sustained actions of the residents over the last 20 years have helped create the varied environment present today, and this should be championed as an example of excellence.**
- **The character of the road and road reserves offers a unique experience in residential subdivisions within the city.**
- **The reserves anchor the native flora and fauna into the valley and raise the character of the valley significantly.**
- **Population movement/ change and subdivision pressure will inevitably lead to a dilution of the character, however there is slack in the valley to allow creative development without impacting upon the visual character.**

8 Site Visit Checklist



PALMERSTON NORTH

LANDSCAPE INVENTORY

October 2011

PALMERSTON NORTH
CITY COUNCIL

PALMERSTON NORTH
LANDSCAPE INVENTORY

Stage One of the Landscape Study
Revision 1

October 2011

PALMERSTON NORTH
CITY COUNCIL

CONTENTS

This Landscape Study is formulated as an inventory, a value neutral study that describes the resources of the district in terms of a number of different landscape 'units' and their defining characteristics.

INTRODUCTION

As part of the Rural Review Palmerston North City Council (Council) commissioned Opus International Consultants (Opus) to prepare a detailed Landscape Inventory of the City.

The Landscape Inventory represents Stage 1 of the Landscape Study and the first output of the Rural Review policy development process.

The Landscape Study is formulated as an inventory, a value neutral study that describes the resources of the district in terms of a number of different landscape 'units' and their defining characteristics. It also provides a strategic overview of the District's landscape at two levels: it includes descriptions of the landform, landcover and landuse that define the physical landscape of the City and a finer grain analysis of landscape character and attributes. The Landscape Inventory itself will not provide the policy direction for future development in the Rural Zone, but will act as a baseline report and provide direction for whatever policy approach the Council seeks in the rural areas.

The next step for Council will be to consider the Landscape Inventory and identify various planning issues and policy options relating to future development within the Rural Zone. Further information on related matters such as roading and infrastructure requirements, potential development constraints such as soil quality and stability and future land requirements for rural-residential development will also need to be gathered to help inform Council's preferred policy approach on development within the Rural Zone.

BACKGROUND

Section 79(2) of the RMA requires Council to commence a full review of its District Plan not later than 10 years after the Plan became operative. This means Council must commence a review of the District Plan prior to December 2010.

One of the major projects that needs to be completed as part of the District Plan Review is a review of the Rural Zone, in particular the role of rural-residential subdivision in terms of fulfilling the City's long-term development strategy and the sustainable management of the rural land resource, including important landscape values. A corresponding project is the review of planning provisions for renewable energy developments, which is also underway.

In October 2006, Opus was commissioned to prepare a Landscape Study of the City.

In 2011, Council requested further interpretative materials to aid and enhance the appreciation and understanding of the primary elements of the City's landscape, its structure and character, and to illustrate the landscapes natural patterns. Opus worked with landscape architects Clive Anstey and Julia Williams to prepare the supplementary material for this revised document, now titled 'Landscape Inventory'.

The Palmerston North Landscape Inventory is the first major study of its kind to be completed for the City. In part the need for a Landscape Study highlights the complexity of the issues involved in the Rural Review and the need for planning provisions that recognise conflicting values and objectives in development processes, and provide for their resolution. It also recognises the detailed level of information required to support the successful development of new District Plan provisions under the Resource Management Act 1991.

Some of the key resource management issues to be addressed in the Rural Review are:

- The management of natural landscape features;
- The effective management of risks associated with soil instability;
- Wind-farm development;
- Reverse sensitivity effects in the Rural Zone (i.e. the development of new sensitive receiving environments, e.g. dwellings in close proximity to existing rural activities);
- Potential effects resulting from the use of on-site wastewater treatment systems (septic tanks);
- The use and / or protection of high class soils;
- The likely influence of other proposed developments including strategic infrastructure, e.g. the second bridge crossing; a possible future State Highway realignment from Mt Stewart to the Ashhurst Gorge
- The extent and location of the existing rural-residential subdivision overlay (i.e. the areas identified suitable for rural-residential subdivision);
- The role of rural-residential subdivision in meeting the City's urban growth requirements;
- Long-term strategic planning considerations, e.g. rural-residential development on the fringe of the City has the potential to create problems for future urban growth;
- Alternative options for rural-residential development;
- The effects of development in the Rural Zone on the rural roading network; and
- Sustainable transport

This first stage of the Palmerston North Landscape Study has two key outputs:

1. The identification and description of the Landscape Types and individual Landscape Units within the City; and
2. A programme for Stage 2 of the Landscape Study which will take the characterisation of the landscape further in order to ensure the study provides a robust basis for the proposed Landscape Strategy as well as the wider Sectional District Plan Review. Stage 2 will cover 3 themes:
    - the landscape framework
    - individual landscape unit values
    - a land use study for rural residential development:

STUDY PROCESS

STUDY APPROACH

The objective for the first stage of this Landscape Study is to advance from a previous landscape assessment of the City carried out by Boffa Miskell Ltd in the early 1990s, following local government[1] re-organisation in 1989. The Boffa Miskell report provided high level recommendations for developing land use and landscape policy for inclusion in the current District Plan[2]. This initial landscape assessment was subsequently updated as part of a citywide ecology study in 2002[3], and usefully informed the City's Greening Strategy[4]. However this earlier assessment was found to have limited supporting descriptive detail so that the basis of the landscape analysis and classification was unclear. Further, while the report provided recommendations for developing landuse policy for inclusion in the current District Plan there was no reference to stakeholder or community input or formal engagement with the public.

A number of recent landscape studies from around the country have been reviewed and their positive aspects used to shape the approach that has been taken to defining the natural processes and land use patterns that define the Palmerston North City's landscape. The current study has taken a descriptive approach to defining the City's landscape so there is an overarching framework, or baseline, from which the Rural Review can be developed in a consistent and integrated manner. The City's landscape is a reflection of its landform, landcover and landuse and the community's historic, cultural and personal connections with this landscape, as outlined in the following overview.

Palmerston North Landform

The eastern edge of the Manawatu is defined by the Tararua-Ruahine Ranges, a narrow axial range that forms part of the 'backbone' of the lower North Island. North of the Pahiatua Track, the range is broad and almost flat-topped; south of Pahiatua Track the range rises and becomes progressively dissected until it forms a series of parallel ridges, each with a unique series of 'peaks', saddles and spurs.

West of the ranges lies the open landscape of the Manawatu Plains. The plains and ranges are linked by the Manawatu River, which over time has cut through the mountains and etched a wide, meandering channel into the lower flats.

Palmerston North city sits on the edge of the Manawatu Plains, straddling the Manawatu River and backdropped by the Tararua Ranges. The business centre and most residential development is located north and west of the river. The rural area, or at least the greater part of the rural area, lies between the river and the Tararuas.

From the foothills of the Tararua Ranges the landform steps down to the river corridor in a series of visible terraces, some relatively flat and some incised by valleys and gullies. Numerous watercourses in the form of rivers, creeks and ephemeral streams flow in a complex pattern across the terraces towards the Manawatu River. This is clearly illustrated in the Figure 1.

How the Manawatu was formed

Several million years ago, before the ranges were formed, the entire Manawatu Region was under the sea. The Manawatu River ran from southern Hawkes Bay to the west coast south of Whanganui. The surrounding land had a westward tilt and was drained by a network of watercourses.

As long as 1.5 million years ago the axial ranges emerged on the coastal boundary, the result of tectonic uplift. Greywacke basement rocks were pushed up along the north-south tending faultline to form the ranges. At the same time, sea levels were falling. Progressive marine erosion left a series of low angled benches cut into the flanks of the ranges, each covered with a layer of marine sediment. Over time material at the top of the riser, on the edge of the bench, has slipped, changing the angle of the riser and the formation of the terraces. The most prominent of these is the series of elevated flats at the foothills of the Tararuas known as the Tokomaru Marine Terrace.

Figure 1: Local stream network on Linton flats. *NZTopo50 BM34*

[01] In 1989, the jurisdiction and land area of the City was expanded to meet City's future urban growth requirements. This newly incorporated land came from the former Manawatu District and Oroua County Councils.

[02] The report recommendations were not adopted in the District Plan, as notified in August 1995.

[03] Palmerston North City Council (2002) Ecological Processes in Palmerston North City. Prepared by Boffa Miskell Ltd. Wellington.

[04] Greening Strategy: Enhancing Palmerston North's Biodiversity October 2006. A joint initiative of the Palmerston North City Council and The Environment Network Manawatu.

The terrace rises from Levin to Palmerston North, reflecting an increase in uplift rates to the north along the western flanks of the range. It represents the coastline at the time of the last interglacial, the warm period before sea levels started to fall.

The drainage network was increasingly impeded by the rising Tararua mountain range. The largest river, the Manawatu, was able to keep pace with the changing levels, and cut down and through the range to form the steeply incised Manawatu Gorge. Smaller rivers and streams were less able to cope with the rising land; over time they reformed and re-routed to flow into the Manawatu River.

With falling sea level the former seabed became what we now know as the Manawatu Plains. The floodplain associated with the Manawatu River has created four well-defined terraces, formed during the last glacial cycle in an on-going process of loess accumulation and erosion. The highest river terrace is the Forest Hill terrace. Cutting of this terrace and refilling formed the Milson terrace, then the Ashhurst terrace, and the finally the lowermost unit that is the Raukawa terrace.

PALMERSTON NORTH LAND COVER

The 2002 study 'Ecological Processes in Palmerston North City 2002' identified a total of 86 Ecological Areas (EAs) across the City, as shown in Figure 3. Under this heading are listed the ecological areas that fall within each landscape unit, being predominantly remnants of indigenous vegetation.

In an overview, the study notes *"These areas covered approximately 4500 ha or somewhere between 12-15% of the total area of the City. The total area is very heavily dominated by large Ecological Areas (EA's) in the northern Tararua Range, such as the headwaters of the Kahuterawa and Turitea catchments. Without these areas the total area of EAs would be only about 300ha, less than 1%of the city's area. There are considerably more EAs under private than public tenure, but most of the large EAs, and by far the greatest proportion of the total area of EAs (about 88%) are in public tenure.'*[5]

In short, while there are a large number of very small EAs in private ownership, the Palmerston North City Council Reserves, (notably the Turitea Reserve and adjoining Hardings Park) are by far the most important components of City's protected ecological areas because they represent the largest area of land.

Aside from plant and animal pests (including humans), other threats to habitat include flooding, wind exposure, erosion, sedimentation, and fragmentation from subdivision and land development activity in particular. A major effect of fragmentation is not just the loss of the original habitat but also the loss of physical and ecological connections between EA's that remain.

Much of the rural area is intensively farmed. Habitat clearance, coupled with the city's need for flood control on the Manawatu River and Mangaone Stream, has been particularly hard on river and wetland habitats. The remaining wetland habitats are now extremely fragmented and limited throughout the city. There are only a few riparian EAs, and 8 wetland areas, all less than 10ha in area.

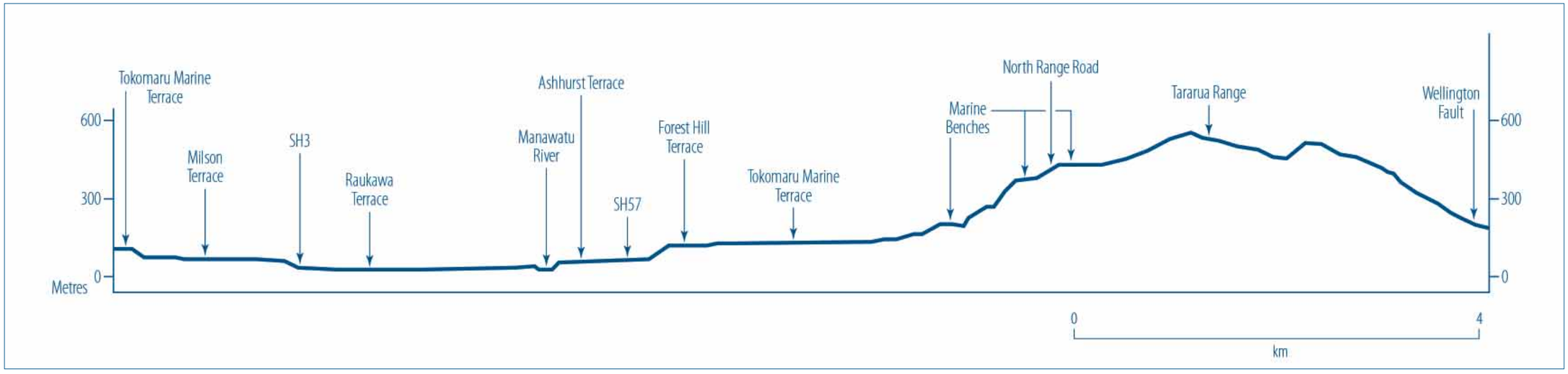
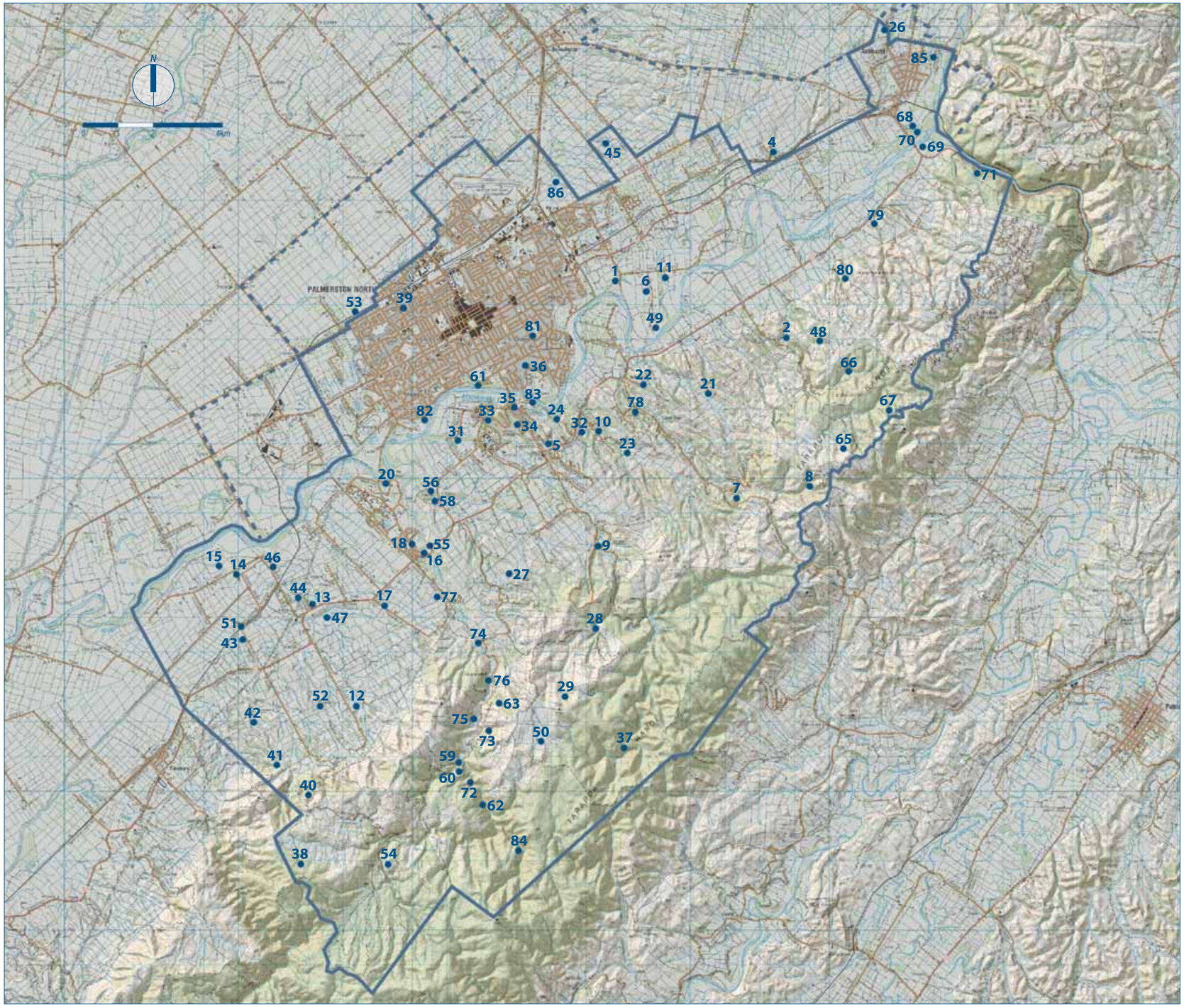


Figure 2: Cross-section of the Manawatu River valley-Tararua Range near Palmerston North
(From Soons, J.M. and Selby, M.J. Landforms of New Zealand)

[05] Executive Summary Page 4. Palmerston North City Council (2002) Ecological Processes in Palmerston North City. Prepared by Boffa Miskell Ltd. Wellington.



LEGEND

1	Riverside Drive Oxbow	45	Dobson Lane wetland
2	Forest Hill Rd remnant	46	Aker's Bush
4	Napier Rd escarpment	47	Nguturoa Stream remnants
5	Poutoa Walkway Reserve	48	Taupiri Beech remnant
6	Kohlers Totara Block	49	Kohler's Rd B
7	Pahiatua Track remnant	50	Brown's Flat
8	North Range Rd Bush	51	Crow's Lagoon
9	Kereru Drive Bush	52	Larsen's Bush
10	Moonshine Rd Reserve	53	Manderson's Bush
11	Brookfields Park Golf Course	54	Kahutewara Stream site 1
12	Millrick's Line	55	Kahutewara Stream site 5
13	Nguturoa north remnants	56	Keebles Bush
14	Craw's Rd	58	Keebles Stream
15	Te Puna Rd Channel forest	59	Kahutewara Stream site 3
16	Linton Hall Bush	60	Kahutewara Stream site 2
17	Kendall's Line Bush	61	Esplanade Bush
18	Linton Camp Bush	62	Kahutewara Stream site 4
20	Linton Camp escarpment	63	Southey's Bush
21	Aokautere East	65	Buchanan's Dam
22	Aokautere Village Bush	66	Foresthill Stream
23	Tutukiwi Reserve	67	North Range Scrubland
24	Pari Reserve	68	Ashhurst Oxbow Escarpment
26	Ashhurst, Grove Rd	69	Manawatu River
27	Kahuterawa Rd A	70	Ashhurst Domain
28	Greens Rd bush	71	Manawatu Gorge Bush
29	Upper Greens Rd Scrub	72	Kahuterawa Gully Bush
31	Lower Turitea Stream	73	Kahuturawa East Bush
32	Lower Moonshine Valley	74	Kahuterawa Flat Remnant
33	Bledisloe Park	75	Kahuterawa West B
34	Heathcote Drive Bush	76	Kahuterawa West A
35	Summerhill Drive Escarpment	77	Hewitts Rd remnant
36	Centennial Lagoon	78	Wakefield Bush
37	Upper Turitea catchment	79	Gardiners Rd scrub
38	Kaihinu Bush	80	Tuapaka Scrub
39	Mangaone Stream	81	Hokowhitu Domain
40	Wicklow bush	82	Buick Park
41	Scotts Rd scrub	83	Anzac Park
42	Scotts Rd Wetland	84	Harding Park
43	Linton Station wetland	85	McRaes Bush
44	Linton Station wetland	86	Linklater Wetland

Figure 3: Map of Ecosites in Palmerston North City Council
(Information sourced from Ecological Processes in Palmerston North City, Boffa Miskell Ltd , 2002)

PALMERSTON NORTH LAND USE

The patterns of land use have evolved to reflect the geomorphology. Maori settlement tended to focus around the Manawatu River rather than the raised terraces or exposed hills of the Tararua Ranges.

European settlement and land clearance began along the northern side of the Manawatu River where access was easy and the soils were fertile. Remaining parts of the city were virtually all in tall forest cover up to the mid 19th century. Once started however, forest clearance across the river flats and up onto the terraces was rapid.

"Palmerston North became a Borough Council in 1877, at which time the population was 800 and the main industries were milling the extensive native forests and processing flax. By 1902 the population was around 7,000 and the main industry was shifting into agriculture on the plains surrounding the river, which offered easy access and a hospitable environment. The shift to agriculture in the Ranges occurred about two decades later." [6]

Land granted to the Borough of Palmerston North for water supply purposes by central government in 1905 was formerly crown land set apart for 'the growth and preservation of timber', in recognition of impending timber shortages. There was also an early realisation that the vegetation cover on the ranges and steeper land falling to the plains was important for soil and water management purposes; most of the land now administered by Department of Conservation (Tararua and Ruahine Forest Parks), was formerly classified as 'Protection Forest'.

The City's water supply area, together with other parcels acquired over a period of years, became a Reserve in 2003. The reserve was divided into 3 areas: one to provide for structures associated with the capture and management of water to supply the City; a second covering the water supply catchment (Turitea Reserve); and a third, now known as Hardings Park, became a 'Scenic Reserve'. The City's entire backdrop south of the Pahiatua Track is therefore managed for various reserve purposes, or for conservation. All of these areas, as well as the steeper faces above the Manawatu Gorge, are covered in native vegetation, most of which has naturally regenerated following timber removal or burning, with remnants of the original native forest cover within the Turitea Reserve. There are also scattered patches of exotic pines in the reserve itself that are being progressively logged and the land allowed to revert to an indigenous cover.

The intensity of land use is greatest on the fertile river flats where market gardening and horticulture, characterized by their small-scale pattern of shelter planting, predominate. There are extensive areas of dairy farming on the lower and upper Linton river terraces and on the river terraces adjacent to Fitzherbert East Road. Sheep, beef, and deer farming are the predominant land uses across the northern Tararua Ranges and the elevated foothills, extending across the marine and drier river terraces. There is a diverse range of activities occurring on small rural holdings across the rural landscape. Arable farming is limited to well-drained better quality soils on easy topography

Over time the diversification and intensification of land use has moved out from the river corridor and flats into the foothills of the Tararua Ranges. The most recent change has come with an increasing interest in life style blocks and the partial suburbanisation of the Aokautere area with the development of the Atawhai and Summerhill neighbourhoods. These were initially of a scale sufficient to enable the management of grazing stock but are now tending towards smaller lots that afford a rural lifestyle without the responsibilities stock management.

This more intensive form of subdivision has been associated with the planting of trees and shrubs for amenity, shelter and privacy, so that open pasture has been converted to a woody cover. This trend is similarly reflected in the process of exotic forest establishment on the more erosion prone soils. These forests sit across the foothills, extending up steep slopes onto the ranges.

The planting of woody vegetation associated with intensification generally tends to reflect the topography; steeper slopes and inaccessible gullies are being planted or allowed to revert to natives, at least in areas where the topography clearly excludes buildings and cultivation. This mix of trees, shrubs, and lifestyle contributes to greater soil stability and resilience, as well as enhancing rural character and amenity. In some areas of rural residential development however the easier topography has resulted in a more conventional and fragmented patchwork pattern of development.

The pattern and scale of this land subdivision is also partly a response to District Plan requirements, in particular compliance with best practise engineering design for effluent and stormwater disposal.

METHODOLOGY FRAMEWORK AND OUTPUTS

Defining Landscape Types

The landscape types and subsequent landscape units are primarily defined by landform. This basic structure is over-laid by variable patterns of land cover and use so that the character of the landscapes is diverse and interesting. One of the reasons for using landform as the basic structure is because while landcover and landuse change over time, landform remains relatively constant.

Landscape types have been defined in accordance with landform variation, each type being characterised by a particular landform. The different landscapes within each type have been identified as units. Each landscape unit has been described and this information is captured on landscape unit description sheets.

For the Palmerston North Landscape Inventory, a desktop study, field investigation and GIS mapping resulted in the identification of nine landscape types. The landscape types are defined by their geomorphology and in most cases the boundaries between the types are geographic features such as ridgelines, terrace tops or the margins of a watercourse. However, in almost all cases, the demarcation between one type and another is not a sharp or distinct line but rather a gradual change from one landform into another. Each of the nine types has been broken down into distinctive 'units'.

Defining Landscape Units

The Landscape Inventory identifies and describes nineteen landscape units within the City. The patterns of development and the landscape and visual features for each of the landscape units have been identified.

The individual landscape units have been identified at a high level and the Landscape Study does not yet make any recommendations for their management. Future stages of the Landscape Study and Rural Zone Review will identify options for the management of the nineteen landscape units.

[06] Executive Summary Page 4. Palmerston North City Council (2002) Ecological Processes in Palmerston North City. Prepared by Boffa Miskell Ltd. Wellington.

Description Sheets

Description Sheets have been produced for each landscape unit outlining the following attributes:

Landscape Character Analysis

- Landscape Description describes the range of landscape elements and features found in the particular landscape unit
- Defining Characteristics are landscape elements and features that are distinctive to the particular landscape unit
- Visibility and Visual Amenity notes the factors that contribute to its visual amenity including the transport routes that traverse the particular landscape unit
- Patterns of Development notes the various land uses and types of development that are common to the particular landscape unit
- Landscape and Visual Sensitivity reflects the degree of modification within the particular landscape unit and indicates the units sensitivity to change

Landscape Attributes

- Natural Features and Legibility notes the various physical landscape elements within a landscape unit that define a sense of place and identity
- Cultural and Historic Associations identifies the landscape elements that provide links to Maori and European heritage within the particular landscape unit
- Aesthetics and Recognition identifies the scenic qualities of the particular landscape unit and the features it contains, the significance of its location for the City as a whole, and the form the landscape may have (developed or natural or a mix of both).

By their nature, many of these landscape attributes overlap.

Sense of Place

From a community perspective the City's landscape is composed of a rich diversity of places that need to be recognised and their values respected and enhanced by any ongoing development. Every unit has a particular identity or sense of place to which individuals and their communities respond and this has been identified in *Sense of Place*.

- Summary description highlights the critical attributes of character that make this landscape unit unique.
- Community identifies those residents or groups who live in, drive through, have views of, or have vested interests in the landscape unit.

  For reasons of brevity, Community of Interest does not include organisations that are key stakeholders in the district as a whole or have interests across the district but with a focus on specific agencies such as Palmerston North City Council, Horizons Regional Council, New Zealand Transport Agency, Transpower or DOC. Nor does it include local iwi (who are considered to be partners), or residents of the city with an interest in each and every landscape unit.
- Sensitivity to change provides a preliminary indication of each landscape unit's sensitivity to ongoing development and change. Sensitivity' is to be interpreted as a guide to the sensitivity of the landscape's critical attributes to adverse effects, rather than as a directive to the appropriateness or inappropriateness of any potential development. Sustaining the quality of places for people goes hand in hand with sustaining resources and developing resilience. This will be subject to more detailed analysis in Stage 2 when both bio-physical limitations and resilience will be explored.

Ecological Areas

Ecological Areas, as detailed in the 2002 report, are listed by name and reference number. However, the number and size of the ecological areas in each unit is not necessarily a reflection of its ecological diversity and naturalness.

> *"What is 'natural' has been defined by the Environment Court as being something which is a 'product of nature'. It therefore includes pasture and exotic tree species but not man-made structures. A landscape with man-made structures may still have a degree of naturalness but it will be less 'natural' than an unaltered landscape or a landscape without structures."* [7]

Natural science, aesthetic and associative values for each landscape unit will be further explored in Stage 2 of the Landscape Study.

Section 17 of the District Plan has schedules of items of cultural and natural heritage value including heritage buildings, object and sites of value to Tangata Whenua, notable trees and areas of significant indigenous vegetation. These items will be identified with other landscape values in Stage 2 of the Landscape Study when a more in-depth analysis of 'associative values' is undertaken.

Te Koha O Te Whenua: *A grove of karaka trees on Massey University land that is on the District Plan Schedule of Objects and Sites of Cultural Heritage Value to Tangata Whenua*

[07] Peart, Raewyn. Landscape Planning Guide for Peri-urban and Rural Areas. EDS 2005.

DESCRIPTION OF LANDSCAPE TYPES

LANDSCAPE TYPES

The following table provides a summary overview of the interrelationship between the nine landscape types and units in topographic order, rising from the Manawatu River up to the Tararua Ranges. The nineteen landscape units within the City are described in further detail in the accompanying Description of Landscape Units sheets in the report (pages 17-55).

LANDSCAPE TYPES AND UNITS

THE RIVER LANDSCAPES

River

One of the most distinctive landscape types within the City, the Manawatu River separates the Manawatu Plains and the northwest third of the City from the remainder of the City that rises to the Tararua Range in the east to southeast.

The Manawatu River enters the Manawatu Plains and the City via the Manawatu Gorge and is immediately joined by the Pohangina River, which drains the western flank of the Ruahine Range to the north of the City.

For the most part, the river flows in a relatively broad river channel that contains numerous shingle side and point bars. The river channel meanders within a course that is defined through much of the City by flood control measures such as willow plantings and stopbanks; the exception being a high set of cliffs below the observatory at Anzac Park and a lesser set of cliffs adjacent to Linton Military Camp.

This Landscape Type includes one landscape unit within the City:

Unit 1: Manawatu River

The accompanying data sheet provides a description of the components of the landscape unit.

Character	Landscape is dominated by the river, both its current and historic locations.
Patterns	Pattern of water movement is charted by banks, pools, rapids and shingle bars, plus established vegetation that follows the meander of the river.
Processes	River movements and meander and seasonal vegetation change.
Resilience	The river's resilience is constrained by the cultural imposition of stopbanks and planting to control the river within a distinctive channel.

River Flat

There are two areas of low-lying river flat on the true left bank of the Manawatu River within the City that are not separated from the river channel by a stopbank. Both of these relatively small sets of fertile flats are contained by distinctive terraces to the southeast.

This Landscape Type includes two landscape units within the City:

Unit 2: Fitzherbert Bridge

Unit 3: Manawatu Bridge (crossing in proximity to Ashhurst Domain)

The accompanying data sheets provide a description of the components of the landscape units.

Character	An integral part of riparian environment that buffers flood flows, highly modified with a strong cultural overlay.
Patterns	Land use and ownership, creates a close pattern of fences, and shelter/ flood control plantings.
Processes	River containment with periodic flooding.
Resilience	Limited by containment between river and raised river terrace and functions as an overflow area in flood events.

Lower Flat

There are a further three areas of low, fertile flat land that bound the Manawatu River within the City, but these are slightly more elevated than the River Flat landscape type and are protected, in most part, by stopbanks. The lower flat on the true right bank upstream of urban Palmerston North is contained to the northwest by a distinctive terrace. The opposing flat on the true left bank rises directly to the adjoining hill slopes in the north and to an intervening elevated flat in its mid to southern extent. The remaining lower flat is defined by a subtle change in landform to the east and extends south beyond the City boundary.

This Landscape Type includes three landscape units within the City:

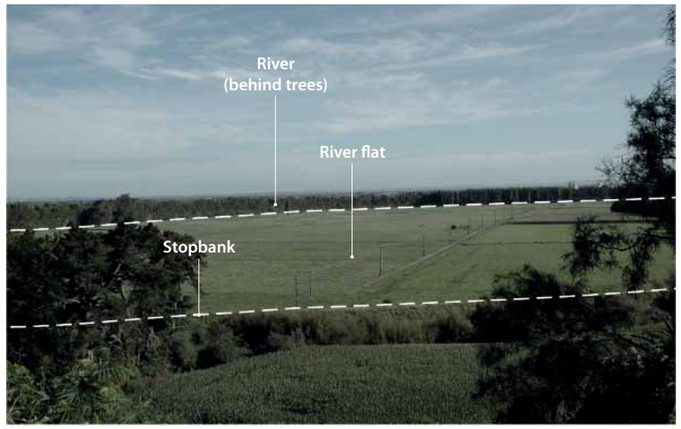
Unit 4: Linton Drain

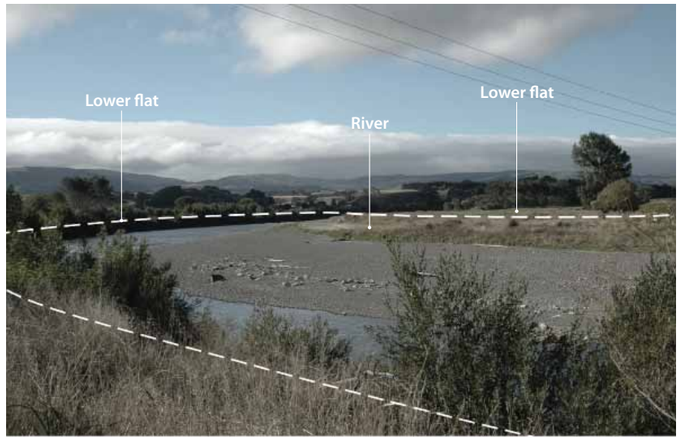
Unit 5: Fitzherbert East

Unit 6: Te Matai Flats

The accompanying data sheets provide a description of the components of the landscape units.

Character	Fertile soils on gently sloping land with strong cultural overlay. Small lots of fertile, productive land used for intensive farming and horticulture fragments the landscape.
Patterns	An ordered landscape dissected by fences, vegetation, shelter belts.
Processes	Now protected by stopbanks with minimal evidence of former periodic flooding.
Resilience	Resilience enhanced by river control works, focussed on the City's urban areas (middle reach of the Manawatu River). Land use can be adapted but ultimate limitation will always be potential flooding and high water tables.





THE TERRACE AND PLAINS LANDSCAPES

Plain

The major portion of urban Palmerston North, lying northwest of the Manawatu River, sits on the eastern edge of the Manawatu Plains. This flat to undulating landform extends southwest, west and northwest of the urban area beyond the cadastral boundary of the City and includes a small area of the City above the terrace to the immediate west of the Ashhurst village.

This Landscape Type includes one landscape unit within the City:

Unit 12: Palmerston North City

The accompanying data sheet provides a description of the components of the landscape unit.

Character	Gently undulating landform with small-scale detail in depressions, localised gullies and waterways. A rich and varied landscape when viewed from within.
Patterns	Strong river terrace edge to the east is a direct reflection of the topography. Cultural overlay of fencing, shelterbelts, home paddock amenity plantings and some more recent life-style developments. This development results in a softer, less ordered landscape with more distant views screened by the foreground vegetation associated with dwellings along roads.
Processes	Localised creeks and wetlands.
Resilience	Well-drained land is relatively flat, easily accessible. The rural character should be maintained by providing adequate open space buffers to built development.

Rolling Flat

A large broad area of rolling flat rises from the lower flat to the west and extends east to the foot of the hill slope that rises to Te Mata. The Manawatu River and lower Kahuterawa Stream catchment defines the north to northeast edge of this landscape type and it extends southwest beyond the district's boundary.

This Landscape Type includes one landscape unit within the City:

Unit 13: Linton Flats

The accompanying data sheet provides a description of the components of the landscape unit.

Character	A pastoral landscape with gently sloping landform, sharply incised by creeks and ephemeral waterways. See Figure 1 Local Stream Networks on Linton Flats.
Patterns	Lack of pattern with broad scale fragmentation due to large lots interspersed with pockets of more intense use and development which limits distant views.
Processes	Some recent rural residential living, especially at the base of hill slopes, supplements established communities including Lower Kahuterawa Valley, Linton and Linton Camp.
Resilience	Slope and soil and complex landform allow this land type to absorb change.

Elevated Flat

In the central portion of the City, between the river and the foot of the hill slopes that rise to the Tararua Range, are two areas of elevated flat that are incised by local stream valleys.

This Landscape Type includes two landscape units within the City:

Unit 14: Central Elevated Flats (south of Massey University Campus)

Unit 15: Northern Elevated Flats (north of Massey University)

The accompanying data sheets provide a description of the components of the landscape units.

Character	Gently sloping landform, sharply incised by creeks and ephemeral waterways. Viewed from the City's urban areas, the gentle rise in elevation enables views of an open and expansive landscape stretching back to a distinctive edge at the base of the Tararuas. The proximity and visibility of these elevated flats and associated escarpments effectively makes the rural character an integral part of the built environment.
Patterns	When viewed from a distance this is a flat plane with vertical elements limited to isolated shelterbelts. Intensive development tends to follow the original access roads. Structures in sheltered depressions or associated with intensive planting that provides shelter from the prevailing winds. In close views, the gullies and depressions with mixed vegetated cover provide diversity and interest.
Processes	Some recent rural residential living, especially at base of hill slopes and clustered along the top edges of the valleys.
Resilience	Development needs to be contained within the existing pattern to retain the wider rural character of expansive open space and long open views. Arable land has capacity to absorb built development. Potential for the larger pattern of open space to be fragmented through land subdivision and shelter/boundary plantings, so that the landscape loses the sense of expansiveness and openness. The addition of woody vegetation on steeper slopes has added to resilience where it reflects the pattern of the landform.

THE VALLEY LANDSCAPES

Local Valley

There are five local valleys that drain the adjoining elevated flat and the hill slopes to the southeast and lead down to the river and its adjoining flats on the true left bank. The northern three of these small valleys are quite contained and have relatively parallel northwest – southeast alignments. The southern two valleys are the downstream part of catchments that extend back behind the frontage hill slopes of the Tararua Range.

This Landscape Type includes five landscape units within the City:

Unit 7: Lower Kahuterawa

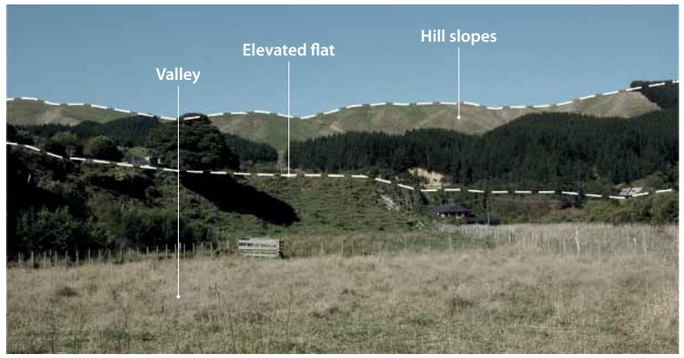
Unit 8: Turitea Valley

Unit 9: Moonshine Valley

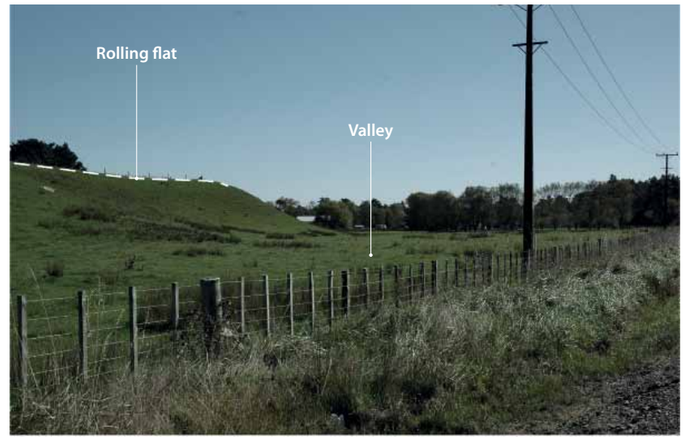
Unit 10: Lower Pahiatua Track

Unit 11: Aokautere Stream

The accompanying data sheets provide a description of the components of the landscape units.



Character	The character has been greatly influenced by land use and development that in turn is influenced by slope and soil. Valleys formed by watercourses cutting into marine terraces, with bank and terrace erosion continuing over time. Size varies, depending on the proximity of the valley to the Tararuas, steepness and the size and gradient of the watercourse. Some of the valleys have been developed, particularly if they have wide, flat valley floors. Other deeply entrenched gullies have been planted with pines and allowed to revert to indigenous cover.
Patterns	Strongly reflects distinctive topography and vegetation. Transport corridors have in turn provided access for more intense settlement.
Processes	Pattern strongly influenced by the natural process of water movements. Processes of soil erosion significant, particularly where valleys are deeply incised, abutting elevated terraces and have steep sides.
Resilience	High resilience as the landscape is visually contained and visual effects are internalised and can be absorbed. Effects in terms of soil and water runoff and on-site effluent disposal require careful management. This landscape type is erosion prone and vulnerable to extreme weather events with potential for localised flooding to be aggravated by increased sediments in waterway.



THE HILL LANDSCAPES

Hill Slope

The hill slope landscape type extends from the Manawatu Gorge southwest to the southern boundary of the district and beyond and is broken in two places where the Turitea Stream and the Kahuterawa Stream flow out of the range and through the adjoining elevated flats. The northern half of this landscape type rises to the skyline. To the south the hill slopes rise to prominent northeast – southwest running ridges that are forward (north-west) of the main Tararua Range.

This Landscape Type includes three landscape units within the City:

Unit 16: Te Mata Slopes

Unit 17: Ngahere Park Slopes

Unit 18: Forest Hill Slopes

The accompanying data sheets provide a description of the components of the landscape units.

Character	Hill slopes have a history of extensive pastoral farming where original vegetation has been removed. Over time the steeper and erosion prone areas have been planted in pine or allowed to revert to indigenous cover. More recently there has been a trend to pockets of rural residential development where access is relatively easy, particularly at the base of the more gentle slopes to the north, as opposed to the steeper Te Mata slopes, to the south. Windfarms are now a visually distinctive feature of Forest Hills slopes. Visually prominent slopes, spurs and ridgelines provide backdrop to elevated flats. These hills provide a critical backdrop to the City and the foothills communities.
Patterns	Deeply incised gullies and ridge/spur systems. Culturally imposed patterns of mixed vegetation, predominantly pines. Patterns, including access tracks are not always sympathetic to the landform.
Processes	Soil quality, exposure, elevation and landform reduce land use options. As pastoralism has become less economic, only the productive and easier land is being grazed; on the more difficult slopes, pine plantations have been established and reversion to indigenous vegetation, allowed to occur. This has resulted in vegetation patterns that crudely reflect the landform
Resilience	The complex landform of this large-scale landscape can absorb small-scale change. At higher elevations the patterns are bold and simple with increasing complexity along the lower slopes where land use diversification is already occurring. Further built development will be constrained by access, aspect/wind exposure and increasing visual prominence on higher slopes and ridgelines.

Upper Catchment

The elevated southern portion of the City extends southeast from the top ridges of the adjoining hill slopes to the main axis of the Tararua Range and encompasses the upper catchments of the Turitea Stream and the Kahuterawa Stream. This landscape type continues southwest beyond the City boundary.

This Landscape Type includes one landscape unit within the City:

Unit 19: Tararua Heights

The accompanying data sheet provides a description of the components of the landscape unit.

Character	Land has not been grazed for a long time, due to its steepness, elevation and exposure. It has a history of protection forest, water catchment and legal status and protection as Reserve. Elevation and broken topography make this landform the prominent backdrop feature for the City. It provides the City with a distinctive skyline, identified as a regionally significant landscape in both the RPS and Proposed One Plan.
Patterns	All bush cover with some remnants of the original forest and advanced regrowth. Plantations on the margins of the water reserve are gradually being removed and areas allowed to revert to indigenous cover.
Processes	Wind and water highly significant in dictating vegetation patterns.
Resilience	Landscape has evolved to the point where it is self-maintaining and in its best use. It is highly resilient in terms of natural processes and events. Elevation, slope and exposure place severe limits on any development potential and settlement. The Reserve status overlying over most of the landscape provides some legal protection and controls around reserve management and use.

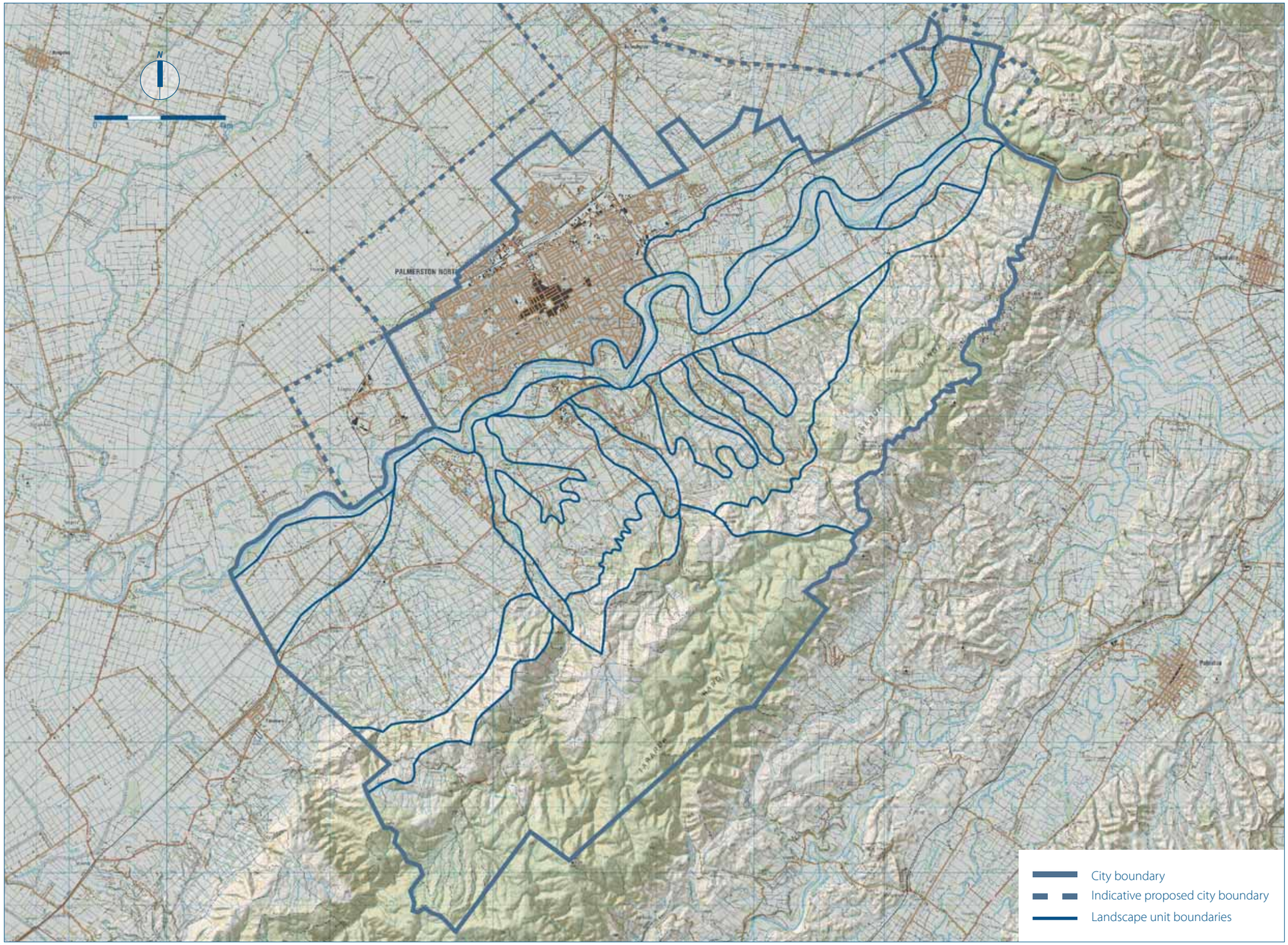


Figure 4: City boundary

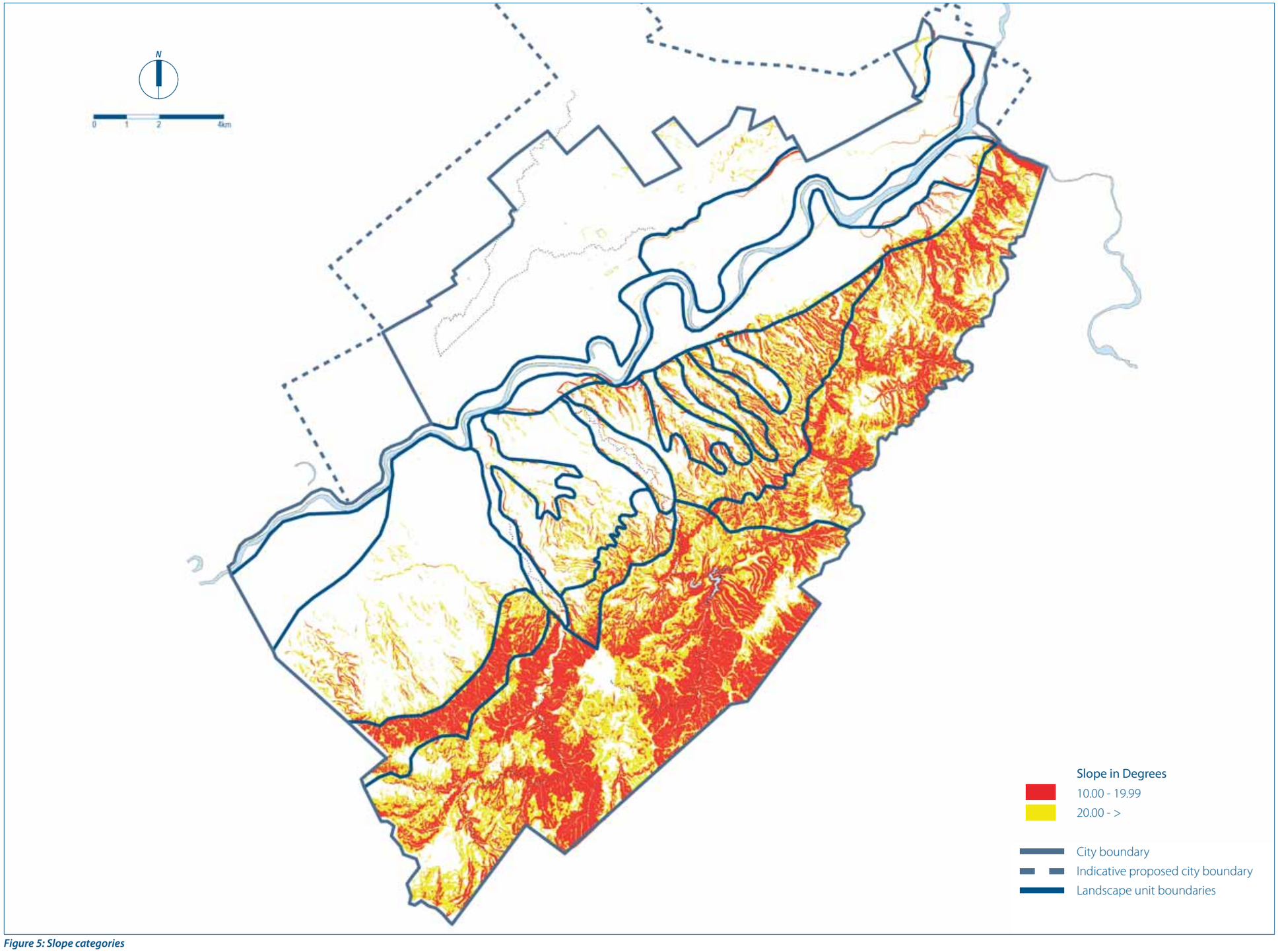
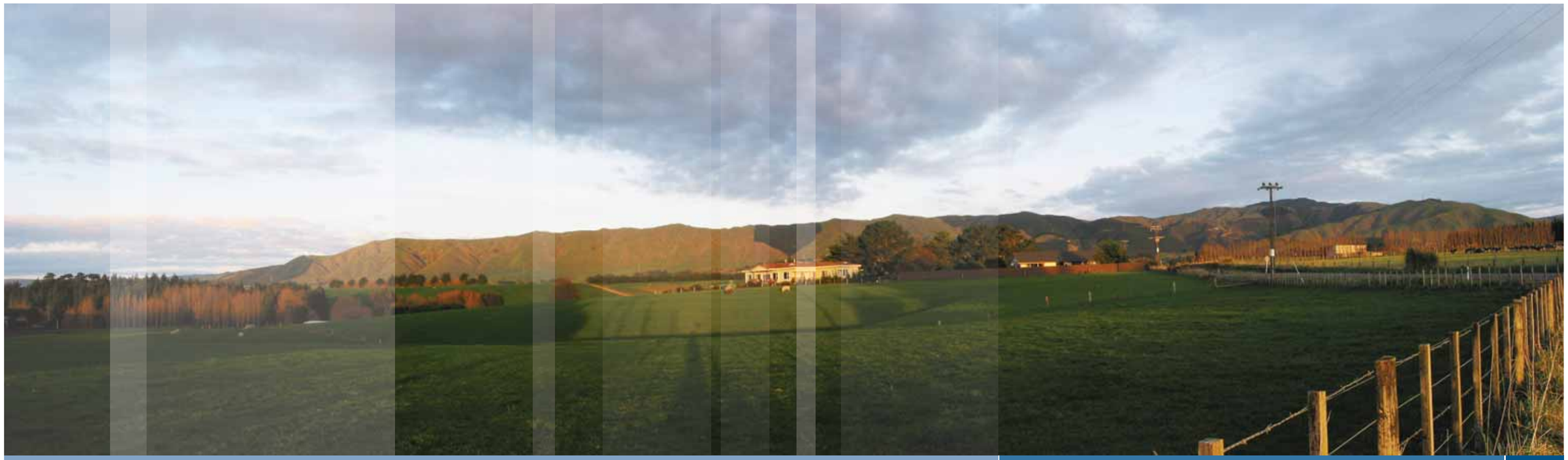
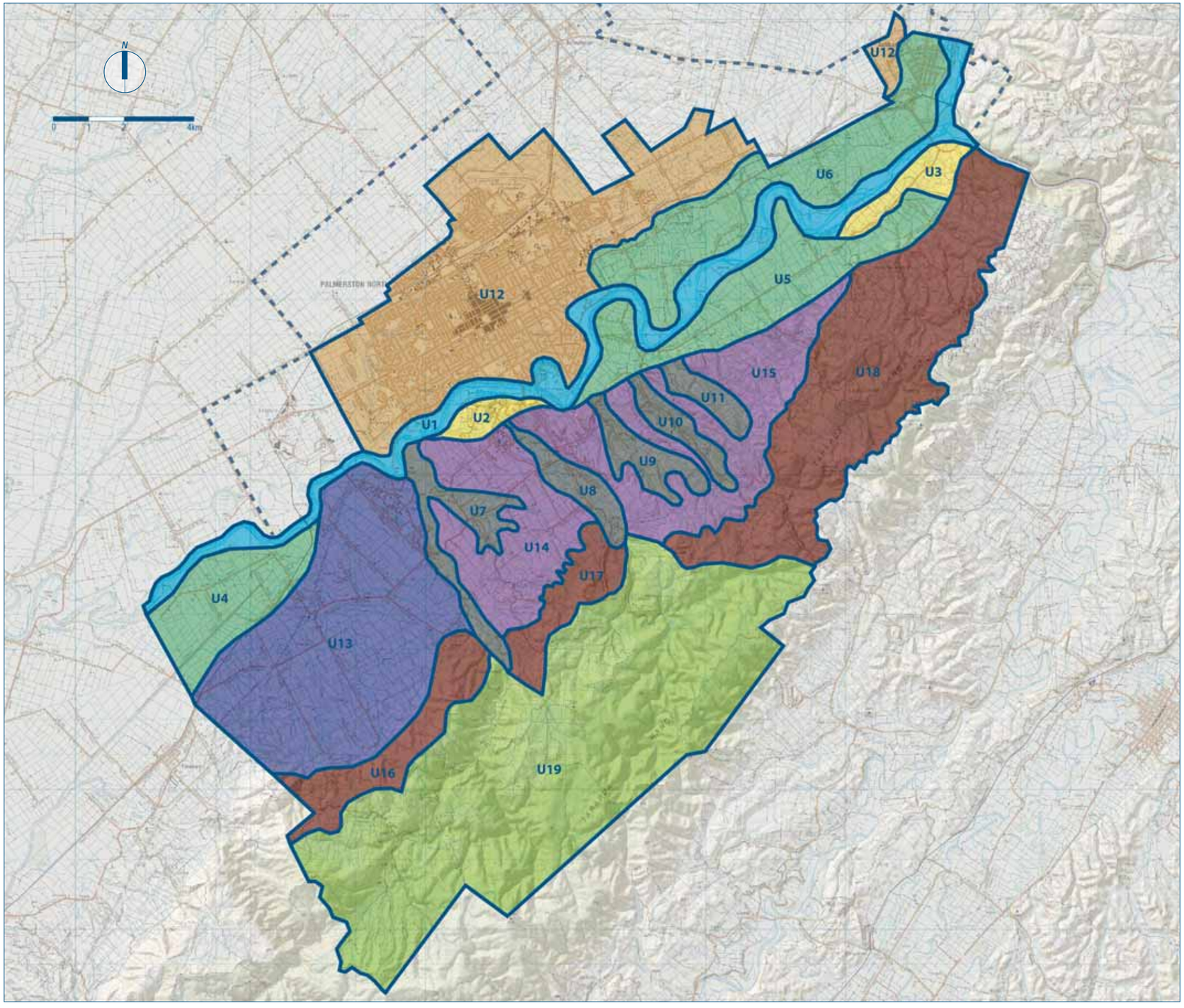


Figure 5: Slope categories



DESCRIPTION OF
LANDSCAPE UNITS



LEGEND

U1	Manawatu River
U2	Fitzherbert Bridge
U3	Manawatu Bridge
U4	Linton Drain
U5	Fitzherbert East
U6	Te Matai Flats
U7	Lower Kahuterawa
U8	Turitea Valley
U9	Moonshine Valley
U10	Lower Pahiatua Track
U11	Aokautere Stream
U12	Palmerston North City
U13	Linton Flats
U14	Central Elevated Flats
U15	Northern Elevated Flats
U16	Te Mata Slopes
U17	Ngahere Park Slopes
U18	Forest Hill Slopes
U19	Tararua Heights

Indicative future city boundary

NOTE:
Unit boundaries are indicative only, and will be refined and clarified in Stage 2 of the Landscape Study

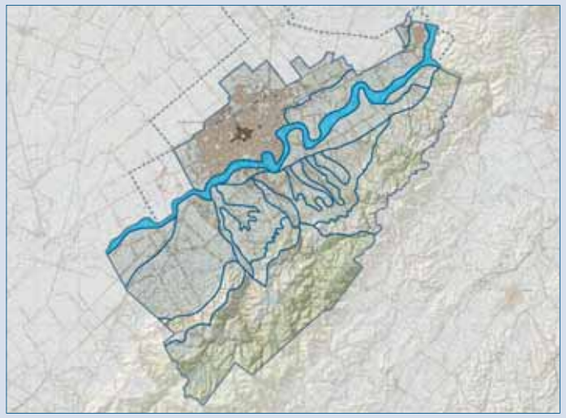
The Stage 1 inventory describes the landscape type, irrespective of its underlying planning zone. This map encompasses the entire area of Palmerston North City. Individual unit maps therefore do not differentiate between planning zones; the landscape character descriptions cover rural and residential areas

Figure 6: Palmerston North Landscape Units

UNIT 1

Manawatu River

River

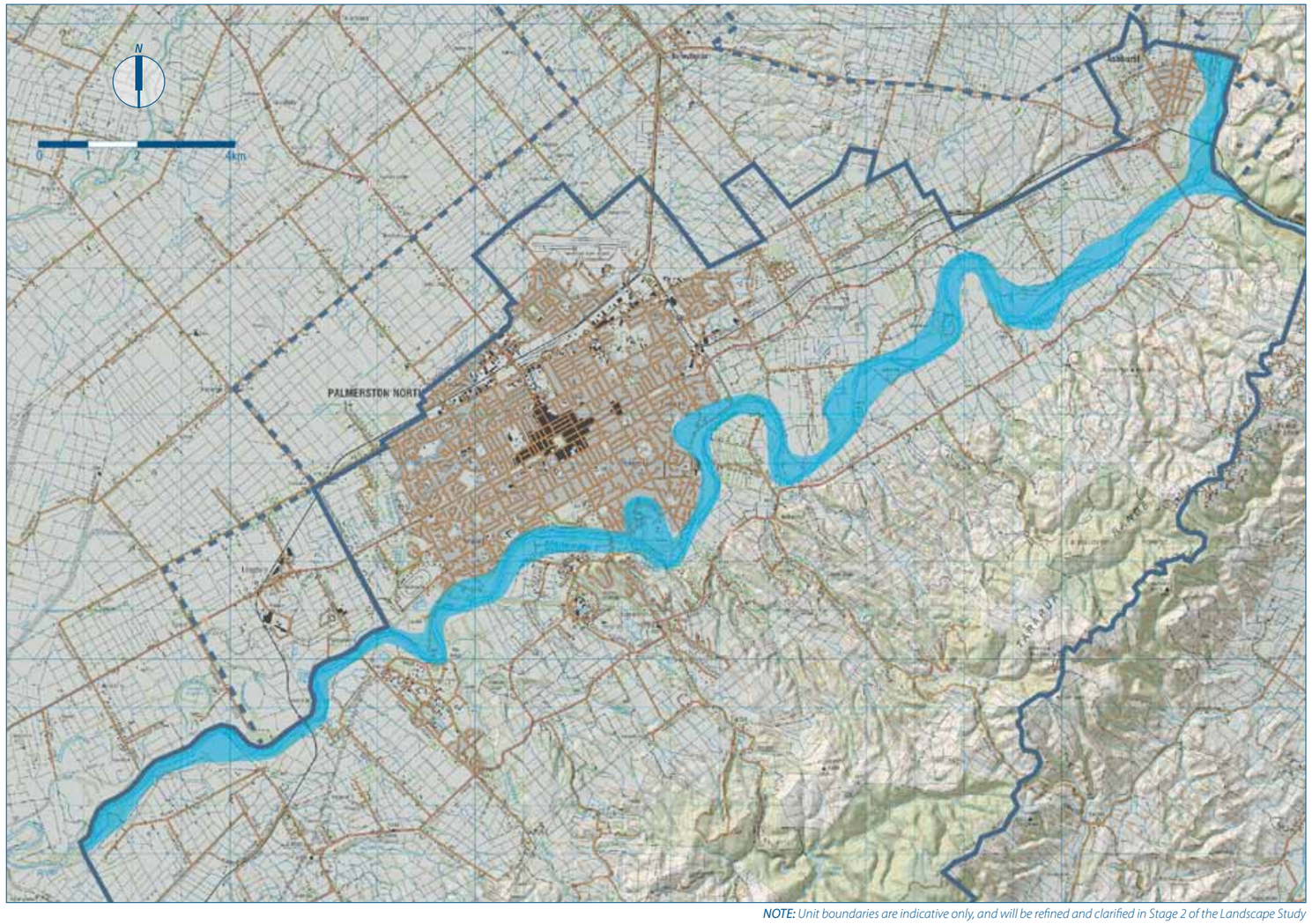


SENSE OF PLACE

The Manawatu River and the Tararua Ranges are the most distinctive landscape features within the district. For residents of the city however, the river is more immediate. The character of the river changes as it moves from the Manawatu Gorge through to Linton so the corridor is complex and varied. Distinctive river terraces reflect the river's earlier meanders and facilitate expansive views of the broad river environment.

Although the river channel is contained, the river has a strong presence in the city due to distinctive riverbank plantings, public walkways and stop-banks, the limitations it imposes on access around the district, and its function as a buffer between urban and rural sectors.

The river corridor, the river flats, and the river terraces are for the most part free of prominent structures so that nature predominates. Although visual connections with the river may be limited, the river is quite central to Palmerston North's landscape and identity.



NOTE: Unit boundaries are indicative only, and will be refined and clarified in Stage 2 of the Landscape Study

Community

- Residents district-wide
- Recreational users of the Riverside Walkway which extends along the River's edge, from Parklands through to Riverdale
- Local residents whose properties look onto the river eg Hokowhitu and Parklands
- Road users on Fitzherbert Avenue and Fitzherbert Bridge, State Highway 3 and Manawatu Bridge, Albert Street
- Residents of Summerhill and Atawhai whose properties directly overlook the Manawatu River

SENSITIVITY TO CHANGE	HIGH		LOW
Landscape complexity - topography	✓		
Landscape complexity - vegetation cover	✓		
Landscape complexity - modification	✓		
Visibility within the wider context (views in)	✓	variable	✓

LANDSCAPE CHARACTER DESCRIPTION

- The Manawatu River is the largest river in the lower North Island, which drains much of the central East Coast before flowing through the Manawatu Gorge then crossing the Lower Manawatu Plains to flow into the Tasman Sea at Foxton.
- Pohangina River flows into the Manawatu River at Ashhurst
- Manawatu Gorge is a regionally significant feature. As a gorge through an axial range, it forms the 'break' between the Ruahine Ranges and the Tararua Ranges

DEFINING CHARACTERISTICS

- Major regional river that feeds from and flows on beyond the district
- Stopbanks provide visual and physical containment
- Strong lines of riverbank willows
- No built structures other than two road bridges and one rail bridge; one rail bridge across Pohangina River
- Flows from a gorge out onto the plains, then follows a meandering course within a broader river channel

PATTERNS OF DEVELOPMENT

- Central natural river channel
- Artificial stopbanks and lines of flood protection plantings
- Grazed riverbanks upstream and downstream of Palmerston North City and on true left bank through the city; mown park-like margins on true right bank through the city

ECOLOGICAL AREAS 2002

- Centennial Lagoon Wetland (36)
- Esplanade Bush urban forest remant (61)
- Manawatu River river site (69)
- Buick Park urban forest remnant (82)
- MacRaes Bush urban forest remnant (85)

LANDSCAPE ATTRIBUTES

Natural Features and Legibility

- Numerous indigenous forest remnants; majority in Ashhurst area
- Distinctive river edge cliffs on left bank 2km upstream of Fitzherbert Bridge
- Manawatu Gorge is a regionally significant geographic feature

Cultural and Historic Associations

- The Manawatu River was the main highway for travel and communication in earlier times
- The river also supplied Rangitaane o Manawatu with valuable resources like fresh water, food, and of course mauri
- City riverbanks are a important recreational assest

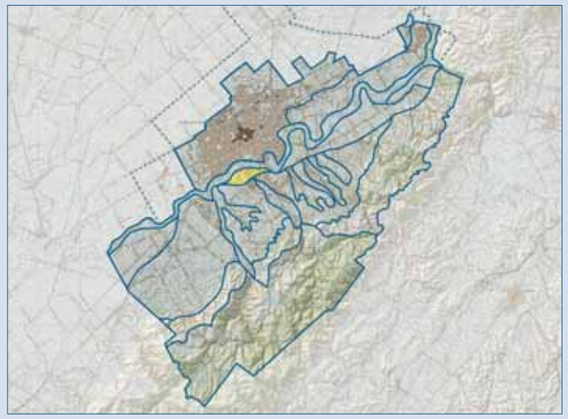
Aesthetics and Recognition

- Manawatu River is the most distinctive landscape feature within the district
- Manawatu Gorge is very distinctive due to its natural form, active geology and due to its narrow confines being in strong contrast with the open plains and rounded hill slopes

UNIT 2

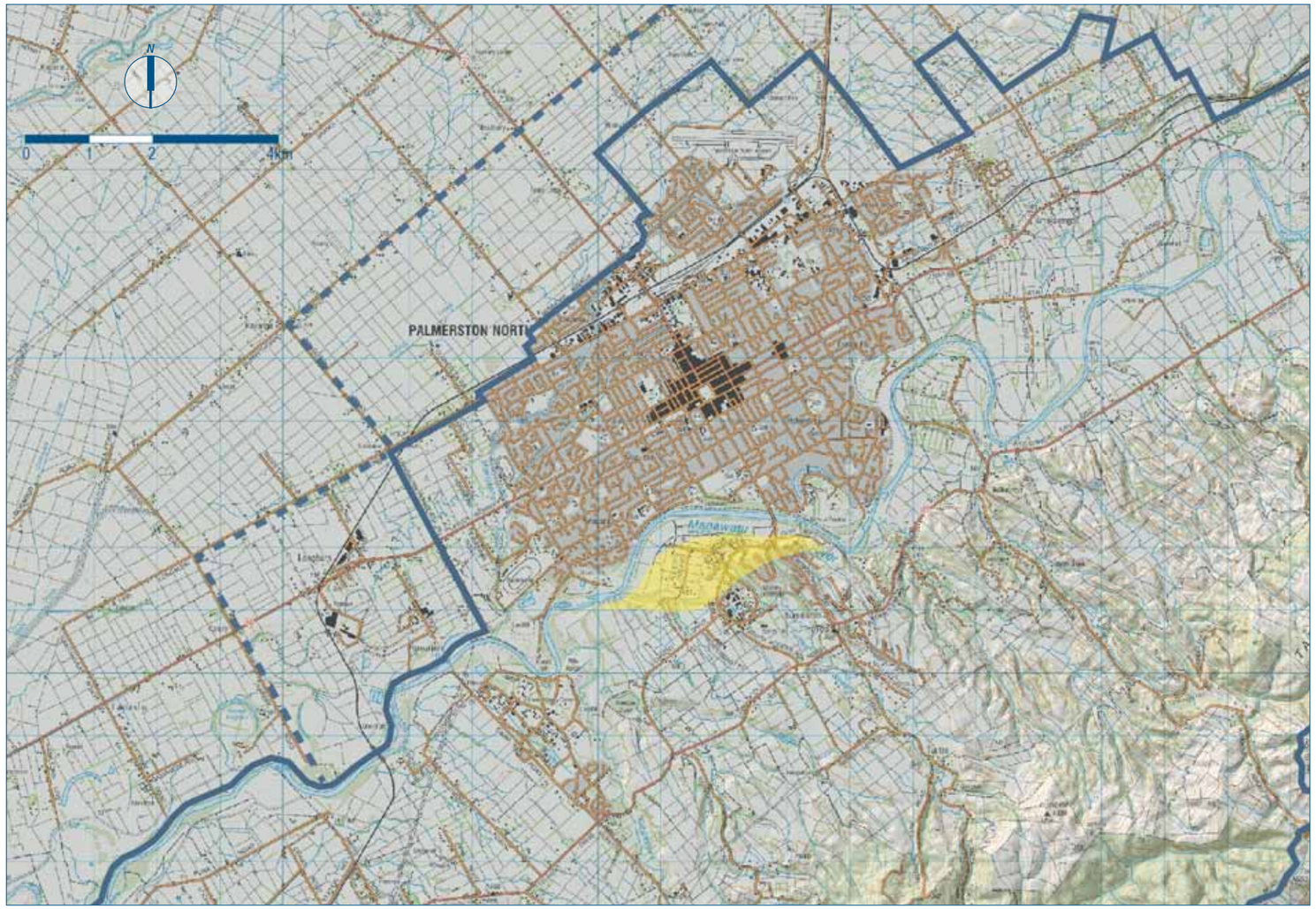
Fitzherbert Bridge

River Flat



SENSE OF PLACE

The unit is experienced as an expansive area of open space with a very natural character. The lush, pastoral landscape accentuates the sudden rural to urban transition at this gateway to the city. The river flat, part of the river corridor, provides a context for the Manawatu River, particularly when seen from the Manawatu Riverside Walkway and the Victoria Esplanade.



NOTE: Unit boundaries are indicative only, and will be refined and clarified in Stage 2 of the Landscape Study

Community

- Travellers on Fitzherbert Avenue, Bridge, Tennant and Summerhill Drives
- Staff, students and visitors to Massey University, both the Turitea Campus, the Fitzherbert Science Centre campus on Tennant Drive and the Hokowhitu Campus located on Centennial Drive.
- Visitors to the Victoria Esplanade, Fitzherbert Park and Anzac Park
- People recreating along the Manawatu Walkway (riverfront)
- Residents of Summerhill and Atawhai overlook the river

SENSITIVITY TO CHANGE	HIGH	LOW
Landscape complexity - topography	✓	
Landscape complexity - vegetation cover	✓	
Landscape complexity - modification		✓
Visibility within the wider context (views in)		✓

LANDSCAPE CHARACTER DESCRIPTION

- Low river flats immediately adjacent to the Manawatu River and contained to the south by a steep river terrace that runs southwest below Anzac Park and passed the
- Massey University Turitea Campus to Turitea Stream
- Flats are bisected by the southern approach ramps to the
- Fitzherbert Bridge, which crosses the Manawatu River
- and leads into Palmerston North City

VISIBILITY AND VISUAL AMENITY

- Directly visible from Fitzherbert Bridge and the northern extent of the two major arterials that feed onto the bridge – Tennent Drive and Summerhill Drive.
- Visual amenity is that of well managed river flat pasture and
- relatively diverse built forms and landscape treatment
- around the research faculties that bound onto Tennent Drive

DEFINING CHARACTERISTICS

- Low lying flats contained between the Manawatu River and the terrace faces below Summerhill and Massey University
- River flat paddocks with a distinct cluster of research and farm buildings
- Distinctive vegetated terraces that rise up to the adjoining elevated flat form the southern edge of this unit

PATTERNS OF DEVELOPMENT

- Central natural river channel
- Artificial stopbanks and lines of flood protection plantings
- Grazed riverbanks upstream and downstream of Palmerston North City and on true left bank through the city; mown park-like margins on true right bank through the city

ECOLOGICAL AREAS 2002

- Lower Turitea Stream rural forest remnant (31)

LANDSCAPE ATTRIBUTES

Natural Features and Legibility

- River flats are dominant feature
- Forms the open space between the city and the university
- Downstream extent of Turitea Stream flows along the base of the terrace at southwest extent of this unit

Cultural and Historic Associations

- A significant pa site Te Motu o Poutoa was located on an elevated terrace east of the Fitzherbert Bridge
- Open paddocks and farm sheds linked with agricultural research and development

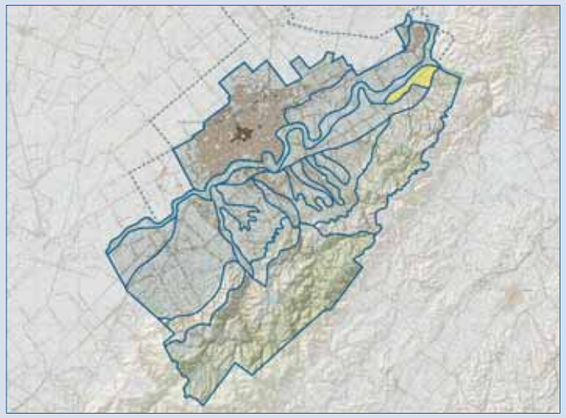
Aesthetics and Recognition

- Grazed paddocks, trimmed hedges and buildings of the agricultural research 'campus'
- Southern 'river crossing' entrance/exit to urban Palmerston North

UNIT 3

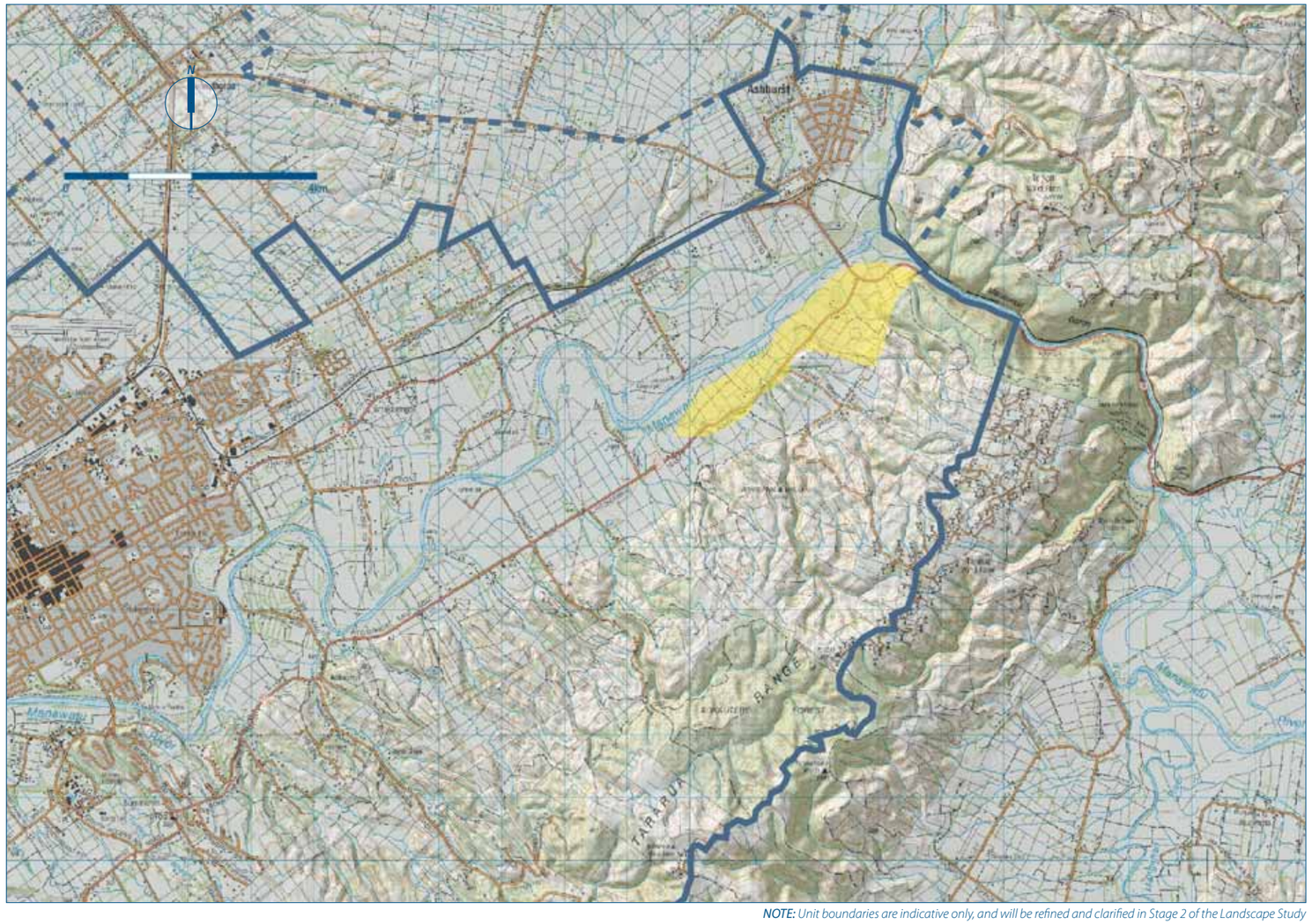
Manawatu Bridge

River Flat



SUMMARY DESCRIPTION

These broad fertile flats within the river corridor have been farmed for many years. The flats are distinguished by the mature shelterbelts and large trees, which give the unit a mature, stable and well-established rural character.



NOTE: *Unit boundaries are indicative only, and will be refined and clarified in Stage 2 of the Landscape Study*

Community

- Travellers on and SH57 and particularly SH3, entering and exiting the Manawatu Gorge
- Landowners within the unit
- Users of Ashhurst Domain, (which has some viewshafts to the river)

SENSITIVITY TO CHANGE	HIGH	LOW
Landscape complexity - topography	✓	
Landscape complexity - vegetation cover		✓
Landscape complexity - modification	✓	
Visibility within the wider context (views in)		✓

LANDSCAPE CHARACTER DESCRIPTION

- Low lying area that is intensively farmed
- Contained by the Manawatu River to the west and a
- distinct terrace to the east and south
- Northern portion of the unit is bisected by SH57A
- which then follows along the terrace face in the
- southern portion of the unit
- Has a significant role as a national/regional roading junction and is visually dominated by the Manawatu Bridge, State Highway 3 and 57, and associated roading infrastructure, including signage
- Serves as an access point (via State Highway 57 Fitzherbert Road East) to the City's Windfarms

VISIBILITY AND VISUAL AMENITY

- Directly visible from the eastern approach to SH3
- Manawatu Bridge and from northern extent of SH57A
- Visual amenity is that of well managed farmland

DEFINING CHARACTERISTICS

- Broad, fertile river flats on true left bank of river
- Established, large tree plantings
- Prone to flooding

PATTERNS OF DEVELOPMENT

- Developed farmland with established plantings of large trees and shelterbelts
- Relatively few buildings
- Two sections of highway; no local roads

ECOLOGICAL AREAS 2002

- No Ecological Areas

LANDSCAPE ATTRIBUTES

Natural Features and Legibility

- Open sections of river flat and the terrace face forming the eastern edge of the unit are the most obvious natural features and, along with the established trees, define its legibility

Cultural and Historic Associations

- This area was known traditionally for its hinau berries which were harvested regularly by Rangitaane o Manawatu
- The two highways and the adjacent crossing of the Manawatu River and the link to the Manawatu Gorge define the historic context of the unit

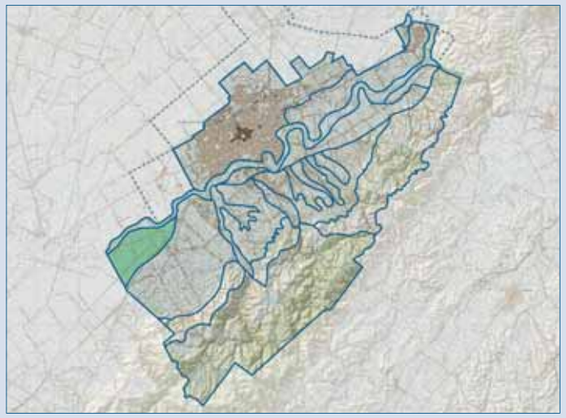
Aesthetics and Recognition

- Northeast 'gateway' to the district

UNIT 4

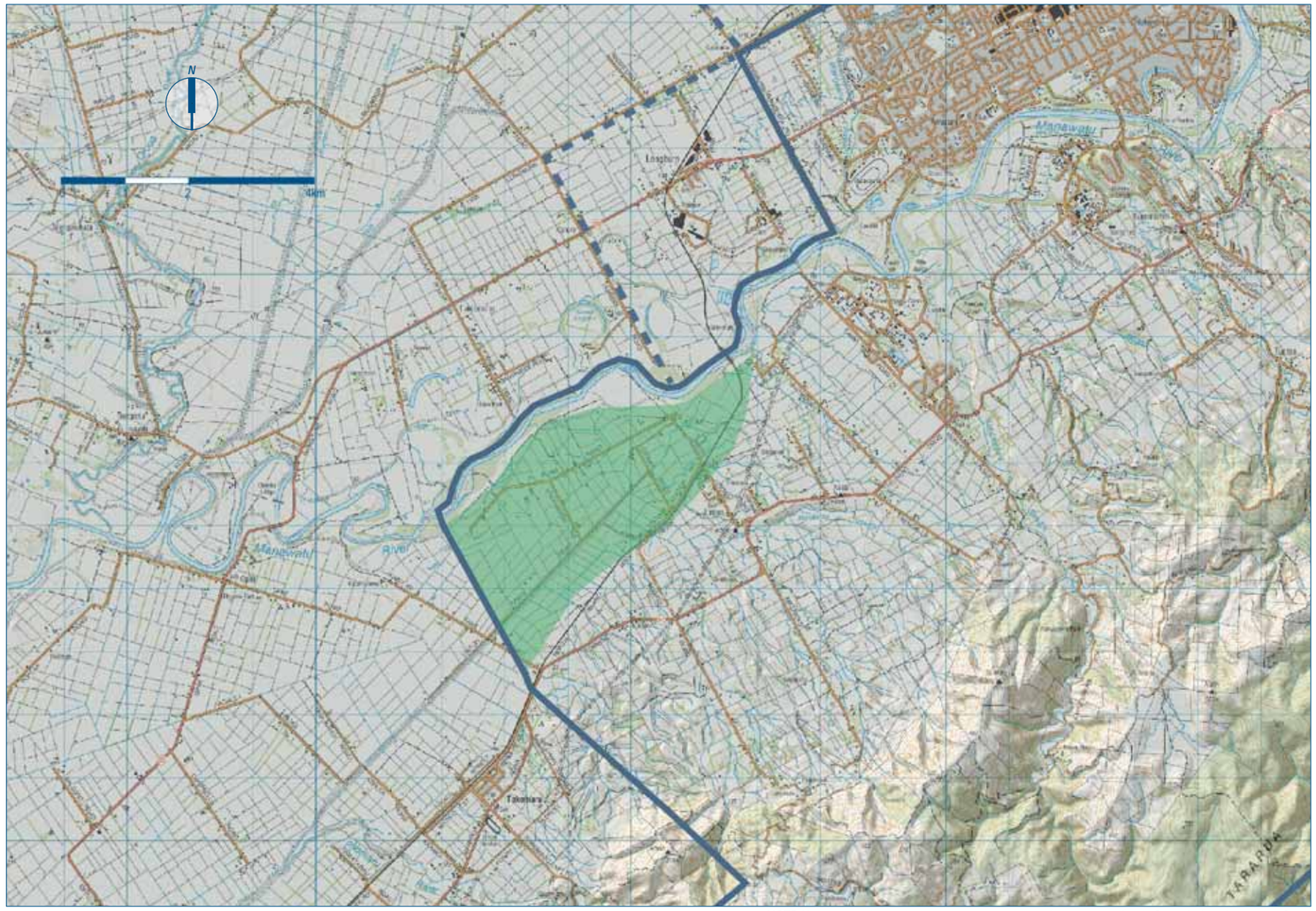
Linton Drain

Lower Flat



SENSE OF PLACE

The Linton lower flat, is an open, expansive, productive landscape. Stop-banks protect this low-lying farmland from the meandering Manawatu River and its periodic flooding. Its history is made legible by the overlying large-scale pattern of drainage channels, roads and shelterbelts that criss-cross the landscape. The largest drainage channel is the known as the Linton Drain.



NOTE: Unit boundaries are indicative only, and will be refined and clarified in Stage 2 of the Landscape Study

Community

- Local rural landowners
- Linton School on perimeter
- Visible from the NIMT which runs along the southern boundary of the unit

SENSITIVITY TO CHANGE	HIGH	LOW
Landscape complexity - topography	✓	
Landscape complexity - vegetation cover	✓	
Landscape complexity - modification	✓	
Visibility within the wider context (views in)		✓

LANDSCAPE CHARACTER DESCRIPTION

- Low lying, expansive area that is intensively farmed;
- predominately dairying
- Predominance of linear roads, drains and shelterbelts
- Several small remnant stands of native forest appear
- as isolated 'islands' within the expanse of pasture

VISIBILITY AND VISUAL AMENITY

- A flat and relatively featureless area
- North Island Main Trunk Railway traverses southwest to north west
- Various local access roads

DEFINING CHARACTERISTICS

- Extensive, open flat pasture
- Numerous deep drainage channels
- Expansive views
- Unit extends south-west beyond PNCC boundary

PATTERNS OF DEVELOPMENT

- Intensive pastoral agriculture

ECOLOGICAL AREAS 2002

- No Ecological Areas

LANDSCAPE ATTRIBUTES

Natural Features and Legibility

- Several pockets of remnant forest and various wetlands

Cultural and Historic Associations

- This drainage area once provided a large amount of food resources for the iwi. There were also many natural occurring lagoons and swamps which were associated with early Rangitaane kainga and pa sites
- Te Puna Homestead notable due to its distinctive built form and established shelter and garden planting

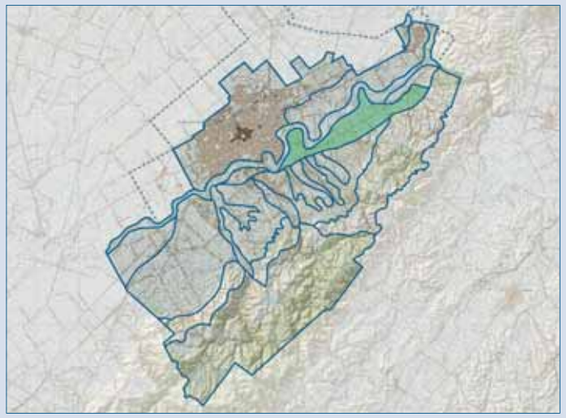
Aesthetics and Recognition

- Simple, open landscape with numerous straight lines of roads and drains

UNIT 5

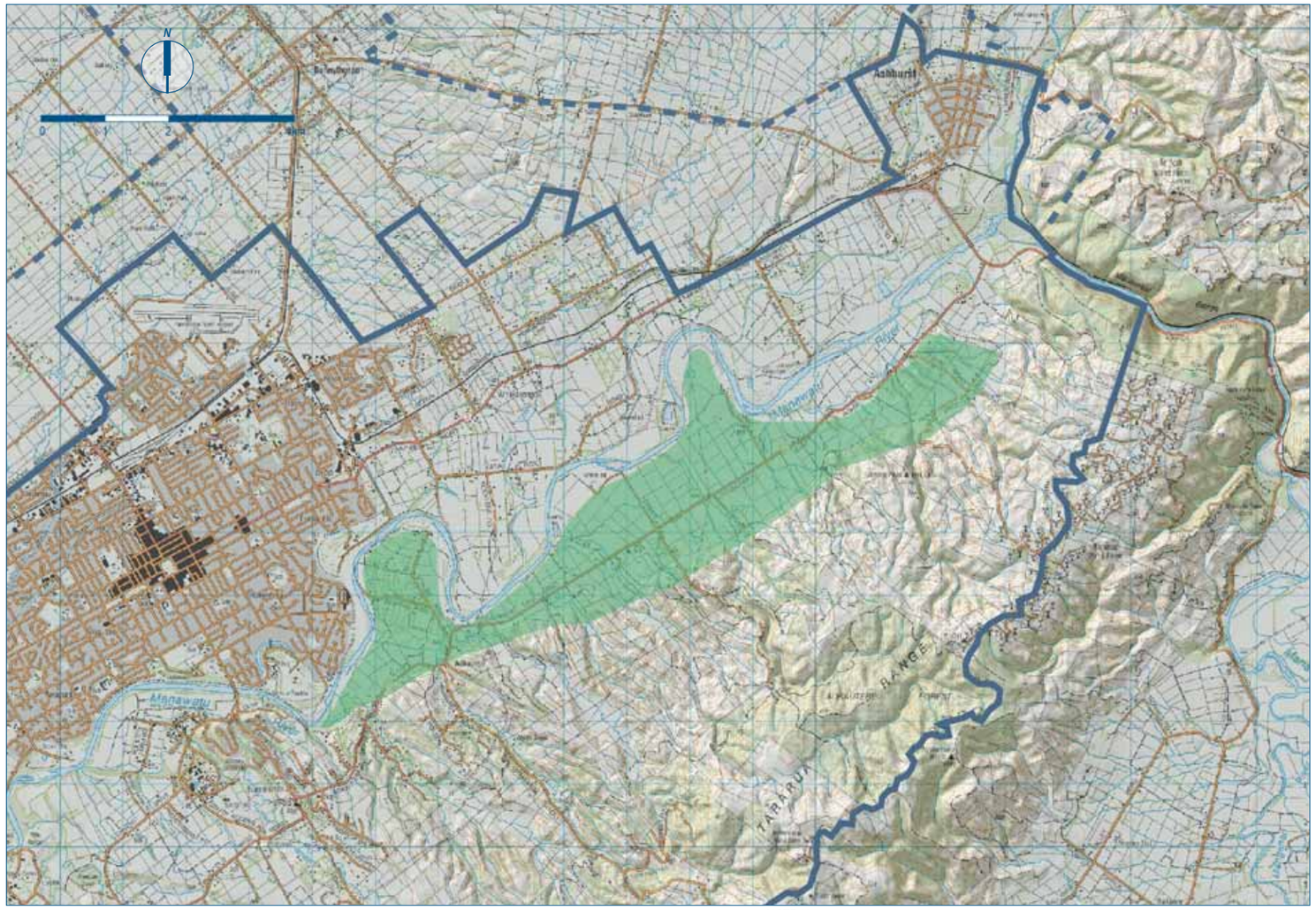
Fitzherbert East

Lower Flat



SENSE OF PLACE

This flat, open land is slightly elevated above the river but still part of the wider river landscape. The long established rural area combines a mix of traditional New Zealand farm holdings with 'English' patterns of shelter and farmhouse plantings to create a managed productive landscape. From State Highway 57 this landscape is experienced as expansive, with periodic vistas across the fl ats to the Manawatu River and the Tararua Ranges.



NOTE: *Unit boundaries are indicative only, and will be refined and clarified in Stage 2 of the Landscape Study*

Community

- Travellers on SH57 and SH3
- Local landowners
- Recreational users including recreational fishers

SENSITIVITY TO CHANGE	HIGH	LOW
Landscape complexity - topography	✓	
Landscape complexity - vegetation cover		✓
Landscape complexity - modification	✓	
Visibility within the wider context (views in)		✓

LANDSCAPE CHARACTER DESCRIPTION

- Open flats slightly elevated about the true left bank of the Manawatu River; a long, linear unit between the river and the hills
- Intensively farmed for dairying, cropping and beef-fattening
- Open paddocks with trimmed thorn hedges; shelterbelts predominantly bound local roads; mature tree plantings around farm houses
- Extensive horticultural-type shelterbelt plantings at southern end of flats at Staces Road

VISIBILITY AND VISUAL AMENITY

- Highly visible from SH57A
- Few local roads; most are no-exit running perpendicular to highway
- Views to the Tararua Ranges rising immediately to the east, to the Te Rere Hau Wind Farm, to the Tararua
- Wind Farm, to the Te Apiti Wind Farm north of the Manawatu Gorge and to the Ruahine Ranges beyond

DEFINING CHARACTERISTICS

- Broad, fertile flats between river and hills, bisected by SH57A
- Distinctive terraces that rise up to the adjoining elevated flats form the southeast edge to much of this unit
- Open pasture with areas of established shelter plantings associated with roads and farm houses
- Views to ranges and wind farms

PATTERNS OF DEVELOPMENT

- Rural landuse in relatively large, traditional farm holdings; some lifestyle blocks in the southern end of the unit

ECOLOGICAL AREAS 2002

- Gardiners Road rural forest remnant (79)

LANDSCAPE ATTRIBUTES

Natural Features and Legibility

- Occasional pockets of indigenous vegetation confined to stream banks

Cultural and Historic Associations

- This area is associated with the arrival of Rangitaane into the Manawatu
- Remnants of Aokautere soil conservation nursery in Staces Road area

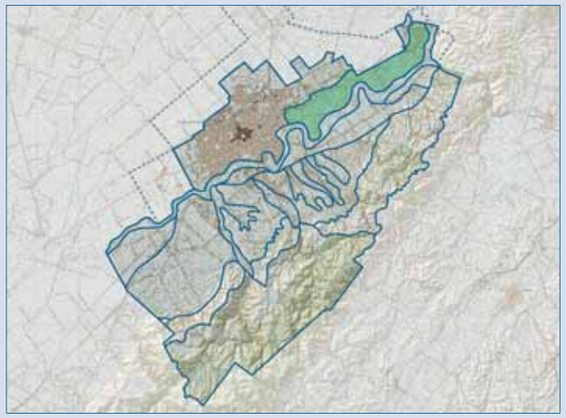
Aesthetics and Recognition

- Managed productive agricultural landscape

UNIT 6

Te Matai Flats

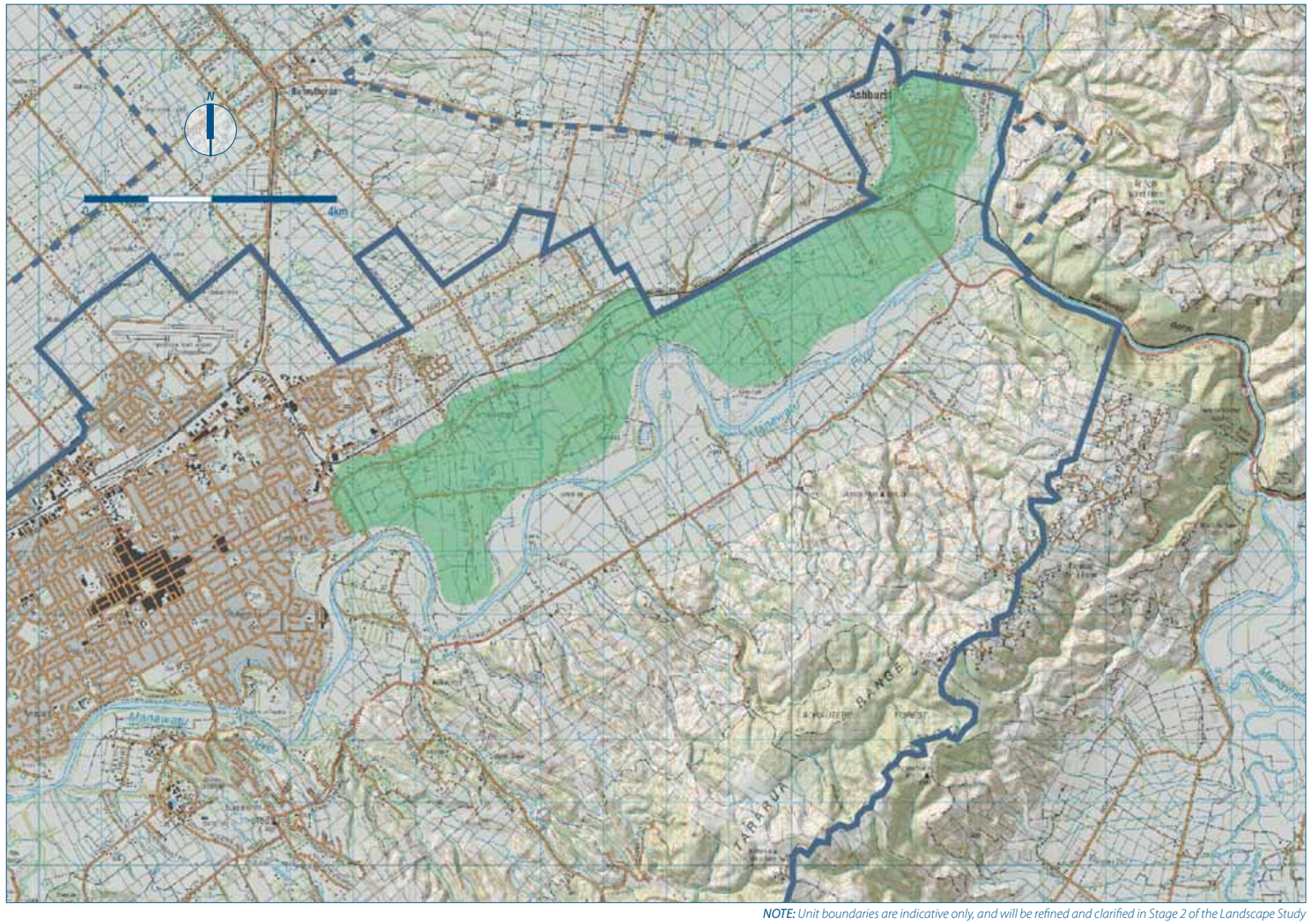
Lower Flat



SENSE OF PLACE

The rich fertile land has a long history of settlement and intensive horticultural use, despite being relatively low lying and subject to flooding. The flats provide a rural gateway to the city for travellers from Napier and the Wairarapa and a distinctive rural buffer between Ashhurst and Palmerston North.

The river terrace to the immediate north of State Highway 3 and the Railway (Palmerston North-Gisborne Line) provides a sense of containment so that views for travellers are directed across the river flats and out to the Tararua Ranges through 'windows' in shelterbelts. The landscape is very coherent at the broad scale with great diversity and interest locally. The intensive horticultural production in particular is associated with activity and a sense of vibrancy.



NOTE: *Unit boundaries are indicative only, and will be refined and clarified in Stage 2 of the Landscape Study*

Community

- Landowners and residents of Ashhurst and Kelvin Grove on elevated terraces, overlooking Te Matai Road (SH3) and the productive rural riverflats
- Travellers on SH3, and users of the Palmerston North-Gisborne Rail Line
- Local rural landowners and residents including market gardeners and nurseries
- Gravel extraction operators
- Recreational users -the Manawatu River Walkway and Bridle Track
- Brookfields Park Golf Course users
- Whakarongo School and school community

SENSITIVITY TO CHANGE	HIGH	LOW
Landscape complexity - topography	✓	
Landscape complexity - vegetation cover		✓
Landscape complexity - modification		✓
Visibility within the wider context (views in)		✓

LANDSCAPE CHARACTER DESCRIPTION

- Open flats slightly elevated about the true right bank of the Manawatu River; a long, linear unit between the river and a terrace that rises to the northwest
- Relatively low lying area that is intensively farmed for dairying and cropping with some market gardening
- Numerous shelterbelts, hedges and established tree plantings around farm houses
- Ashhurst – a small country town (~3,500 pop.) with views to the Ruahine Ranges, Manawatu Gorge and the wind farms on both sides of the gorge; gateway to the Pohangina Valley
- Ribbon urban development from Whakaronga south to city edge

VISIBILITY AND VISUAL AMENITY

- Directly visible from SH3 and from PN-Gisborne railway, which traverse the western extent of the unit
- Various local roads; many running perpendicular to the highway
- Higher ground at the Ashhurst end of the unit allows views across the flats
- Shelterbelts and hedges provide varying degrees of enclosure
- Southern outskirts of Ashhurst are directly visible to SH3
- Ashhurst has a pleasant 'small country town' ambience

DEFINING CHARACTERISTICS

- Broad, fertile alluvial flats between SH3 and Manawatu River
- Closely subdivided farmland with a strong pattern of shelterbelts and hedges
- Ashhurst being a small country town
- Areas in the downstream extent close to Palmerston North are prone to flooding
- Distinctive vegetated terraces that rise up to the adjoining Manawatu Plain form the northwest edge of this unit

PATTERNS OF DEVELOPMENT

- Rural landuse in traditional farm holdings, but being broken down into lifestyle blocks closer to the urban centres
- Ashhurst forms a small urban centre
- Ribbon urban development on northern highway approach to Palmerston North City

ECOLOGICAL AREAS 2002

- Riverside Drive Oxbow wetlands (1)
- Napier Road escarpment reverting bush area (4)
- Kohlers Totara Block rural forest remnant (6)
- Brookfields Park Golf Course rural forest remnant (11)
- Kohlers Road rural forest remnant (49)
- Ashhurst Oxbow Escarpment riparian area (68)
- Ashhurst Domain rural forest remnant (70)

LANDSCAPE ATTRIBUTES

Natural Features and Legibility

- Drainage channels and remnant oxbow lakes
- Ashhurst Domain and established indigenous tree and shrub plantings forms a buffer between the highway and the town
- Terrace face on northwest edge provides containment and a local visual backdrop

Cultural and Historic Associations

- This area was traditionally heavily settled with numerous Rangitaane settlements.
- Early land negotiations with the Crown occured in the area, namely at Raukawa pa
- Village of Ashhurst established in the late 1870's by the English Emigrant and Colonists' Aid Corporation
- Rich soils of the flats have a history of intensive cropping and market gardening

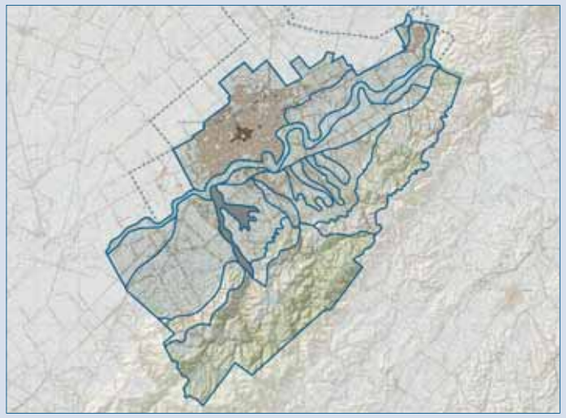
Aesthetics and Recognition

- Provides a rural 'introduction' to Palmerston North City from the north
- Positive rural outlook to adjoining small holdings to the north, the Pohangina Valley and the ranges beyond

UNIT 7

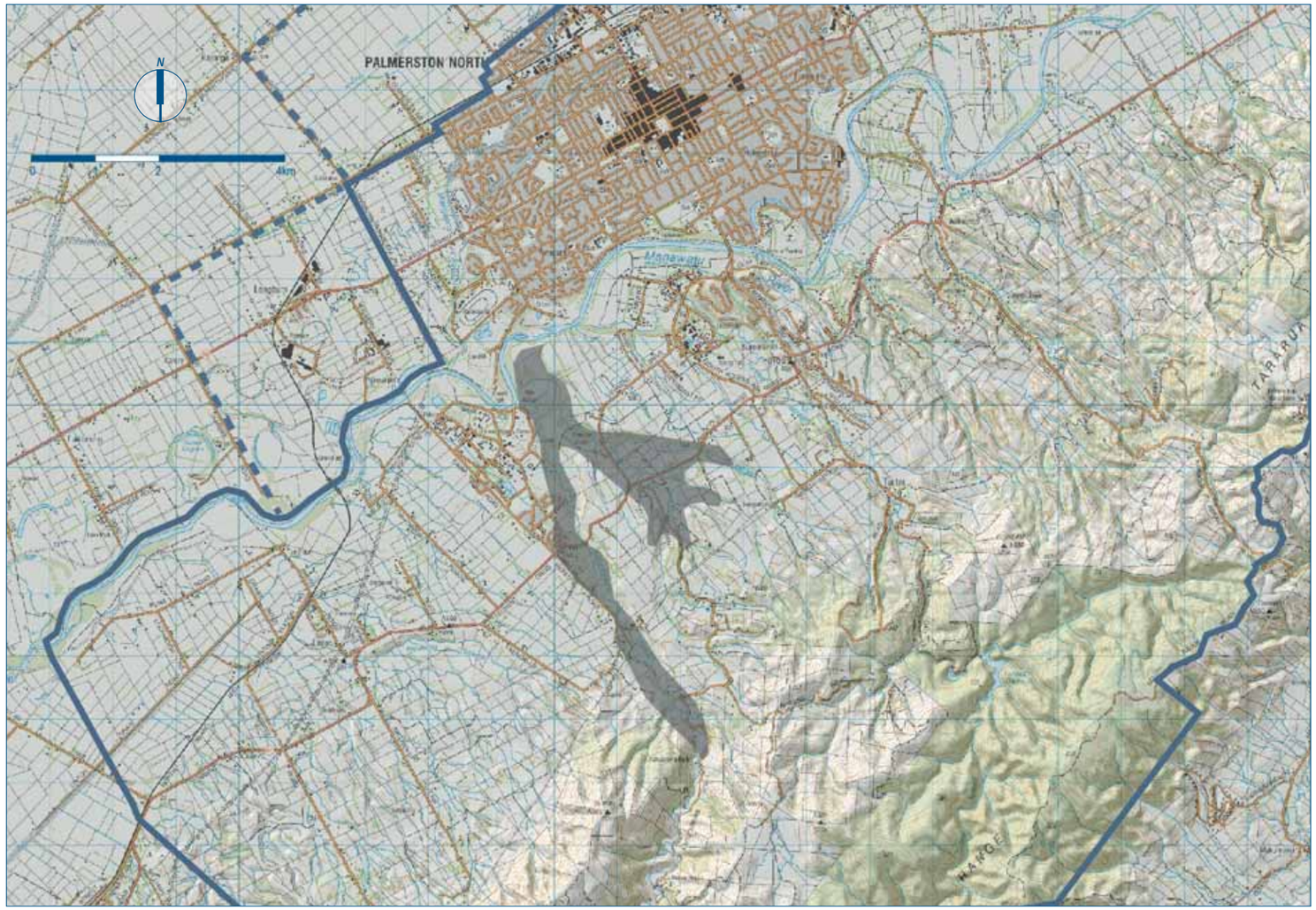
Lower Kahuterawa

Local Valley



SUMMARY DESCRIPTION

Kahuterawa Valley is a branched valley, mainly pastoral but with small plantations and numerous pockets of bush. The complex valley landscape is dissected by Old West Road (SH 57) and Tennant Drive; earthworks associated with the upgrade of these two major roads have changed the visual and physical integrity of the valley landform, severing the natural flow of the valley floor with the road becoming the dominant visual element. Nevertheless the valley retains a distinctive rural character with, for the most part, well integrated and low impact structures set within a diverse mix of trees and shrubs.



NOTE: Unit boundaries are indicative only, and will be refined and clarified in Stage 2 of the Landscape Study

Community

- Local residents in Old West Road and lower Kahuterawa Valley
- Recreational users enroute to Kahuterawa Valley and Sledge Track
- Travellers on Old West and Kahuterawa Valley Roads

SENSITIVITY TO CHANGE	HIGH		LOW
Landscape complexity - topography		✓	
Landscape complexity - vegetation cover		✓	
Landscape complexity - modification	✓	✓	
Visibility within the wider context (views in)	✓	variable	✓

LANDSCAPE CHARACTER DESCRIPTION

- Distinct incised valley with two branches within the Central Elevated Flats unit
- Kahuterawa Stream flows through the southern branch; this branch and lower catchment contains small pine plantations and various areas of remnant indigenous vegetation
- Keebles Stream flows through the open farmland of the north branch and then through Keebles Bush, a distinct stand of mature native bush

VISIBILITY AND VISUAL AMENITY

- SH57 and Old West Road traverse the unit
- The cover of bush, plantation and associated rank growth within much of this small valley is a contrast to the more managed landscape of the adjoining unit
- Few houses within valley; mainly in Old West Road

DEFINING CHARACTERISTICS

- Valley form; rounded valley slopes
- Small, separate stands of bush
- Numerous areas of indigenous vegetation for what is a relatively small unit

PATTERNS OF DEVELOPMENT

- Rural with areas of native bush and exotic plantation

ECOLOGICAL AREAS 2002

- Linton Hall Bush rural forest remnant (16)
- Linton Camp Bush urban forest remnant (18)
- Kahuterawa Stream site 5 river site (55)
- Keebles Bush rural forest remnant (56)
- Keebles Stream river site (58)
- Kahuterawa Flat rural forest remnant (74)

LANDSCAPE ATTRIBUTES

Natural Features and Legibility

- Stream channels and areas of native bush
- Valley distinct larger scale relative to drainage pattern/streams of adjoining unit

Cultural and Historic Associations

- This was an area of resource gathering as well as traditional crossings to the east and communication
- Close proximity to former major Rangitaane Maori village known as Te Kairanga and to Manawatu River, so likely to have strong cultural and historic associations

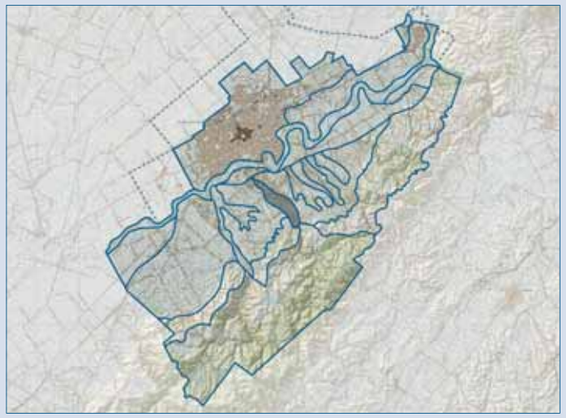
Aesthetics and Recognition

- Contrast of areas of native bush and exotic plantation with adjoining managed pasture Valley form

UNIT 8

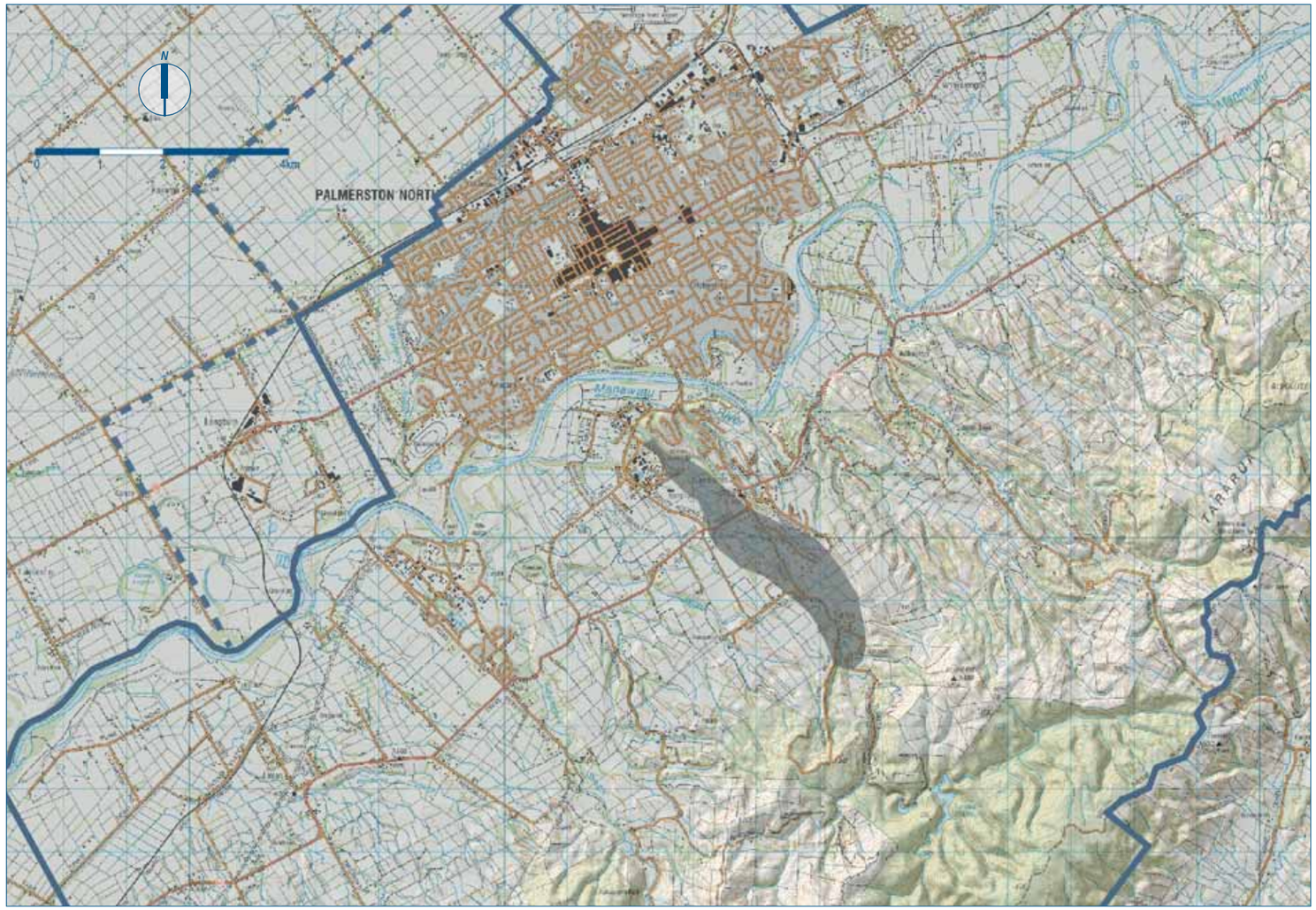
Turitea Valley

Local Valley



SENSE OF PLACE

The Turitea Valley is a well-defined, shallow valley with Turitea Stream and Turitea Road running along the valley floor. The valley has a history of low intensity settlement, now supplemented by pockets of more intensive rural residential and lifestyle development to create a fragmented but densely planted and intimate landscape. In spite of this intensification the rural and natural character of the valley remains and the planting has added interest and diversity to the visual landscape.



NOTE: Unit boundaries are indicative only, and will be refined and clarified in Stage 2 of the Landscape Study

Community

- Residents of Valley Views
- Residents of Ngahere Park (although the subdivision itself is outside the unit)
- Massey Turitea Campus on perimeter
- Travellers on Old West Road
- Residents of Pacific Drive who overlook the valley

SENSITIVITY TO CHANGE	HIGH	LOW
Landscape complexity - topography		✓
Landscape complexity - vegetation cover	✓	
Landscape complexity - modification	✓	
Visibility within the wider context (views in)	✓	

LANDSCAPE CHARACTER DESCRIPTION

- Relatively broad, linear valley that separates the Central Elevated Flats unit from the Northern Elevated Flats unit
- Local access road serves upper portion of the valley
- Intensive pastoral farming in lower and upper valley
- Lower valley includes Massey University sports fields
- Established lifestyle blocks and rural-residential subdivision in upper portion of valley
- Numerous plantings of amenity, shelter, and woodlot tree species throughout valley
- Occasional pockets of indigenous vegetation
- High voltage transmission line crosses midpoint of valley

VISIBILITY AND VISUAL AMENITY

- Lower end of valley visible from Massey University
- Turitea Campus and its southern access road
- Mid section of valley visible from Old West Road
- Majority of valley visible from Turitea Road
- Scale and diversity of valley provides a positive visual amenity

DEFINING CHARACTERISTICS

- Broad, shallow valley
- Numerous stands/belts and specimens of mature exotic and native trees
- Established small-holdings/lifestyle blocks and various more recent rural-residential subdivisions

PATTERNS OF DEVELOPMENT

- Rural landuse with intensive pastoral farming and lifestyle blocks
- Rural-residential development common
- Developing ecological and walkway 'connections' via Green Corridors revegetation project

ECOLOGICAL AREAS 2002

- Kereru Drive Bush rural forest remnant (9)
- Bledisloe Park urban forest remnant (33)

LANDSCAPE ATTRIBUTES

Natural Features and Legibility

- Two areas of notable indigenous vegetation
- Distinct broad, shallow valley
- Turitea Stream

Cultural and Historic Associations

- Traditional Rangitaane track located in the area which linked up with the Pahiatua track

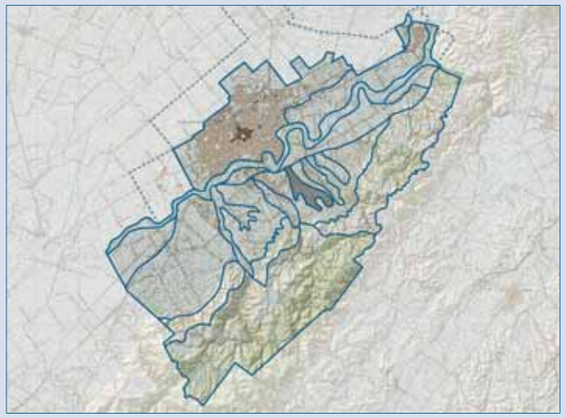
Aesthetics and Recognition

- Degree of containment, scale and diversity of landuse and land cover provide ready recognition

UNIT 9

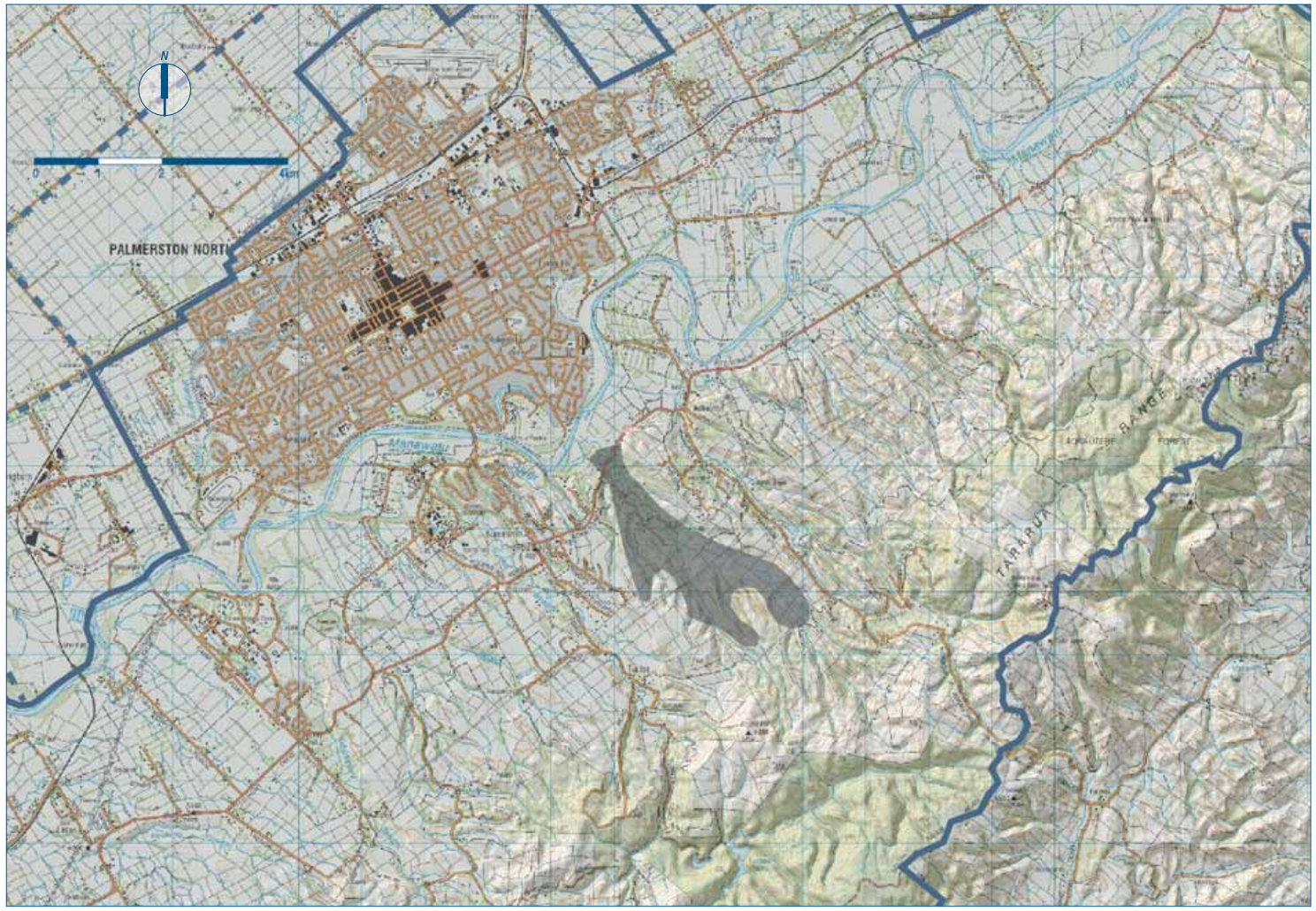
Moonshine Valley

Local Valley



SENSE OF PLACE

This small, incised valley branches out in the upper reaches of the catchment. Rural residential development at the lower end of the valley has resulted in a landscape of two distinct parts: an open pastoral landscape in the upper valley and an intensive cover of indigenous revegetation, woodlots and amenity planting in the lower valley. The valley is contained so that there is a strong sense of intimacy and privacy with dwellings integrated into a matrix of trees and shrubs. The upper valley lies beyond the public road.



NOTE: *Unit boundaries are indicative only, and will be refined and clarified in Stage 2 of the Landscape Study*

Community

- Local residents of Moonshine Valley Road community
- Users of Council Reserves in the Valley: Tutukiwi Reserve and Moonshine Valley Reserve.

SENSITIVITY TO CHANGE	HIGH	LOW
Landscape complexity - topography	✓	
Landscape complexity - vegetation cover	✓	
Landscape complexity - modification	✓	
Visibility within the wider context (views in)		✓

LANDSCAPE CHARACTER DESCRIPTION

- Relatively incised valley that sits within the broader Northern Elevated Flats unit; broadens into three branches upslope
- Local access road serves lower end of the valley
- Established rural-residential subdivision in lower valley
- Extensive pastoral farming in upper valley
- Numerous plantings of amenity, shelter, and woodlot tree species in lower end of valley
- Various areas of indigenous vegetation
- High voltage transmission line crosses midpoint of valley

VISIBILITY AND VISUAL AMENITY

- Lower end of valley visible from access road – Moonshine Valley Road; views contained by vegetation
- Parts of upper valley visible from SH57A/Aokautere Road

DEFINING CHARACTERISTICS

- Narrow valley that broadens out
- Established rural-residential subdivision
- Various stands of mature exotic and indigeonous vegetation in lower valley
- Extensive pastoral farming in upper valley

PATTERNS OF DEVELOPMENT

- Rural landuse with extensive pastoral farming
- Rural-residential development
- Developing ecological and walkway 'connections' via Green Corridors revegetation project

ECOLOGICAL AREAS 2002

- Moonshine Valley Reserve rural forest remnant (10)
- Tutukiwi Reserve rural forest remnant (23)

LANDSCAPE ATTRIBUTES

Natural Features and Legibility

- Numerous areas of indigenous vegetation
- Distinct valley landscape

Cultural and Historic Associations

- This area and the two adjoining valleys to the north were generally known as the entrance point to the Manawatu by Tawhakahiku and Mangere - descendents of Whatonga and as an alternative transportation route between the east and west

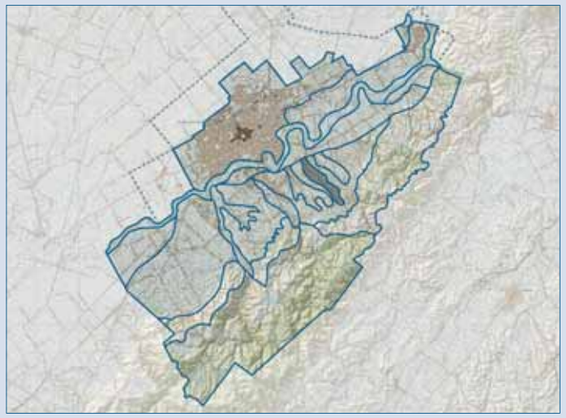
Aesthetics and Recognition

- Distinct valley system
- Pattern of established residences and plantings

UNIT 10

Lower Pahiatua Track

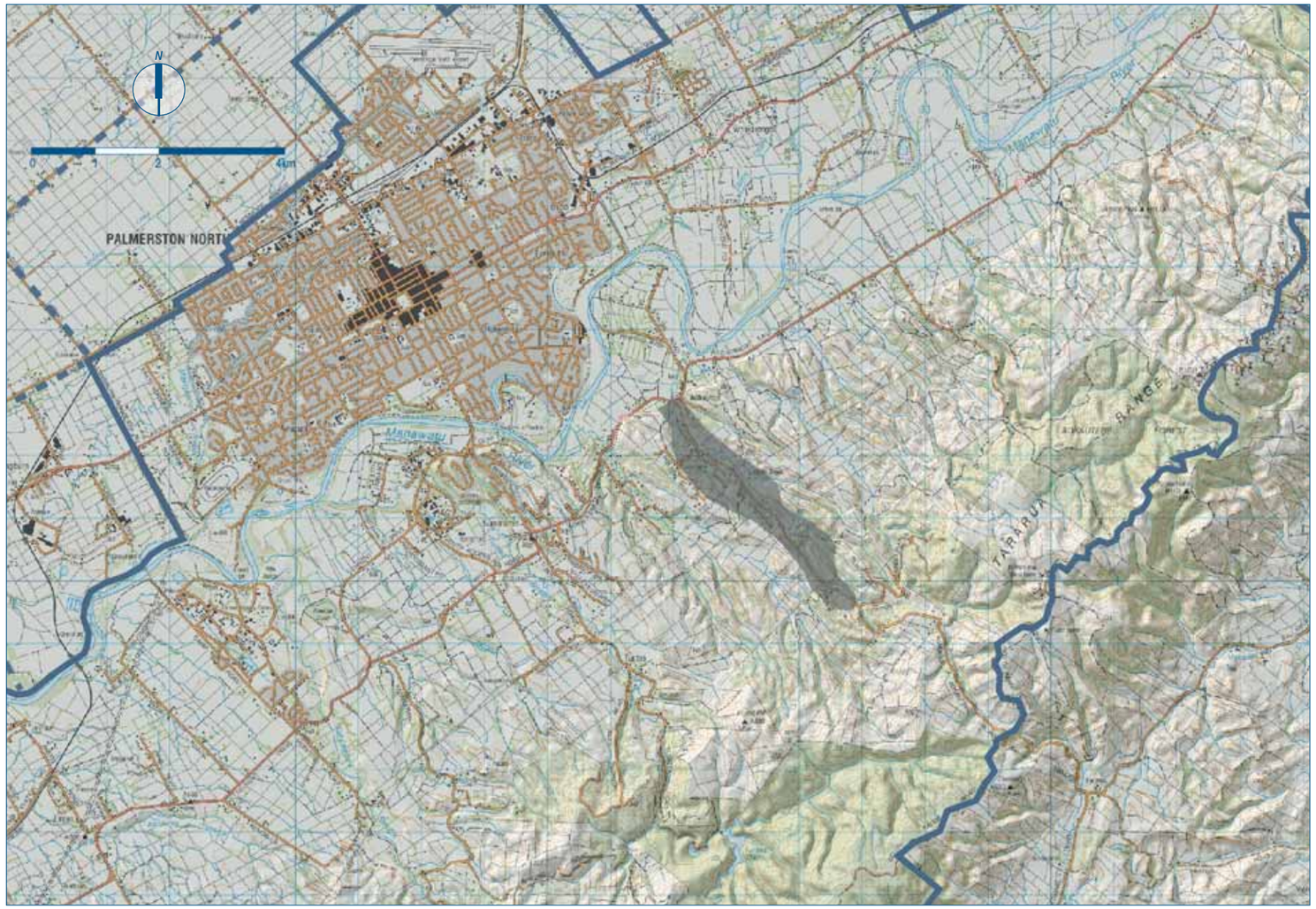
Local Valley



SENSE OF PLACE

This deeply incised, narrow valley forms the lower end of the Pahiatua Track, which has been settled since Palmerston North City was first established. The valley is characterised by a diverse mix of land use activities. Although pasture predominates, the visual prominence of trees and shrubs along roadsides, around dwellings, and sheltering pastured spaces creates a landscape that is intimate and interesting, managed intensively but not overly ordered.

Plantings of native species, supplemented by natural regeneration in wet areas and on steeper slopes, add to the beauty and resilience of the valley, softening the more formal exotic plantings and providing coherence through the valley landscape. Structures within the valley are well integrated into established vegetation so that the landscape is experienced as distinctly rural.



NOTE: Unit boundaries are indicative only, and will be refined and clarified in Stage 2 of the Landscape Study

Community

- Local residents.
- Travellers on Pahiatua Track
- Residents of subdivisions established on the river terraces that edge this unit who use The Track to access their homes.

SENSITIVITY TO CHANGE	HIGH ← LOW
Landscape complexity - topography	✓
Landscape complexity - vegetation cover	✓ variable ✓
Landscape complexity - modification	✓ variable ✓
Visibility within the wider context (views in)	✓

LANDSCAPE CHARACTER DESCRIPTION

- Incised, narrow valley that sits within the broader Northern Elevated Flats unit; remains a similar width up to the head of the valley
- Major local road traverses the length of the valley
- Numerous plantings of amenity, shelter, soil conservation and woodlot tree species
- Various areas of indigenous vegetation on valley slopes, along with scattered mature native trees
- Various lifestyle blocks and area of recent rural-residential subdivision
- High voltage transmission line crosses midpoint of valley

VISIBILITY AND VISUAL AMENITY

- Pahiatua Aokautere Road – Pahiatua Track – traverses the length of the valley
- Immediate slopes visible from road, but due to steepness of slopes and vegetation, outward views are contained

DEFINING CHARACTERISTICS

- Long, linear valley
- Various stands and specimens of mature exotic and native trees
- Established small-holdings/lifestyle blocks and various recent rural-residential subdivisions, e.g. Country Heights

PATTERNS OF DEVELOPMENT

- Rural landuse with extensive pastoral farming and lifestyle blocks; various areas of plantation forestry
- Rural-residential development becoming common

ECOLOGICAL AREAS 2002

- Wakefield Bush rural forest remnant (78)

LANDSCAPE ATTRIBUTES

Natural Features and Legibility

- Numerous areas of indigenous vegetation
- Distinct valley landscape

Cultural and Historic Associations

- This area and the adjoining valleys to the north and south were generally known as the entrance point to the Manawatu by Tawhakahiku and Mangere - descendants of Whatonga and as an alternative transportation route between the east and west
- Pahiatua Track is a long established alternative route from the Manawatu to the Wairarapa

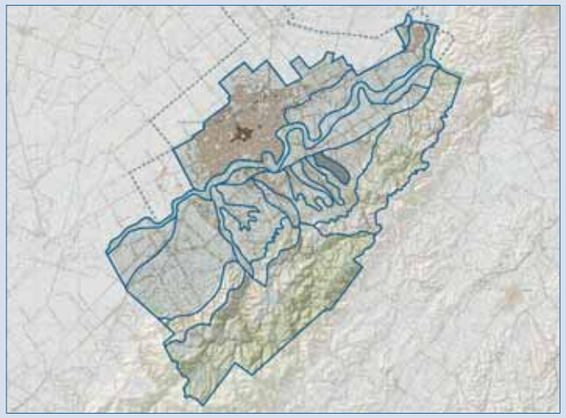
Aesthetics and Recognition

- Great diversity of vegetation within a contained visual and physical catchment

UNIT 11

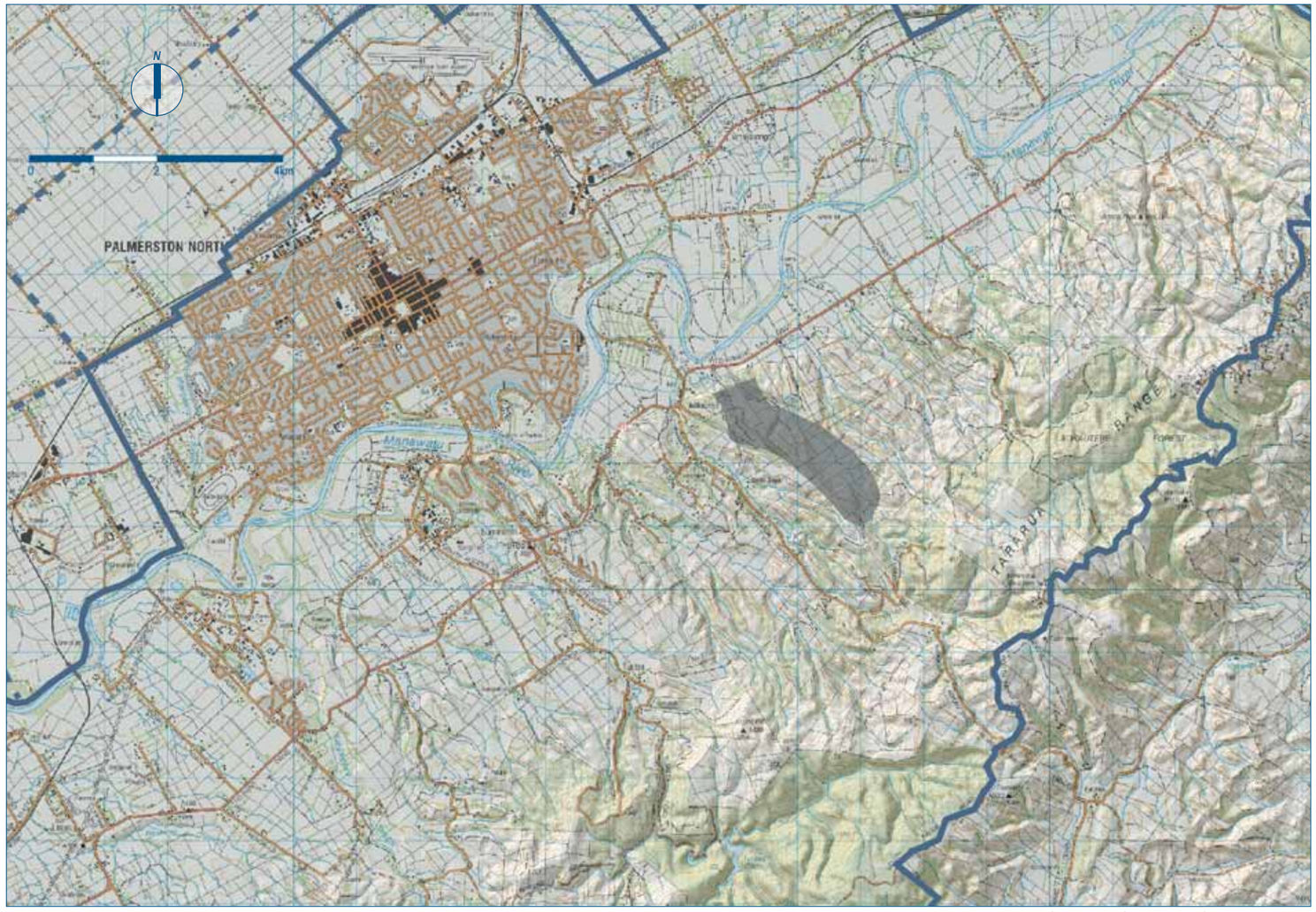
Aokautere Stream

Local Valley



SENSE OF PLACE

The narrow, linear valley has a simple pastoral landscape relieved by established shelter planting and some early reversion to native vegetation on the steeper, south facing, slopes. In the lower valley, the Aokautere Stream meanders across a broad valley floor. In the upper reaches, the valley narrows as it rises to merge with broad open terraces.



NOTE: Unit boundaries are indicative only, and will be refined and clarified in Stage 2 of the Landscape Study

Community

- Local landowner/s
- Kingsdale subdivision (the upper areas overlook the valley)
- Country Heights subdivision

SENSITIVITY TO CHANGE	HIGH		LOW
Landscape complexity - topography		✓	
Landscape complexity - vegetation cover		✓	
Landscape complexity - modification		✓	
Visibility within the wider context (views in)	✓	variable	✓

LANDSCAPE CHARACTER DESCRIPTION

- Singular, narrow valley that sits within the broader Northern Elevated Flats unit; opens out towards the head of the valley
- No public road access
- Sinuous stream channel
- Small areas of indigenous vegetation on south-facing slopes
- Sections of established shelterbelt in lower valley
- Areas of gorse on valley slopes
- High voltage transmission line crosses midpoint of valley

VISIBILITY AND VISUAL AMENITY

- Majority of valley not visible from public viewpoints
- Valley visually contained
- Simple, farmed landscape

DEFINING CHARACTERISTICS

- Long, linear valley
- Various stands/belts of mature exotic trees within lower valley
- Mixed cover of weed and indigenous vegetation on south-facing slopes of lower valley; otherwise valley devoid of larger vegetation

PATTERNS OF DEVELOPMENT

- Rural landuse - extensive pastoral farming

ECOLOGICAL AREAS 2002

- Aokautere East rural forest remnant (21)

LANDSCAPE ATTRIBUTES

Natural Features and Legibility

- One small area of native bush

Cultural and Historic Associations

- This area and the two adjoining valleys to the south were generally known as the entrance point to the Manawatu by Tawhakahiku and Mangere - descendants of Whatonga and as an alternative transportation route between the east and west

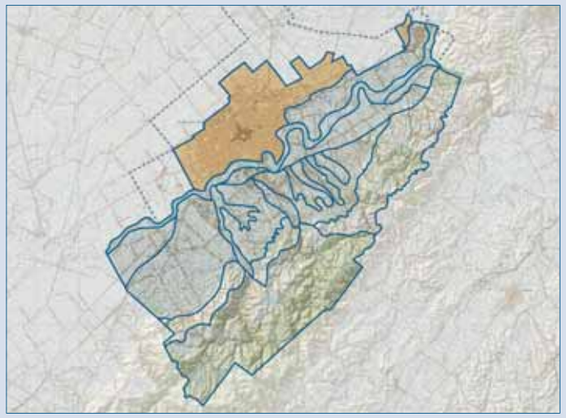
Aesthetics and Recognition

- Simple, farmed landscape contained in an enclosed valley

UNIT 12

Palmerston North City

Plain

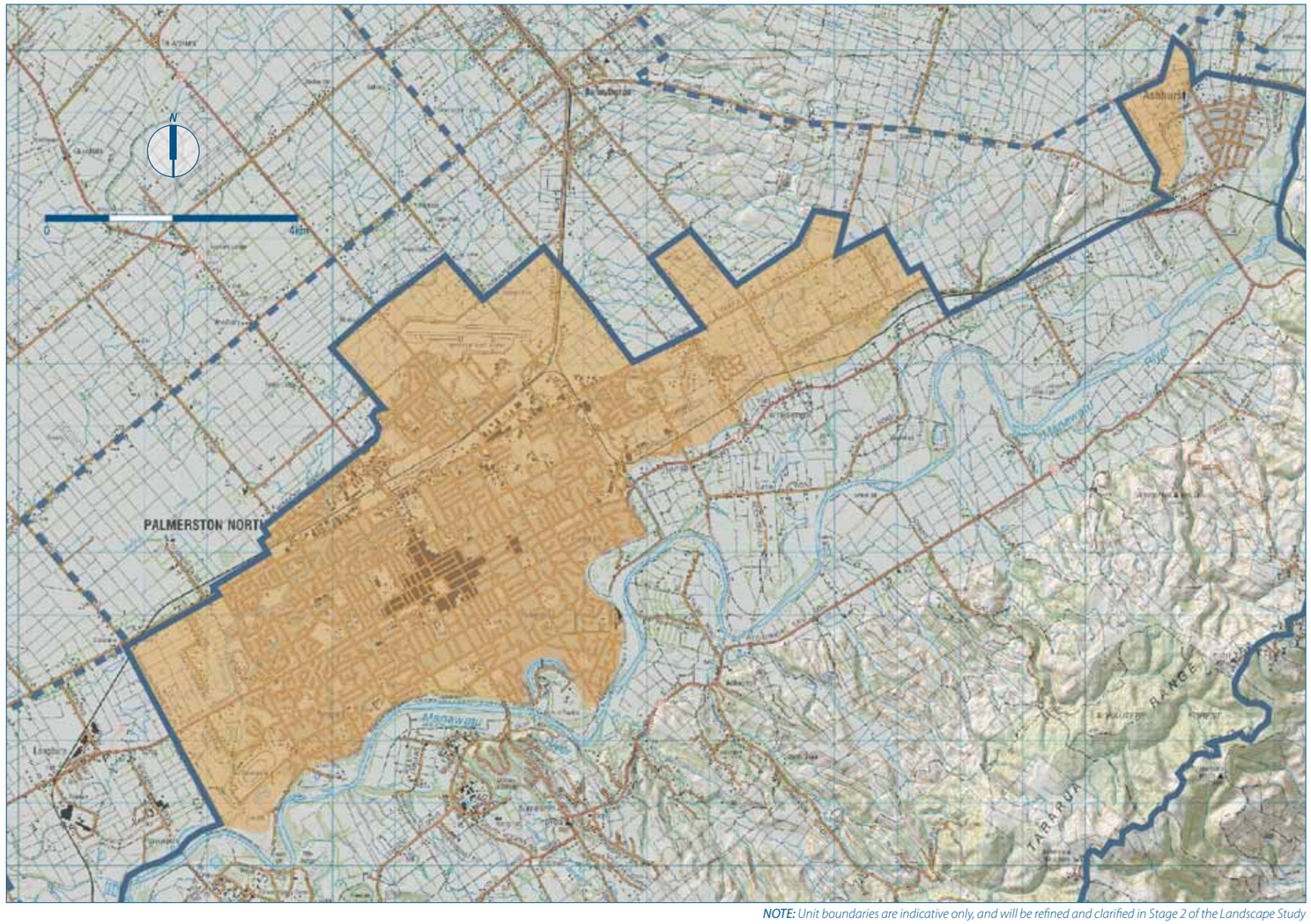


SENSE OF PLACE

The rural land in this unit fringes the northern and western edge of the city suburbs and is characterised by the geometric pattern of roads, fences and shelterbelts that overlay the gently undulating landscape.

The open, pastoral landscape is under pressure from ongoing rural residential development. Such development has resulted in a softer, less ordered landscape with more distant views screened by the foreground vegetation associated with dwellings along roads.

This more intensive use is creating a greater sense of community and identity where previously this landscape was experienced as being 'between places' rather than having its own sense of place and identity.



NOTE: Unit boundaries are indicative only, and will be refined and clarified in Stage 2 of the Landscape Study

Community

- Residents and farmers of Palmerston North, Ashhurst and Longburn on the perimeter of the unit.
- Residents and farmers of the Kelvin Grove Road, Tutaki Road and Stoney Creek developments.
- Travellers on the key approach routes to the City

SENSITIVITY TO CHANGE	HIGH	LOW
Landscape complexity - topography	✓	
Landscape complexity - vegetation cover		✓
Landscape complexity - modification		✓
Visibility within the wider context (views in)		✓

LANDSCAPE CHARACTER DESCRIPTION

- Southeast edge of open, undulating flats that extend out across the Manawatu Plains
- Flat topography
- Open farmland extends to the southwest of the city and more undulating rural land extends to the north east
- The land to the west contains highly versatile soils and historically was used for intensive production, horticultural uses and the like. This area is characterised by shelterbelts and amenity planting around the farm house and buildings
- Landform that is basis of unit extends along top of terrace behind Ashhurst
- Main drainage feature - Mangaone Stream – is an embanked floodway through the city

VISIBILITY AND VISUAL AMENITY

- Very high visibility as major regional transport routes pass through the urban area
- The NZTA have identified a possible future State Highway realignment from Mt Stewart to the Ashhurst Gorge that would traverse through or near this area
- Domestic and international airport within northwest extent
- Large resident population
- Numerous local roads on a relatively regular grid traverse the rural parts of the unit
- Axial views along Fitzherbert Avenue and Main Street form important visual links to broader landscape

DEFINING CHARACTERISTICS

- Flat city with a high-rise CBD
- The urban expansion of Palmerston North (~78,000 pop.) is the predominant landuse in this unit
- Sharp transition from urban to rural on southwest and much of northwest edge of city; northern edge of city now sprawling into rural land
- Extensive, plains landform that extents west beyond PNCC boundary
- Very few areas of remnant indigenous vegetation

PATTERNS OF DEVELOPMENT

- Urban grid pattern with a distinct CBD
- Traditional peri-urban small holdings being replaced by lifestyle blocks and rural-residential subdivisions
- Currently industrial and residential expansion extending north – northeast of the city

ECOLOGICAL AREAS 2002

- Mangaone Stream other: floodway (39)
- Hokowhitu Domain urban forest remnant (81)
- Dobson Lane wetland (45)
- Ashhurst Grove Road rural forest remnant (26)
- Linklater wetland (86)

LANDSCAPE ATTRIBUTES

Natural Features and Legibility

- Victoria Esplanade is one of the few natural features within urban area
- Manawatu River forms a natural eastern edge
- Two notable indigenous forest remnants

Cultural and Historic Associations

- A large clearing known as Papaioea covered a span of 800 acres and was located within the confines of the what is now urban Palmerston North
- Rakaumaui was the name of the pa which was located in what is now The Square
- Urban Palmerston North was established in late 1800's as a service centre for pastoral farming

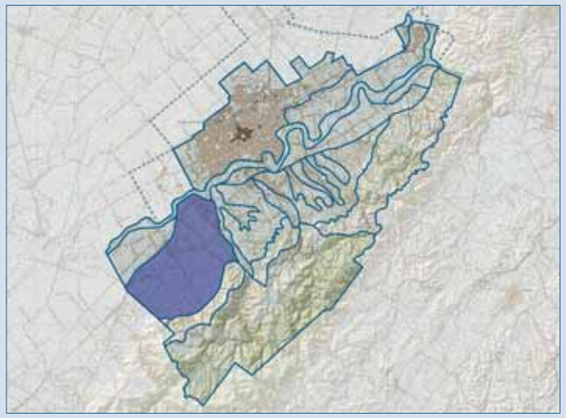
Aesthetics and Recognition

- Treed avenues and established parks and gardens are a notable feature
- Large urban centre on the edge of plains

UNIT 13

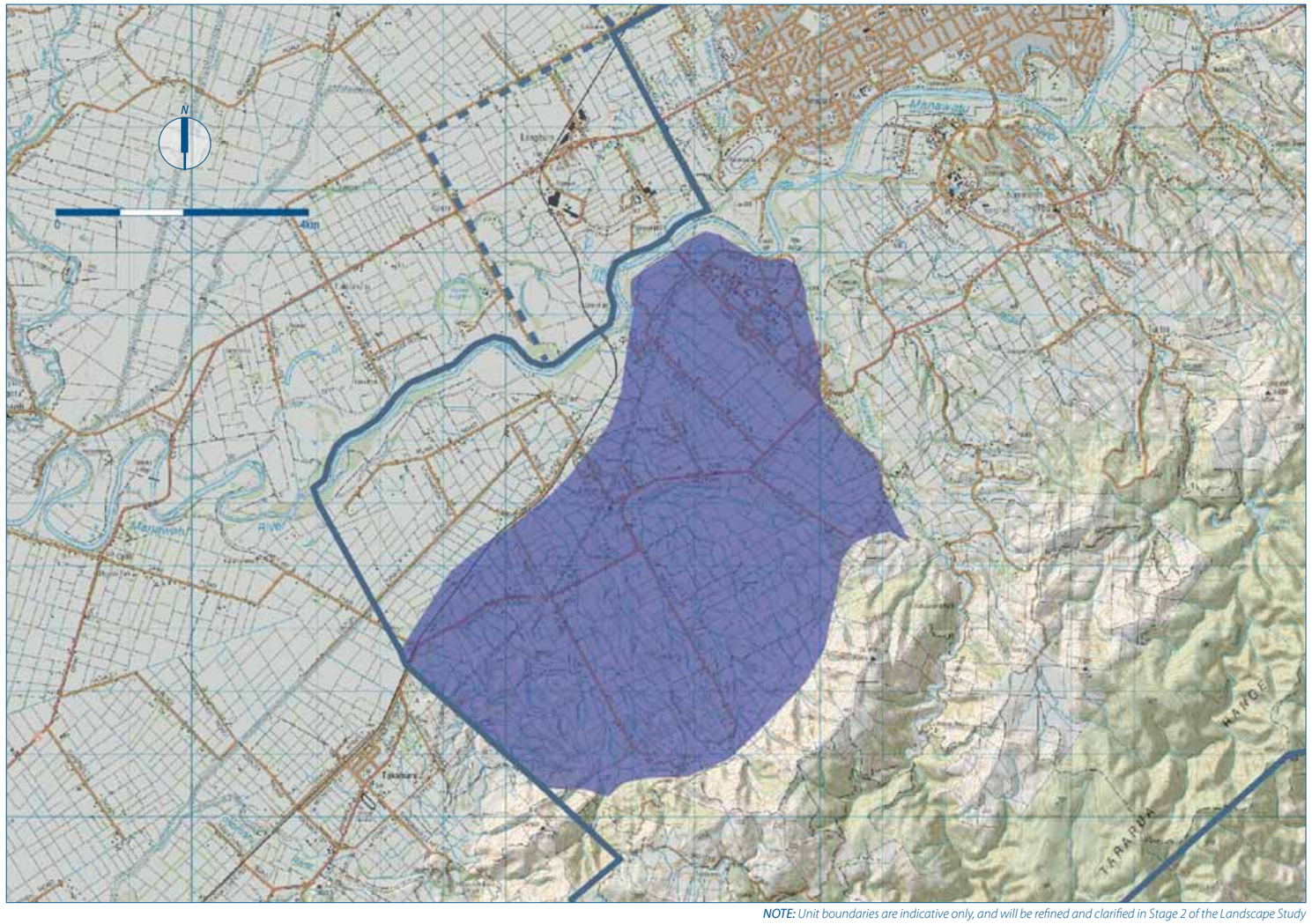
Linton Flats

Rolling Flat



SENSE OF PLACE

Numerous small gullies and watercourses lightly scarify the expansive rolling pastoral landscape of Linton Flat. The open vistas are moderated by shelter plantings of pines and macrocarpa with some eucalypts. When viewed from a higher elevation, indigenous vegetation in gullies and along riparian edges breaks up the homogeneity of the landscape.



NOTE: Unit boundaries are indicative only, and will be refined and clarified in Stage 2 of the Landscape Study

Community

- Linton residents
- Linton Military Camp
- Scotts Road and Millricks Line foothills communities
- Local and interregional travellers using SH 57

SENSITIVITY TO CHANGE	HIGH → LOW
Landscape complexity - topography	✓
Landscape complexity - vegetation cover	✓
Landscape complexity - modification	✓
Visibility within the wider context (views in)	✓

LANDSCAPE CHARACTER DESCRIPTION

- Extensive undulating flats that have a subtle slope to the west-northwest and are dissected by numerous small streams
- Pastoral farming is the predominant landuse
- Unit contains two urban areas within rural settings
  - Linton Military Camp, New Zealand's largest army base and associated village to the west, and
  - Linton, a small community to the south

VISIBILITY AND VISUAL AMENITY

- SH 57 traverses the unit
- Numerous linear local roads run perpendicular to the highway
- Views to the Tararua Ranges rising immediately to the east and running to the south
- The military camp is enclosed by established tree plantings
- Well managed farmland forms the predominant visual amenity

DEFINING CHARACTERISTICS

- Rolling farmland with established shelterbelts
- Extensive drainage pattern of small local streams
- One distinct enclosed urban community
- Extensive, open landform that extents south-west beyond PNCC boundary

PATTERNS OF DEVELOPMENT

- Rural landuse in relatively large, traditional farm holdings; some isolated pockets of lifestyle blocks off various local roads towards the ranges
- One separate, specific purpose urban centre and a rural school/community centre
- Landuse predominantly farming, with urban development confined to two established locations; both close to, but separate from the highway

ECOLOGICAL AREAS 2002

- Millricks Line rural forest remnant (12)
- Nguturoa north rural forest remnant (13)
- Kendalls Line Bush rural forest remnant (17)
- Linton Camp Escarpment farmland riparian area (20)
- Kahuterawa Road rural forest remnant (27)
- Scotts Road scrub rural forest remnant (41)
- Scotts Road wetland (42)
- Linton Station wetland (43)
- Akers Road wetland (44)
- Nguturoa Stream rural forest remnant (47)
- Larsens Bush rural forest remnant (52)
- Hewitts Road rural forest remnant (77)

LANDSCAPE ATTRIBUTES

Natural Features and Legibility

- Numerous 'pockets' of remnant indigenous vegetation on stream banks
- Undulating landform with numerous watercourses means there is a degree of similarity to many parts of the unit

Cultural and Historic Associations

- Large Rangitaane settlement called Te Kairanga, the area was renowned for its great supply of food. The name Te Kairanga can be interpreted to mean 'the place where much food is gathered'
- Site first planned for Linton Military Camp is several kilometres to the south. Site purchased for the military camp included an area which had been the Te Kairanga village, by the Manawatu River

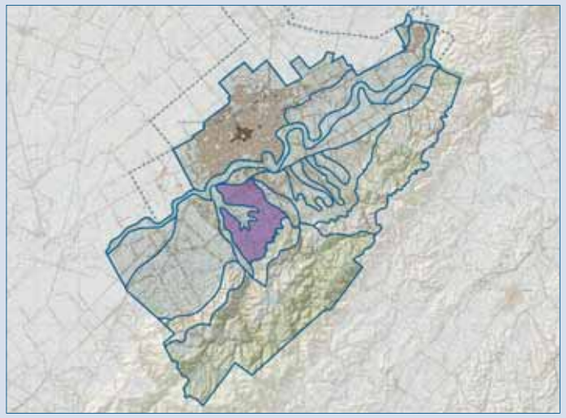
Aesthetics and Recognition

- Extensive area of undulating farmland that forms a large portion of the southern aspect of the district
- Two small urban centres have their own distinct character

UNIT 14

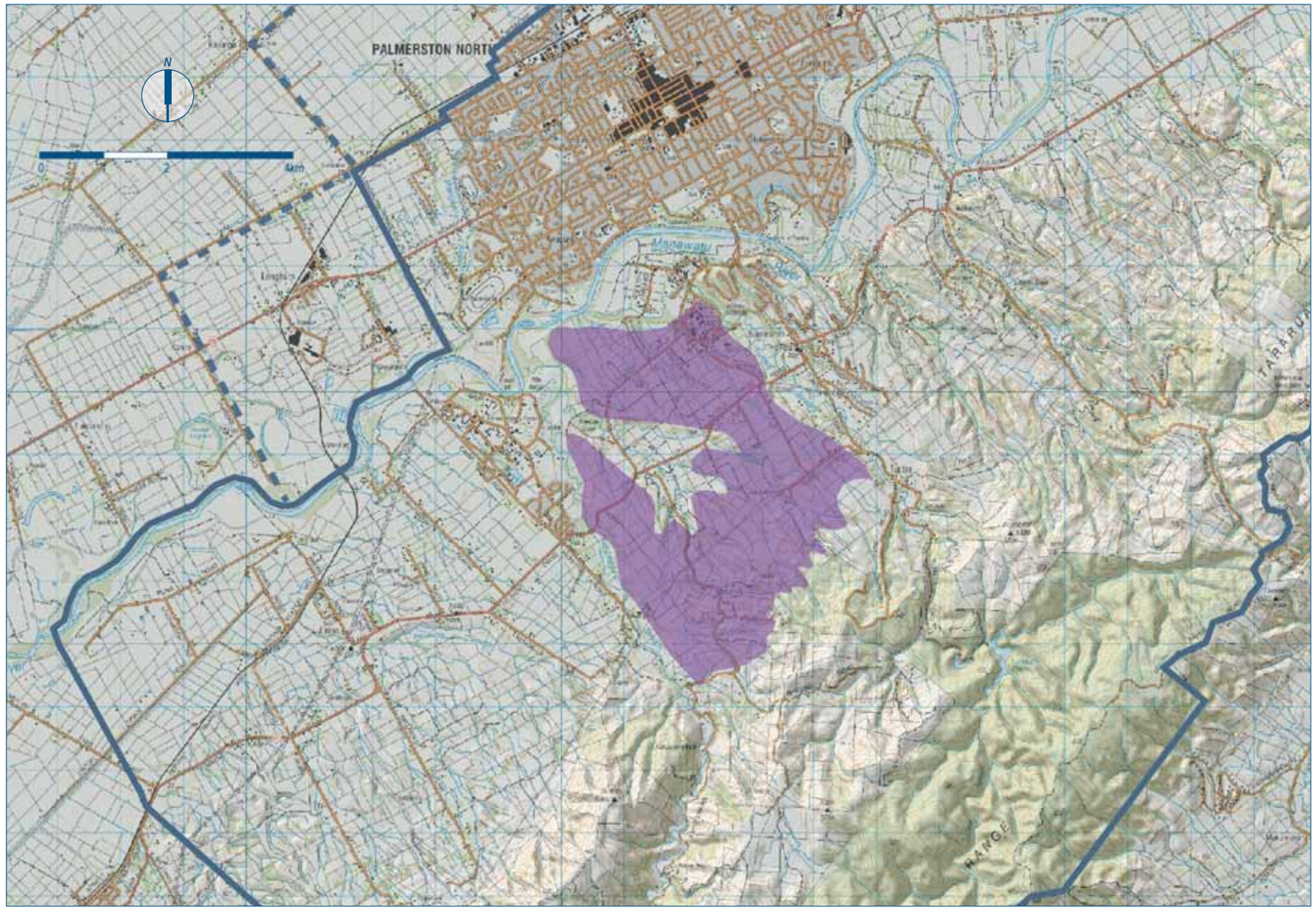
Central Elevated Flats

Elevated Flat



SENSE OF PLACE

The unit is defined by the two valley systems that contain and confine it, namely the Kahuterawa Valley to the south and Turitea Valley to the north. The raised terrace forms an expansive and undulating pastoral landscape. The rigid geometric patterns of paddocks are relieved by shelter plantings, waterways and local gullies; some relatively minor but becoming more pronounced towards the foothills. Pockets of more intensive development with houses and dense plantings of shelter and mixed ornamentals provide a focus of interest in what is an otherwise open and expansive pastoral landscape.



NOTE: Unit boundaries are indicative only, and will be refined and clarified in Stage 2 of the Landscape Study

Community

- Massey University's Turitea Campus, Massey Farms, Massey University Sport and Rugby Institute
- By-pass traffic using the interregional route
- Residents of Shere Lane, Kahuterawa Valley
- Residents of Pacific Drive (on perimeter of unit)

SENSITIVITY TO CHANGE	HIGH — LOW
Landscape complexity - topography	✓
Landscape complexity - vegetation cover	✓
Landscape complexity - modification	✓variable✓
Visibility within the wider context (views in)	✓variable✓

LANDSCAPE CHARACTER DESCRIPTION

- Broad undulating flats with a subtle slope to the northwest dissected by various small streams
- Pastoral farming is the predominant landuse
- Unit contains an urban area within a rural setting
  - Massey University's Turitea Campus
- Old West Road (SH 57), the interregional by-pass route, dissects through the centre of the unit. Access is provided off this route to the Massey's Sport and Rugby Institute and parking

VISIBILITY AND VISUAL AMENITY

- SH 57 traverses the unit
- Several local roads run perpendicular to the highway
- Views to the Tararua Ranges rising to the east
- The university campus is enclosed by established tree plantings
- Well managed farmland forms the predominant visual amenity

DEFINING CHARACTERISTICS

- Rolling farmland with established shelterbelts
- Obvious drainage pattern of numerous, small local streams
- One enclosed urban community

PATTERNS OF DEVELOPMENT

- Rural landuse in relatively large, traditional farm holdings; some isolated pockets of lifestyle blocks off local roads in the southern part of the unit
- Separate, specific purpose urban centre
- Landuse predominantly farming, with urban development confined to the university campus which is close to, but separate from the highway

ECOLOGICAL AREAS 2002

- Kahuterawa Road rural forest remnant (27)

LANDSCAPE ATTRIBUTES

Natural Features and Legibility

- 'Pockets' of remnant indigenous vegetation on stream banks
- Undulating landform means there is a degree of similarity to many parts of the unit

Cultural and Historic Associations

- This area would have been broadly associated with the settlements of Te Kairanga, Turitea, Karaka Grove and Te Kuripaka
- There were also seasonal food gathering areas throughout this area

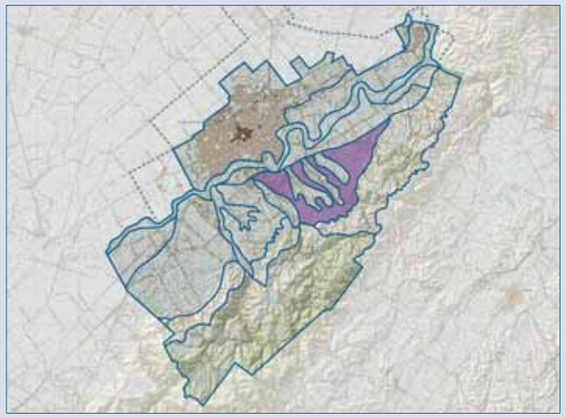
Aesthetics and Recognition

- Extensive area of undulating farmland
- One distinct urban centre

UNIT 15

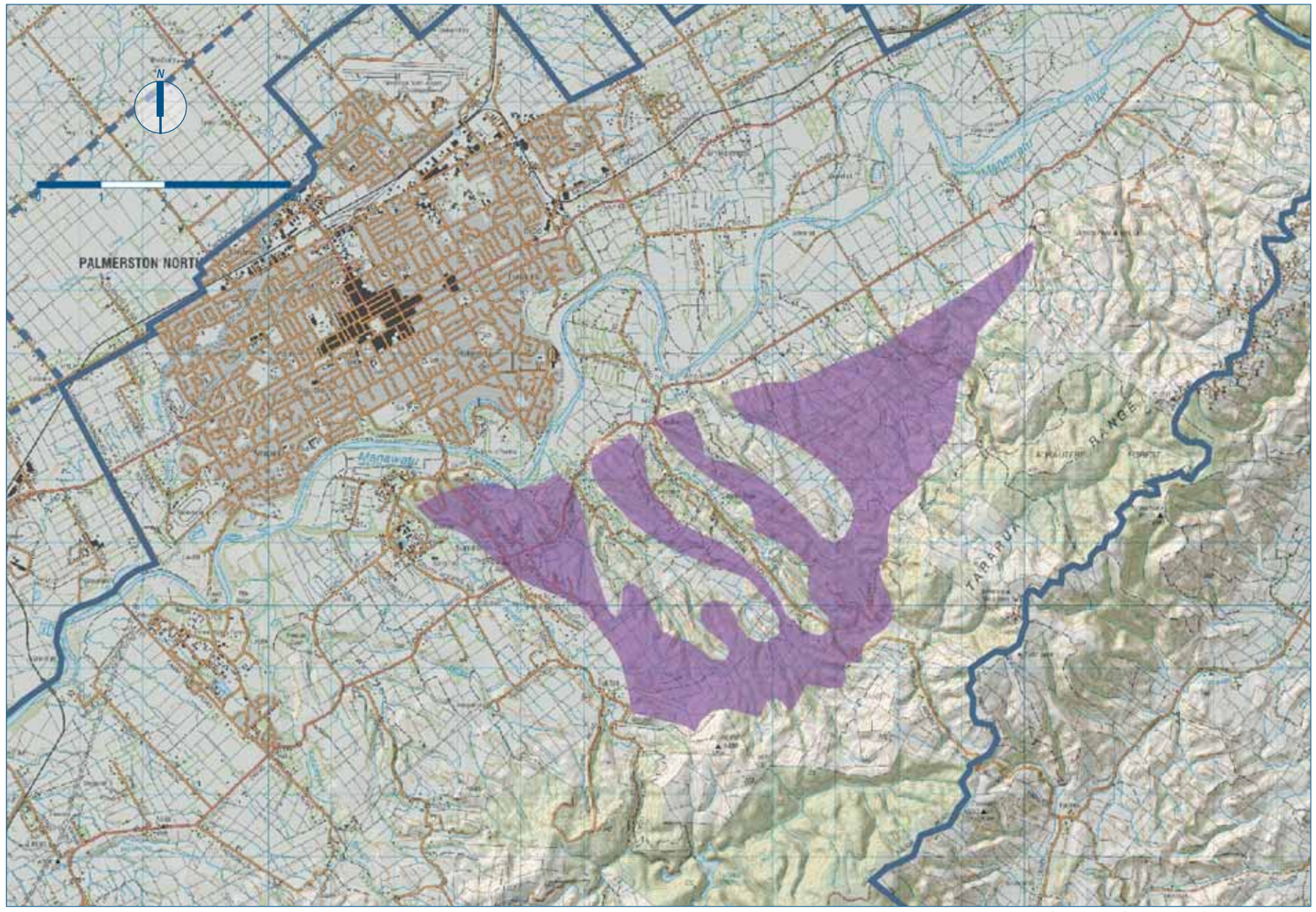
Northern Elevated Flats

Elevated Flat



SENSE OF PLACE

Viewed from across the plains to the north of the City, the elevated flats appear relatively flat. In closer views, a more broken landform becomes apparent; the terrace landform becomes progressively more corrugated towards the Manawatu Gorge. The landscape is characterised by valley systems falling from the foothills down to the terrace edge, ever more deeply incised with steeper sides clothed with small pockets of indigenous vegetation. These valleys merge with the terraces moving towards the foothills to become part of a pastured continuum running up onto the lower slopes.



NOTE: *Unit boundaries are indicative only, and will be refined and clarified in Stage 2 of the Landscape Study*

Community

- Local residents of Polson Hill, Hillcrest, Kingsdale and Country Heights subdivisions who have built up out of the valleys in the edge of these elevated flats.
- Travellers along SH 57 and Pahiatua Track
- City residents who look onto these landforms

SENSITIVITY TO CHANGE	HIGH		LOW
Landscape complexity - topography	✓		
Landscape complexity - vegetation cover		✓	
Landscape complexity - modification		✓	
Visibility within the wider context (views in)	✓	variable	✓

LANDSCAPE CHARACTER DESCRIPTION

- Broad expanse of open, slightly elevated flats that gently slope to the west
- Three distinct and separate local valleys encompassed by the unit
- Summerhill – a developing suburban 'hub' occupies the western extent of unit, with subdivisional development extending up broad ridge south of Aokautere Road to the point where high voltage transmission line crosses the unit
- Landuse of upper flats/slopes and all of northern flats is extensive farming

VISIBILITY AND VISUAL AMENITY

- Western portion of unit is visible from Summerhill Road and Aokautere Road (SH57A)
- Northern edge of unit visible from SH57A north of Aokautere
- Pahiatua Track rises through the unit, though the road is within a local gully; most frequented route that allows outward views to Manawatu Plains
- Broad outward views from the unit

DEFINING CHARACTERISTICS

- Broad ridge tops/flats 'sitting' between the river flats and the front slopes of the northern Tararua Range
- Pockets of indigenous vegetation and also extensive areas of gorse within gullies
- Gully network in the western portion of the unit being developed as the framework of local reserve and urban greenway system
- Residential development common and expanding within western portion of unit

PATTERNS OF DEVELOPMENT

- Rural landuse currently the predominant use
- Residential development now well established in western portion of unit

ECOLOGICAL AREAS 2002

- Poutoa Walkway Reserve other: restoration area (5)
- Pahiatua Track rural forest remnant (7)
- Aokautere Village Bush rural forest remnant (22)
- Pari Reserve farmland riparian area (24)
- Lower Moonshine Valley rural forest remnant (32)
- Heathcote Drive Bush urban forest remnant (34)
- Summerhill Drive Escarpment urban forest remnant (35)
- Anzac Park urban forest remnant (83)

LANDSCAPE ATTRIBUTES

Natural Features and Legibility

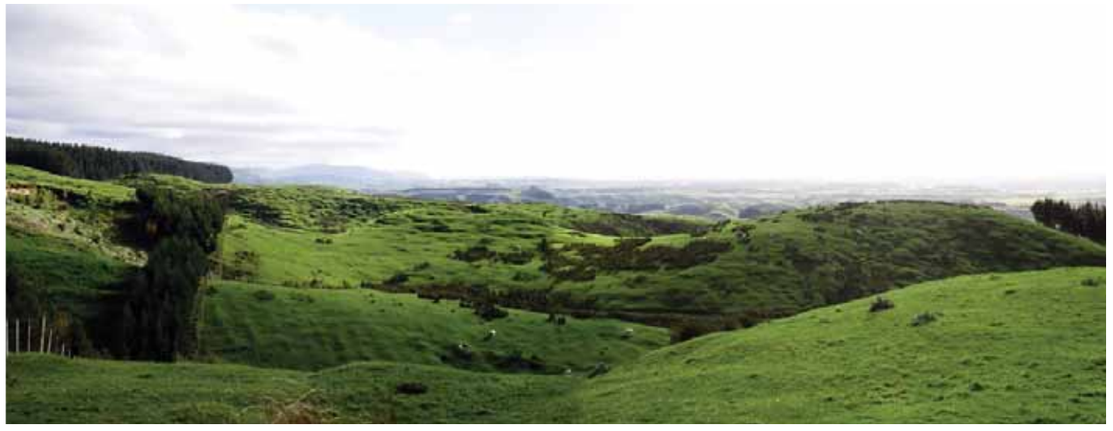
- Numerous small areas of native bush in Summerhill
- Broad elevated, open ridgetops

Cultural and Historic Associations

- This area is directly associated with Te Motu o Poutoa as well as the track linking the pa site with the ranges
- There were also a number of strategic vantage points located within this area where pa were established for their safety appeal with views of the broader region

Aesthetics and Recognition

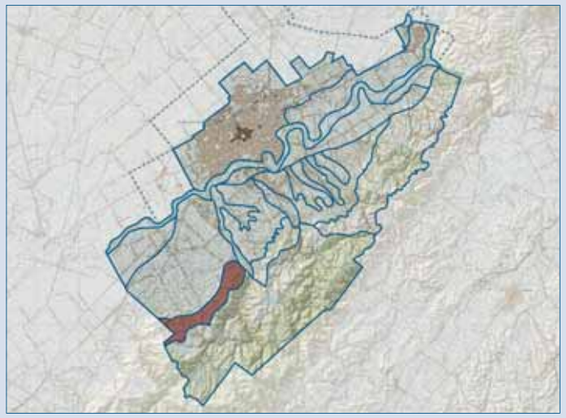
- Outward views to the river flats and Manawatu Plains



UNIT 16

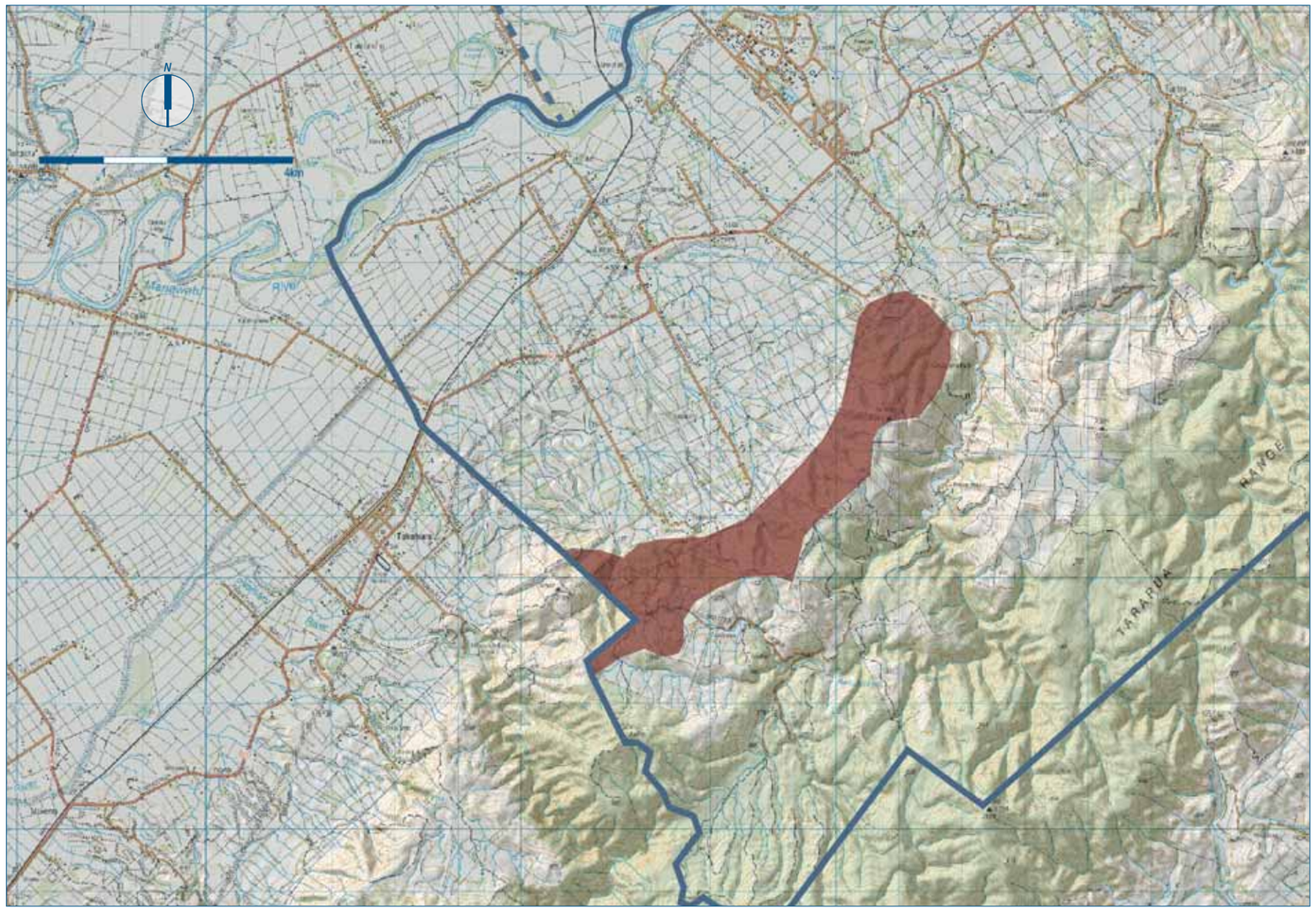
Te Mata Slopes

Hill Slope



SENSE OF PLACE

The Te Mata Hill slopes are clearly defined, rising steeply from Linton flats up to the Te Mata ridgeline and backdropped by the northern Tararua ranges. The landform is very pronounced and dramatic. The steep slopes are predominantly in pasture but with prominent blocks of pines. The slopes are distinctive and visible from SH57 and Linton flats.



NOTE: Unit boundaries are indicative only, and will be refined and clarified in Stage 2 of the Landscape Study

Community

- Local residents/ landowners at the base of the foothills
- City residents and travellers who look onto these landforms

SENSITIVITY TO CHANGE	HIGH	LOW
Landscape complexity - topography	✓	
Landscape complexity - vegetation cover		✓
Landscape complexity - modification	✓	
Visibility within the wider context (views in)	✓	

LANDSCAPE CHARACTER DESCRIPTION

- These west facing slopes have been modified by pastoral farming, with indigenous vegetation now confined to gullies
- Geometric patterns of pine plantations are a common feature at the southern and northern extent of the unit, along with linear fencelines.
- Te Mata is the prominent highpoint at the north end of the ridgeline
- A high voltage transmission line traverses across lower edge of unit

VISIBILITY AND VISUAL AMENITY

- As a prominent 'front slope' to the northern Tararua Ranges, this unit is directly visible from SH57, NIMTR and numerous local roads.
- More distant views from urban Palmerston North
- Visual amenity has been reduced by the 'placement' of landuses and structures that are out of context with natural shapes and forms i.e. pine plantations, transmission lines

DEFINING CHARACTERISTICS

- Main ridges and high points are distinctive features
- Steep slopes running from skyline ridge down to plains
- Complex pattern of topography and vegetation cover
- Plantations of pine trees, plantings of mixed tree species in gullies and scrub common along the easier slopes to south-west
- Distinctive patterns of amenity/shelter tree planting associated with dwellings and roads on lower slopes
- Unit extends south-west beyond PNCC boundary

PATTERNS OF DEVELOPMENT

- Rural landuse with extensive pastoral farming, with areas of plantation forestry
- Energy production from wind turbines, a new landuse that overlays pastoral farming – potential development of northern half of the Motorimu Wind Farm, which was consented, although the consent was later voluntarily relinquished in 2009

ECOLOGICAL AREAS 2002

- Wicklow Bush reverting bush area (40)

LANDSCAPE ATTRIBUTES

Natural Features and Legibility

- Notable area of indigenous vegetation near Scotts Road at south end of unit

Cultural and Historic Associations

- These lower areas provided places for overnight settlement at times of food gathering in the range, and traversing the other side of the Tararua Range
- Various long established homesteads

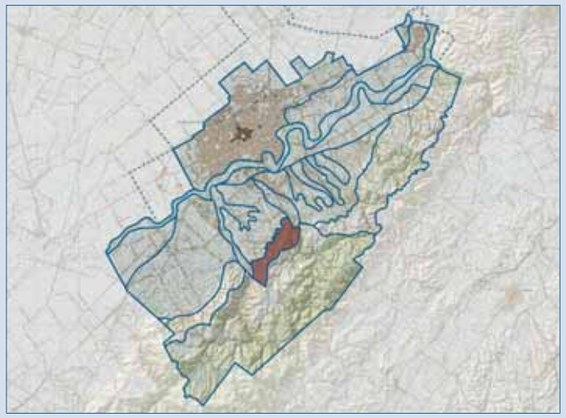
Aesthetics and Recognition

- Distinctive west-facing slopes and ridgeline in southern extent of district

UNIT 17

Ngahere Park Slopes

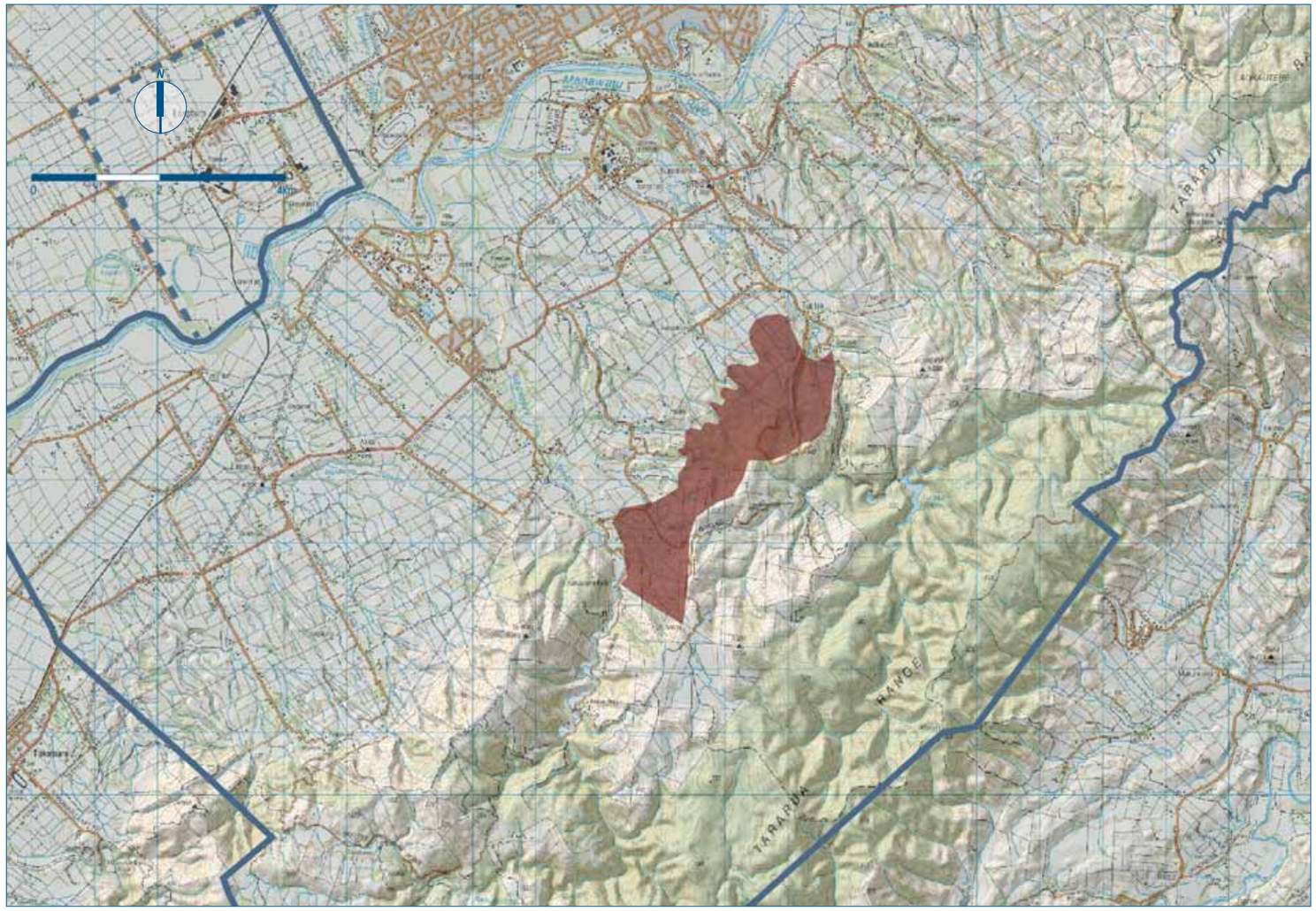
Hill Slope



SENSE OF PLACE

The Ngahere Park slopes have a similar aspect to the Te Mata slopes but the landform is not as steep and prominent. The landform is composed of a complex series of small valleys and rolling ridges, with steeper gullies along the lower slopes. The steeper upper slopes are predominantly in pasture but pine plantations cover an extensive area across the lower slopes at the top end of the Turitea Valley.

Pockets of rural residential development extend from the Turitea Valley up onto the Ngahere Park Slopes and into the pine plantations, with some tree clearance to create space for buildings and outdoor living. While pines provide shelter and a coherent green framework, amenity plantings provide variety and interest. Dwellings, some substantial in scale, tend to be set into carefully managed vegetation so that privacy is provided while views are retained.



NOTE: Unit boundaries are indicative only, and will be refined and clarified in Stage 2 of the Landscape Study

Community

- Residents of Ngahere Park and Greens Road

SENSITIVITY TO CHANGE	HIGH	LOW
Landscape complexity - topography	✓	
Landscape complexity - vegetation cover	✓	
Landscape complexity - modification		✓
Visibility within the wider context (views in)	✓	

LANDSCAPE CHARACTER DESCRIPTION

- Open, west-facing 'front' slopes between Kahuterawa and Turitea Streams; lower slopes consist of many small rounded ridges and gullies
- Slopes have been modified by pastoral farming, with indigenous vegetation now confined to gullies
- Geometric patterns of pine plantations in the northern extent of the unit contrast with pastoral farming; rural-residential subdivision enclosed within forestry blocks

VISIBILITY AND VISUAL AMENITY

- As a 'front slope'/foreground ridge to the Tararua Ranges, this unit is visible from SH57 and numerous local roads
- More distanct views from urban Palmerston North
- Visual amenity has been negated by the 'placement' of landuses and structures that are out of context with natural shapes and forms i.e. pine plantations, some areas of rural-residential subdivision

DEFINING CHARACTERISTICS

- Main ridge forms a distinctive feature
- Slopes running from main ridge down to flats broken by many sub ridges
- Complex pattern of topography with numerous stands of mature exotic evergreen trees
- Pine plantations cover north end of unit, some of which includes rural-residential subdivision

PATTERNS OF DEVELOPMENT

- Rural landuse with extensive pastoral farming, with areas of plantation forestry
- Rural-residential development common to north end – Ngahere Park Road – and south end – off Kahuterawa Road

ECOLOGICAL AREAS 2002

No Ecological Areas

LANDSCAPE ATTRIBUTES

Natural Features and Legibility

- No areas of notable indigenous vegetation
- Relatively complex/broken topography within lower slopes

Cultural and Historic Associations

- These lower areas provided places for overnight settlement at times of food gathering in the range, and when traversing the Tararua Range

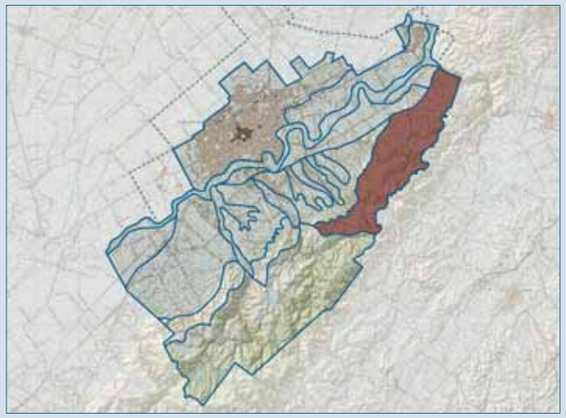
Aesthetics and Recognition

- Prominent 'foreground' slopes and ridgeline

UNIT 18

Forest Hill Slopes

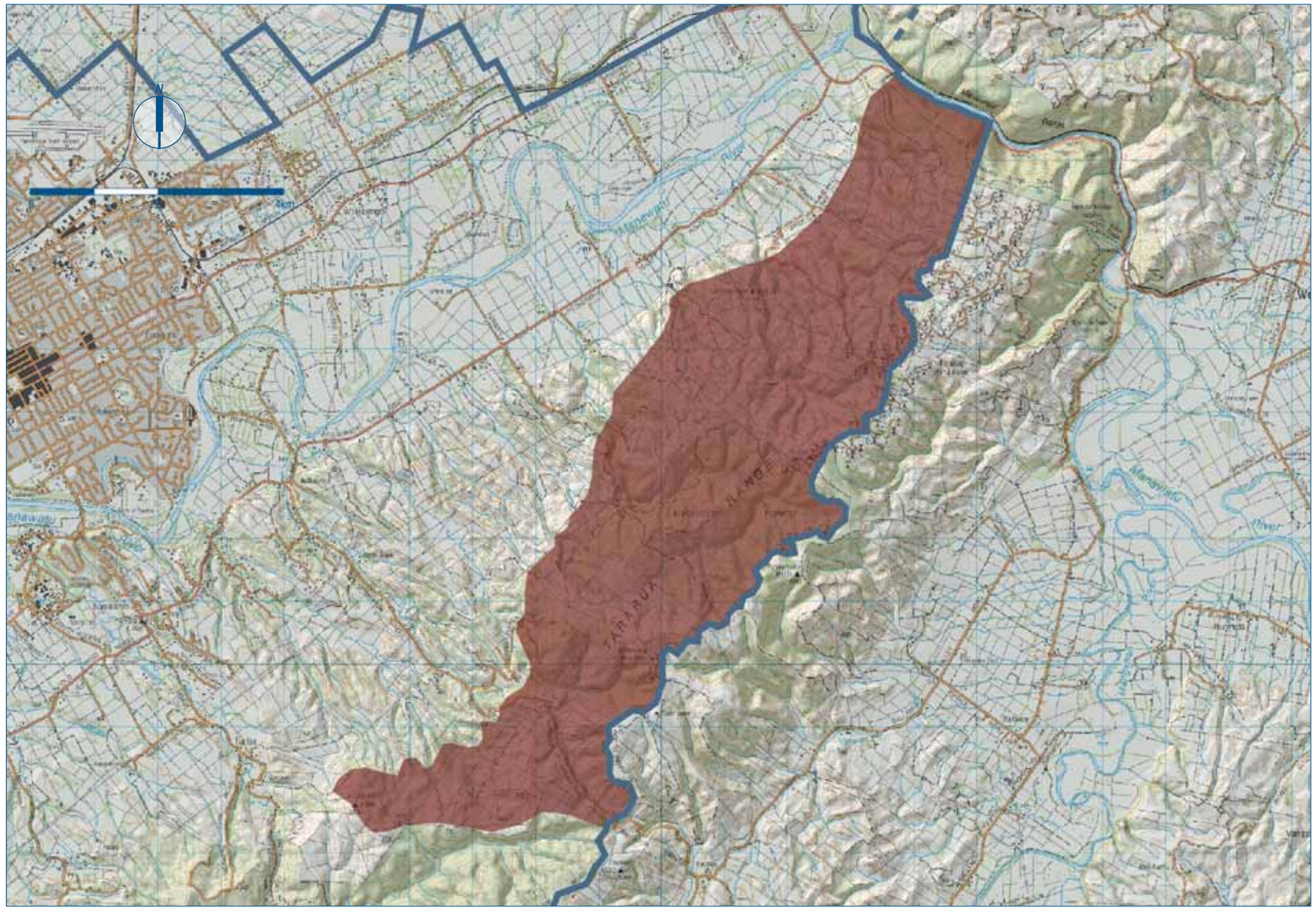
Hill Slope



SENSE OF PLACE

The Forest Hill unit covers the exposed northern end of the Tararua Ranges, falling steeply to the Manawatu gorge. The landscape is characterised by steep, corrugated hill slopes and spurs rising to a broad, prominent ridgeline. It reflects patterns of traditional pastoral farming with substantial areas in pine plantations, and wind turbines of a variable scale and design.

The simple and natural landform patterns revealed by open pasture have increasingly given way to more ordered, often geometric, patterns of plantations and turbines. On such prominent ridgelines, spurs, and slopes wind turbines and the plantations are highly visible.



NOTE: Unit boundaries are indicative only, and will be refined and clarified in Stage 2 of the Landscape Study

Community

- Local residents/landowners
- Travellers on Napier Road and SH3
- Residents district-wide
- Wind Energy Sector

SENSITIVITY TO CHANGE	HIGH ← LOW
Landscape complexity - topography	✓
Landscape complexity - vegetation cover	✓
Landscape complexity - modification	✓
Visibility within the wider context (views in)	✓✓

LANDSCAPE CHARACTER DESCRIPTION

- Running south from the Manawatu Gorge, west-facing slopes rise steeply up from the lower flats and adjoining elevated flats
- Convoluted drainage pattern of Forest Hill Stream breaks the central slope into several north-south running ridges
- The development of these slopes in the past for pastoral farming, followed by plantation forestry, has shaped appearance and current landuse
- The more recent development of wind farms on the northern Tararua Ranges has brought further obvious change.
- The majority of the Tararua Wind Farm is in the northern portion and the yet-to-be completed Te Rere Hau Wind Farm is in the southern portion of the unit

VISIBILITY AND VISUAL AMENITY

- Directly visible from SH57A, SH3, various local roads and much of urban Palmerston North. Roads within unit are limited, but provide broad outward views to plains
- Established plantation forestry was a controlling influence on the visual amenity of this unit. Wind farm now has an influence on this

DEFINING CHARACTERISTICS

- Steep, open slopes with rounded ridges; numerous linear gullies in the northern and southern parts of the unit; more complex drainage system in the centre of the unit
- Various gullies and some upper slopes have a cover of indigenous vegetation
- Numerous blocks of plantation forestry, both large and 'small'
- The bush cover of Manawatu Gorge to the north and pine plantation on the central slopes accentuate the open portions of this unit
- Numerous wind turbines, both large and 'small'

PATTERNS OF DEVELOPMENT

- Rural landuse with extensive pastoral farming being the predominant use; some plantation forestry
- Energy production from wind turbines, a new landuse that overlays pastoral farming (With Stage 3 of the Tararua Wind Farm complete and the final stage of Te Rere Hau Wind Farm, completed further expansion of this landuse within this unit is unlikely)
- Protection/Recreation – Manawatu Gorge Bush

ECOLOGICAL AREAS 2002

- Forest Hill Road reverting bush area (2)
- North Range Road Bush reverting bush area (8)
- Taupiri Beech rural forest remnant (48)
- Buchanans Dam exotic forest riparian area (65)
- Forest Hill Stream riparian area (66)
- North Range Scrubland reverting bush area (67)
- Manawatu Gorge Bush sizable mature forest (71)
- Tuapaka Scrub rural forest remnant (80)

LANDSCAPE ATTRIBUTES

Natural Features and Legibility

- Numerous forest remnants, several of which are 'enclosed' by plantation forestry
- Manawatu Gorge and its DoC reserve are distinctive natural features

Cultural and Historic Associations

- The northern end of the Tararua Range which was utilised by Rangitaane through tracks across the range - this area is lower than other parts of the range therefore crossing would have been easier
- History of logging and forest clearance
- Pahiatua Track frequently used alternative route over ranges to the Wairarapa
- First large scale wind farm in New Zealand

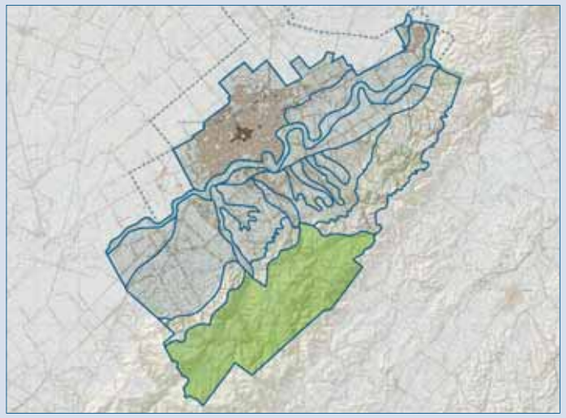
Aesthetics and Recognition

- The northern-most extent of the Tararua Ranges
- Visual contrast between pastoral farming and plantation forestry and now wind farms

UNIT 19

Tararua Heights

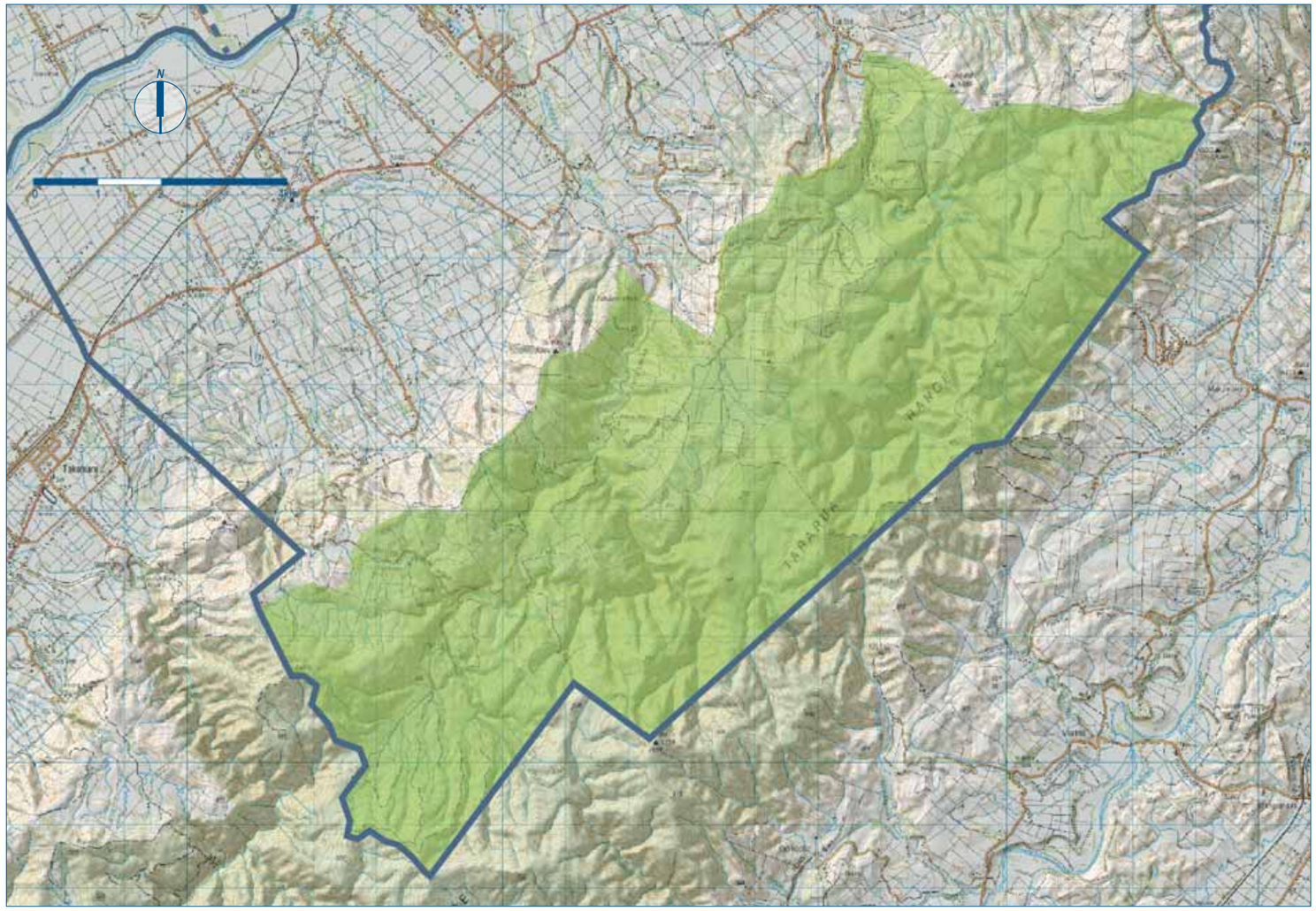
Upper Catchment



SENSE OF PLACE

For the most part the unit is wild and rugged with limited access and a dense cover of indigenous regrowth typical of elevated and exposed sites on the Tararua Ranges. The patterns of vegetation reflect a history of logging with only remnants of the original cover remaining (in the Turitea Water Reserve), naturally regenerating indigenous forest on steeper slopes with patches of rough (reverting) pasture on easier lower slopes, and exotic forest plantations on the upper slopes and ridgelines accessible from Pahiatua Track and South Ridge Road.

There are substantial plantings of pines across more erosion prone areas and regenerating indigenous vegetation where grazing pressures are low or stock have been excluded. This unit provides the visual backdrop for the City, for both residential and rural residents. Council has identified the Kahuterawa Valley as the City's primary 'natural area'.



NOTE: Unit boundaries are indicative only, and will be refined and clarified in Stage 2 of the Landscape Study

Community

- The outdoor recreation community (upper Kahuterawa)
- Residents district-wide,
- Local landowners
- Wind Energy Sector

SENSITIVITY TO CHANGE	HIGH ← LOW
Landscape complexity - topography	✓
Landscape complexity - vegetation cover	✓
Landscape complexity - modification	✓
Visibility within the wider context (views in)	✓ ✓ variable

LANDSCAPE CHARACTER DESCRIPTION

- Existing landscape character and that of much of the upper and top slopes of the northern Tararua Ranges reflects a history of tension between development for pastoral farming and the need to protect steeper slopes for soil and water purposes
- The remaining areas of indigenous forest in the upper Turitea catchment reflect the historic need to protect Palmerston North's water supply.
- Various areas of extensive pastoral farmingon the flatter land in the western half of the unit
- Plantation forestry is found in the upper Kahuterawa catchment

VISIBILITY AND VISUAL AMENITY

- Not directly visible from the Manawatu Plains
- Unit accessible from upper Scotts Road, upper Kahuterawa Road, upper Greens Road and upper Turitea Road
- Visually enclosed/contained unit

DEFINING CHARACTERISTICS

- Two visually and physically isolated valley systems
- Extensive pastoral farming accessed from Scotts Road and from Kahuterawa Road
- Extensive areas of indigenous forest cover in the upper two-thirds of the Turitea catchment and further indigenous forest and pine plantation in the upper Kahuterawa catchment
- Unit extends south-west beyond PNCC boundary
- Kaihinu is a distinctive high point to the south of upper Scotts Road. Arawaru is the highest point at the southeast corner of the City

PATTERNS OF DEVELOPMENT

- Rural landuse with extensive pastoral farming and plantation forestry
- Energy production from wind turbines, a new landuse. Potential development of Turitea Wind farm to the north (decision released 2011) and the part of Motorimu Wind Farm to the south (consent voluntarily relinquished 2009)

ECOLOGICAL AREAS 2002

- Greens Road Bush rural forest remnant (28)
- Upper Greens Road scrub rural forest remnant (29)
- Upper Turitea catchment sizable mature forest (37)
- Kaihinu Bush sizable mature forest (38)
- Browns Flat wetland (50)
- Kahutewara Stream site 1 wetlands (54)
- Kahutewara Stream sites 2, 3 & 4 river site (59, 60, 62)
- Southeys Bush rural forest remnant (63)
- Kahuterawa Gully Bush sizable mature forest (72)
- Kahuterawa East reverting bush area (73)
- Kahuterawa West A reverting bush area (76)
- Kahuterawa West B rural forest remnant (75)
- Harding Park sizable mature forest (84)

LANDSCAPE ATTRIBUTES

Natural Features and Legibility

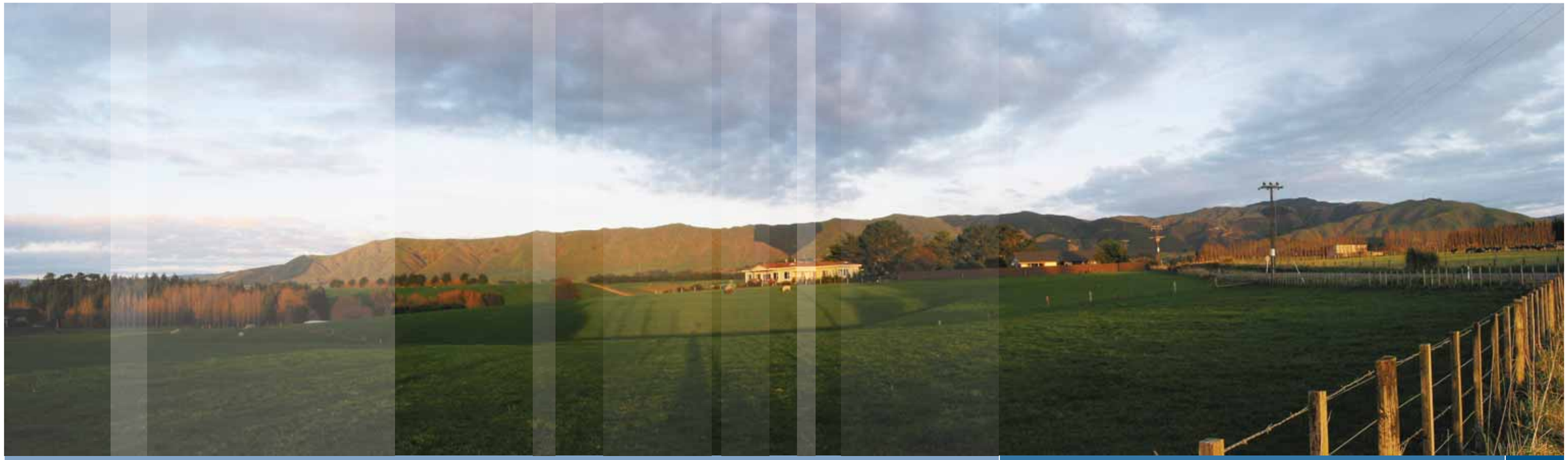
- Extensive areas of indigenous forest and forest remnants
- Two distinct valley systems
- Open connection to southeast and the bulk of Tararua Range

Cultural and Historic Associations

- This is the ancestral maunga of the Rangitaane iwi, a place where many spiritual and ritualistic practises occured
- Lower/western extent cleared for pastoral farming

Aesthetics and Recognition

- High natural landscape values



PROGRESSING

THE LANDSCAPE STUDY

STAGE 2:

ALIGNING LANDSCAPE VALUES WITH LANDSCAPE MANAGEMENT

This Stage 1 report provides baseline information describing the City's landscapes as objectively as possible. Each landscape unit has been characterised on a factual basis in terms of landform type and land use, and on the expert opinion of landscape architecture professionals in relation to patterns of development and the degree of modification and sensitivity to landscape change.

The report is designed to 'engage, inform, and assist' readers in gaining a broad overview of the city, how it is structured, and the diversity of landscapes which the community enjoys. To this end the 'Sense of Place' approach has provided a snapshot of each unit and its unique qualities, the people to whom it is important and, more value based, an indicative analysis of the landscape's sensitivity to change. The challenge for the council is to develop planning provisions that provide for landscape values and ensure that these are protected and sustained over time whilst still supporting the continuing and ever changing productive activities within these rural environments.

For 'landscape management' to make sense there must be an alignment of objectives for the landscape with those for land and water management generally, whether for productive or conservation purposes. Providing direction to the management and development of the city's landscapes requires a thorough understanding of the landscape's natural values and processes, how places within the city relate one to another, and how they function within an overall framework of waterways, hills and ridgelines.

Stage 2 will take the characterisation of the landscape further in order to ensure a robust basis for the Rural Review as well as the wider Sectional District Plan Review. Stage 2 will explore 3 themes:

- **Theme 1. Landscape Framework:** refining the landscape framework and incorporating statutory requirements.
- **Theme 2. Landscape Unit Values:** progressing the Stage 1 report by evaluating Landscape Units in terms of key values and assessing potential land use implications.
- **Theme 3. Land Use Study for Rural Residential Development:** mapping development opportunities and constraints in order to develop a draft landscape framework for rural residential development as part of the wider PNCC Rural Residential Subdivision Review.

It is anticipated that the three themes will run concurrently but will inform each other and feed into the Sectional District Plan Review consultation process. Outcomes from Stage 2 will be integrated into Stage 3 where preliminary development principles and options for managing growth will be developed.

A diagrammatic breakdown of the various stages of the Landscape Study and its interrelationship with parts of the Rural Review is provided in the adjacent diagram.

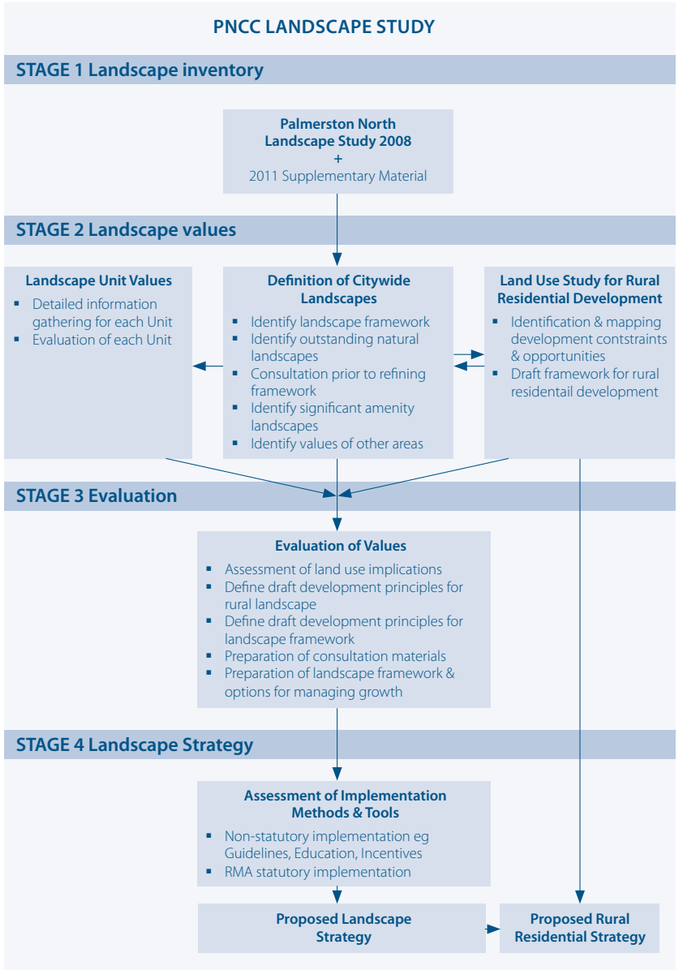


Figure 7: The various stages of the Landscape Study and its interrelationship with parts of the Rural Review

THEME 1. LANDSCAPE FRAMEWORK

For the practical purpose of establishing the basis for integrated landscape and resource management Stage 2 will commence with a strategic overview of the broader Palmerston North City landscape. Two preliminary conceptual frameworks have been defined and they will be refined in consultation with appropriate experts and stakeholders.

The first of the two conceptual frameworks, Figure 8 Natural Patterns includes:

- areas with significant resource and historic values
- areas with development constraints such as a tendency to flooding, and soils prone to water logging with poor percolation rates which is a particular constraint for rural residential development
- areas at risk from soil erosion, generally steeper areas
- water ways and permanent wetlands
- ridgelines and hilltops

Central to this framework will be water, the management of which is critical to both ecological and human health, as well as the ongoing resilience and productivity of the land. Also included in the framework will be the city's high quality soils, a scarce resource to be protected from the encroachment of activities detracting from their productive value. Retaining these soils in their present use will sustain not only their productive value but also the open space character of the Manawatu River landscape. The framework will encompass land in the public estate including all City parks and reserves, Department of Conservation land, QEII covenanted land, regional council land, and some private land.

Well-managed frameworks provide a wide range of benefits including high quality water, biodiversity, recreation, as well as high quality living environments and visual amenity. In Palmerston North City, the framework will give emphasis to natural patterns and processes, and define the visual coherence and a connectedness across the landscape, linking the Manawatu River with its source in the Tararua Ranges. Areas not captured within the framework may be subject to fewer development constraints but nevertheless are equally important to the City's identity and 'sense of place'.

Most of the City's rural areas are in open pasture while others are more intensively used with a strong sense of enclosure and fragmentation. In assessing and attributing values to the various units during Stage 2 it will be important to recognise the relationship between areas within the framework and areas outside of it. While providing coherence across the landscape, the framework also contributes to the unique character and quality of each unit. The proposed Landscape Strategy must be able to express and manage this uniqueness within a coherent and unifying framework. The strategy must also enable the purpose and principles of the Resource Management Act to be met. Accounting for and managing the effects of activities requires a thorough understanding of the place within which an activity is proposed. In some places the values and sensitivities will be very constraining while in others it will be possible to successfully accommodate substantial change. In fact there will be 'degrees of constraint' in accordance with the relevance of the various matters set out in the Act.

The 'landscape framework' is indicative of those areas where constraints are likely to be greatest. This does not mean that development and new uses cannot occur within the framework and neither does it mean that areas outside of the framework are devoid of constraining resource values. The purpose of the 'framework' is to give expression to the Act's purpose at a landscape scale, accepting that there will be local nuances and a need for refinement as the 'landscape framework' is developed. The second of the two conceptual frameworks, Figure 9 Development Constraints, amalgamates the areas of constraint into one unified pattern.

Outstanding Natural Features and Landscapes (ONFLs), Significant Amenity Landscapes (SALs), and landscape attributes important to environmental quality will be identified and incorporated into strategies. From this strategy planning provisions will be developed and incorporated into plans, policies and consent processes as required by the Resource Management Act.

Relevant Legislation

The Resource Management Act sections 6 (b) & 7(c) provide for *the protection of outstanding natural features and landscapes from inappropriate subdivision, use, and development as a matter of national importance and the maintenance and enhancement of amenity values as one of the other matters*. Some guidance on addressing these matters is provided by the decision of the Board of Inquiry that heard Mighty River Power's application for a resource consent to build the Turitea Wind Farm. This decision concludes that most of the proposed wind farm site is an outstanding natural landscape and that the skyline of the Tararua Ranges is an outstanding natural feature. The Board also acknowledged the significant amenity values associated with the foothills landscapes.

Horizon Regional Council's Proposed One Plan lists the Manawatu-Wanganui Regions outstanding natural features and landscapes. The list includes the 'The skyline of the Tararua Ranges' and 'Tararua Forest Park'. Also listed is 'The Manawatu Gorge'. The One Plan provides guidance, through assessment criteria, on the identification of further outstanding natural features and landscapes and concedes that the list that the plan provides is not necessarily exhaustive.

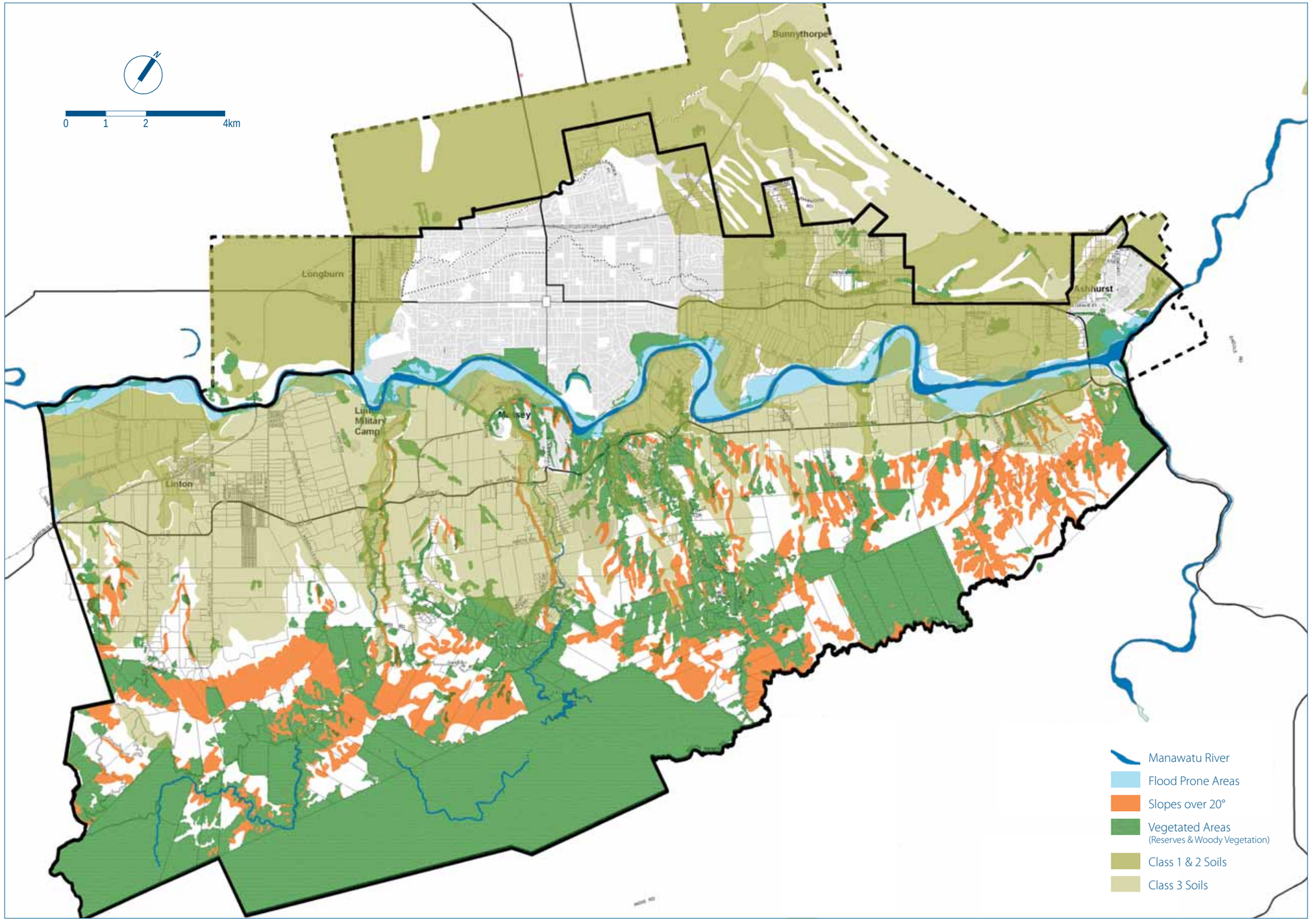


Figure 8: Natural Patterns

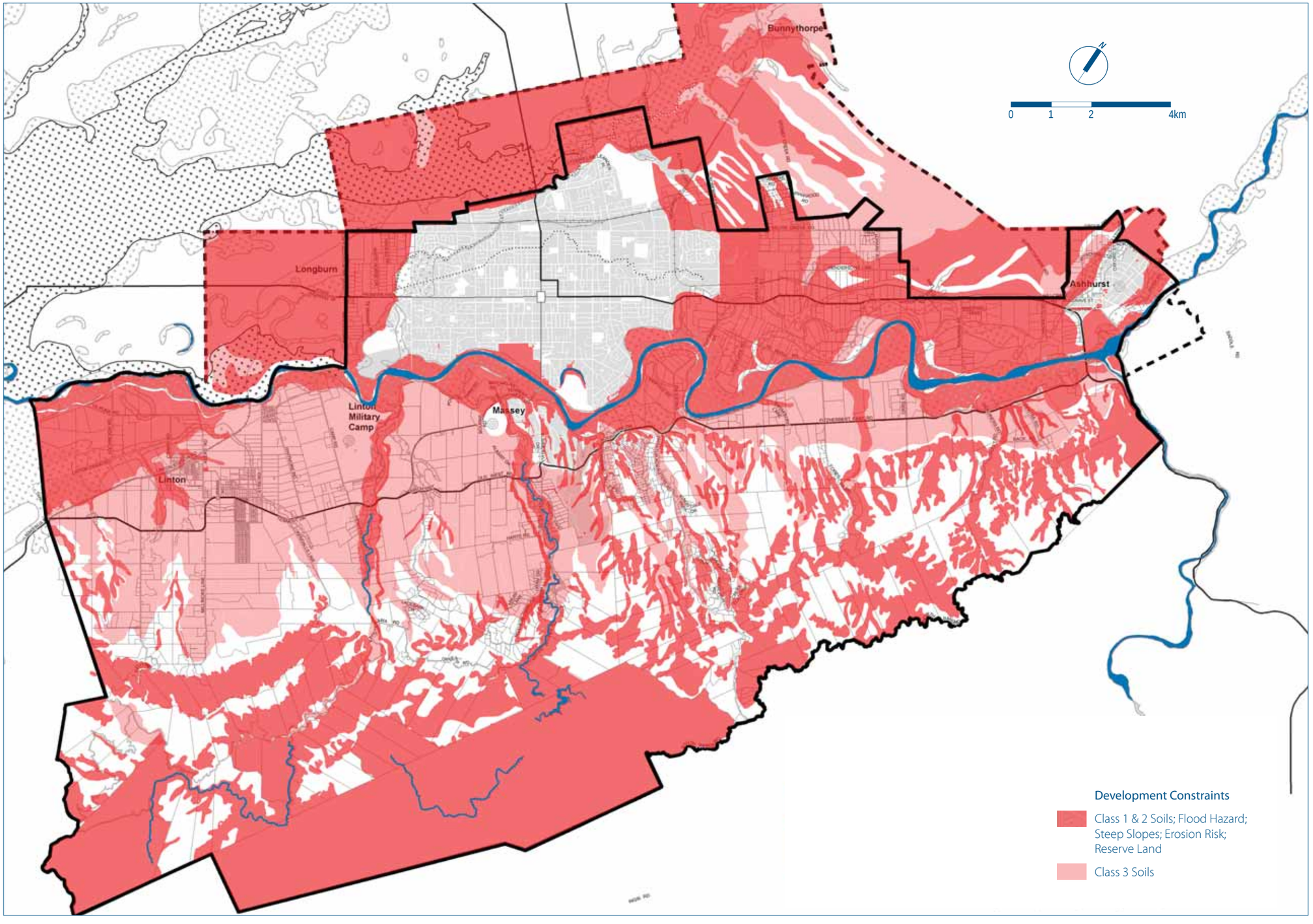


Figure 9: Development Constraints

Neither the Turitea Decision nor the Horizon's One Plan provides systematic assessments to define the boundaries of landscapes referred to. (They are not defined on maps.) The One Plan therefore requires Local Authorities within the region to undertake assessments to verify the listed landscapes and features, define features and boundaries on maps, and to add any features and landscapes that meet the criteria in the RPS. Such assessments might usefully identify areas worthy of recognition and enhancement, and areas vulnerable to adverse changes as significant amenity areas, a section 7 matter.

Another section 7 matter of relevance is *the maintenance and enhancement of the quality of the environment.* The definition of *environment* provided in the Act includes a wide range of values important to community wellbeing.

A further matter of national importance under section 6(c) of the RMA is *the protection of areas of significant indigenous vegetation and significant habitats of indigenous fauna.* A draft National Policy Statement (NPS) dealing with indigenous biodiversity is currently in preparation and once approved will have significant implications for landscape management.

The National Policy Statement for Renewable Electricity Generation was released in 2011, at the same time as the supplementary work for this report was being prepared. The policy focuses on enabling the sustainable management of renewable electricity generation. The policy acknowledges that development to increase renewable electricity generation can have environmental effects that span local, regional and national scales, often with positive effects nationally but adverse effects locally. This NPS requires that district plans include provisions to enable the development, operation, maintenance, and upgrading of new and existing renewable electricity generation activities. This has the potential to impact on the various approaches the District Plan uses to manage the hill slopes and upper catchments of the Tararua Ranges, given the qualities of the wind resource available.

The Operative Palmerston North City District Plan

Provisions in the current district plan: *Landscapes of Significance*

The operative District Plan (Section 17 Cultural and Natural Heritage) does not identify any landscapes of district significance, although at the time of preparing the RPS and District Plan PNCC commissioned a landscape assessment for the new 'kairanga' land (formerly part of the Manawatu and Oroua County Councils) located southwest of the Manawatu River, which identified 'the skyline of the Tararua Ranges' as being a regionally significant Outstanding Natural Landscape. This finding was duly submitted to Horizons Regional Council for inclusion in the RPS.[8] Other landscape policy recommendations, included within this report, were not incorporated into the District Plan.

The Tararua Ranges are for the most part accepted as an Outstanding Natural Landscape (ONL). The Manawatu River Corridor is a very important unifying feature for the City, providing amenity for local residents and recreational opportunities for the wider community. This may well warrant consideration for special recognition in terms of section 7 of the RMA, both for its *amenity* values and for its contribution to the *quality of the environment.* Consultation with the community may identify other significant amenity features or landscapes, or viewshafts that warrant identification in the 2nd generation District Plan.

Also of relevance to considerations of landscape management (and the resilience provided by the recognition of a 'Landscape Framework'), is the 2010 Manawatu Accord, signed by the members of the Manawatu River Leaders' Forum to take action to improve the state of the Manawatu River. The Accord sets out a focus, vision, and goals for the river's future. Palmerston North City Council and Horizons Regional Council are signatories to the Accord.

Key action points in the Accord with implications for the Landscape Strategy include reducing sediment run-off from intensive land-use such as dairying and cropping, reducing sediment run-off from erosion prone farmland, and protecting areas of habitat for native fish, birds and trout. In terms of infrastructure the Accord recognizes the need for care in the development and management of the rural road network, particularly where there are major earthworks, and a need to minimize the adverse impacts of flood-control and drainage schemes.

> *"Kei te ora te wai,*
> *kei te ora te whenua,*
> *kei te ora te tangata.*
>
> *If the water is healthy,*
> *the land and the people*
> *Are nourished."*
>
> *OURS Action Plan* [9]

[08] Subsequently, the landscape was not formally included in the DP, presumably on the grounds that such a provision essentially duplicates the RPS (S 32 assessment).

[09] From the OURS Action Plan.

THEME 2: LANDSCAPE VALUES

Assigning values is clearly a subjective process; frequently local residents are best placed to know the vulnerabilities and sensitivities of the landscape they live in. Identifying and assigning values to the landscape units will be done through engagement with their respective communities in conjunction with professional experts and key stakeholders.

An assessment of each of the landscape units will inform thinking as to the specific environmental outcomes sought for each unit. It will assist in the process of determining which unit(s) warrants particular protection and/or development guidance and will provide guidance on determining implementation tools that can be used in the proposed Landscape and Rural Residential Strategies.

It is recommended that the following steps are taken before the values and importance of each landscape unit is established.

Information Gathering Recommendations:

- That the baseline information contained within this Stage 1 report be used to focus on clearly defining the particular values associated with each landscape unit. Through a process of consultation, the values of each of the landscape units need to be affirmed and any additional values identified.
- Consultation feedback must be supplemented with more specialized information. In considering the values associated with the wider landscape framework, as well as each of the landscape units, it is recommended that further technical input be sought from experts in the fields of soils, ecology / biodiversity, tangata whenua and heritage, social and cultural impacts, and economic values.
- That the national policy context and the priorities Central Government is placing on landscape attributes associated with Water, Biodiversity, and Renewable Energy be reviewed and their relevance addressed.

Value Weighting Recommendations:

- Prepare a methodology for evaluating the significance of landscape values within each of the landscape units in a local, regional, and national context, using appropriate criteria. For example, Horizon's Proposed One Plan includes criteria that have been accepted by the Environment Court.
- Undertake an evaluation of landscape units in order of priority as set by the council using an agreed methodology. Priority should be given to units that are the focus of development pressures or are vulnerable to adverse natural events such as erosion and flooding.

THEME 3: LAND USE STUDY FOR RURAL RESIDENTIAL DEVELOPMENT

The Council is undertaking a sectional review of its district plan, staged over 5 years. The first stage includes a review of the Rural Zone provisions, including rural residential subdivision and wind farm policy.

The need for the rural residential subdivision review has been highlighted by recent development pressures, controversy over the extent and location of the existing rural-residential subdivision overlay, and the potential impact of residential development on farming activities and landscape values. It has become evident that strategies to guide future rural residential development need to be responsive to natural patterns and processes, provide for the widest possible range of community needs, and not be inconsistent with Council's long term growth strategy.

It is proposed that a high level strategic study be undertaken looking at where and how rural-residential land uses should most appropriately occur for a period of 20 or more years. Strategic land use studies for other activities dependent upon, and affecting the supply of land such as industrial and residential growth, have recently been completed or are underway, e.g. the Joint Industrial Land Review, Palmerston North-Manawatu Joint Strategic Transport Study (JTS).

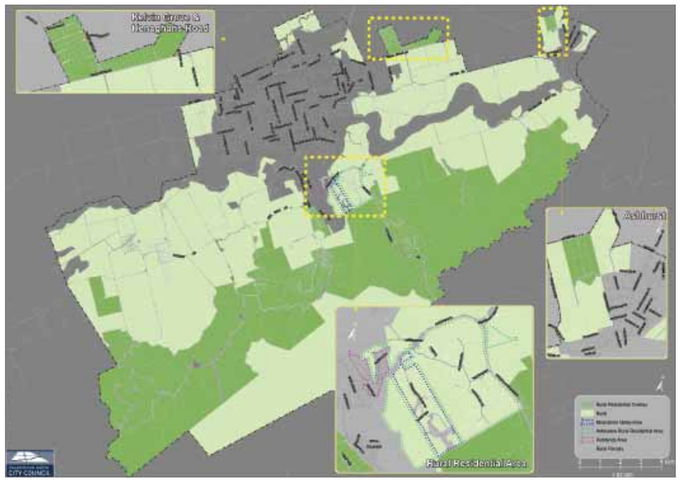
Existing rural-residential land uses and past, present and future trends need to be understood. In addition, the current best practice planning provisions relating to rural residential land use will be researched. Agreed landscape values will be fed into the defining development principles for rural residential land use, as part of the Land use Strategy.

Currently approximately 41% of the Rural Zone is covered by the rural-residential subdivision overlay. This is understood to be a consequence of the permissive, effects-based approach applied in the Rural Zone of the District Plan. The current extent of the overlay is based on a coarse screen methodology, linked to soil quality and site-specific considerations rather than a consideration of all the relevant resource management constraints. Rural-residential subdivision consents approved under the current District Plan framework have highlighted a number of resource management issues including:

- the potential for low density urban development to extend into areas inappropriate for such growth;
- an increased desire for urban services in the rural environment;
- the ad-hoc provision of infrastructure, in particular upgrades to local road networks;
- the effectiveness and suitability of on-site wastewater treatment systems (septic tanks), particularly with regard to best practise engineering design for effluent and stormwater disposal responsive to site/soil conditions;
- potential effects on the overall productivity of the rural zone;
- the premature subdivision of rural land that may be suitable for future residential growth;
- effects on rural amenity and local landscape features;
- reverse sensitivity (complaints from new rural residents about existing rural activities, effects of development on nationally strategic infrastructure); and
- increasing difficulty in some areas reconciling lot layout/building design with effluent disposal requirements to achieve satisfactory landscape and visual amenity outcomes.

Other strategic studies have taken place, or are underway, including Residential Growth, Industrial Land Use and the Regional Land Transport Strategy. In developing its strategy for future rural residential development the council will review the extent and location of the current rural-residential overlay (and/or propose an alternative planning mechanism) within the revised district plan.

For example the proposed One Plan prescribes a minimum lot size of 5,000m2 for rural lots to ensure sites can adequately deal with on-site effluent. This could be considered a 'blunt stick' approach and Council may commission further work to assess the practical feasibility of identifying areas where development meeting the range of market demands can be accommodated.



LOOKING AHEAD TO STAGE 3 AND 4 OF THE LANDSCAPE STUDY

The **Stage 3** evaluation will integrate landscape values arising from the three Stage 2 themes, initially by mapping the existing land uses within each landscape unit, and then identifying the opportunities and constraints for new uses. This will establish the landscape implications of changes in land use and the effects on critical values. In light of the opportunities and constraints for various land uses, it is appropriate to consider the availability of land for future uses such as rural-residential development and new wind farms. Part of this task will be to examine the sources of conflict arising with large-scale developments and reverse sensitivity effects.

This information will be used to outline a set of draft development principles and a development scheme for the Rural Zone, aligned to the conceptual landscape framework. The opportunities and constraints will then be assessed in line with current District Plan provisions and other non-statutory protection mechanisms currently being used, and an assessment made of their effectiveness. Any commonalities or disparities between existing zonings and the revised landscape units will be noted.

This material will enable the city to prepare preliminary options for managing rural residential growth and to engage in consultation.

Stage 4 will provide Council with a more strategic approach to landscape management. It will start with a review of the range of implementation methods and tools used throughout New Zealand for rural landscape management, as well as an assessment of current best practice. The review will encompass both District Plan implementation methods and the potential range of less regulatory mechanisms such as guidelines, incentives and resident/council partnerships. There is also potential for the Objectives and Policies for the Rural Zone to be modified to better respond to identified values and processes.

The fundamental challenge in managing the landscape and environmental qualities that communities enjoy is to ensure that all activities are managed in an holistic way. This means that all effects on the critical values and processes underpinning the landscapes values and qualities need to be accounted for. Taking a more strategic approach to landscape management therefore involves greater recognition of critical values and processes and ensuring that activities are integrated in a way that respects and enhances them.

The objective of the Landscape Strategy is to move beyond judgments about activities per se and provide direction to where various activities are best located within the wider landscape and how they can be managed and designed to 'fit' within the chosen setting.

TERMINOLOGY AND DEFINITIONS

The Rural Review will use generally accepted terminology and will adopt approaches to and criteria for assessment that have been promoted by the NZ Institute of Landscape Architects and accepted by the Environment Court. The approach outlined in Horizons Proposed 'One Plan' is generally consistent with that accepted by the court.

DEFINITIONS

Environment[10] **includes:**

a. Ecosystems and their constituent parts, including people and communities; and

b. All natural and physical resources; and

c. Amenity values; and

d. The social, economic, aesthetic, and cultural conditions which affect the matters stated in paragraphs (a) to (c) of this definition or which are affected by those matters.(as defined in the RMA

Landscape[11] is the cumulative expression of natural and cultural features, patterns and processes in a geographical area, including human perceptions of and associations with these.

Landscape is the cumulative expression of natural and cultural features, patterns and processes in a geographical area, including human perceptions and associations.

Landscape attributes comprise biophysical features, patterns and processes; sensory qualities; and spiritual, cultural, and social associations, including both activities and meanings.

Landscape amenity is the natural and physical quality and character of an area (landscape) that contributes to people's appreciation of its pleasantness, aesthetic coherence, and cultural and recreational attributes (RMA 1991).

Landscape character: the distinctive combination of landscape attributes that give an area its identity including slope, soils, geomorphology. These in turn dictate landuse.

Landscape value derives from the importance that people and communities, including tangata whenua, attach to particular landscapes and landscape attributes.

Landscape evaluation is the process of identifying and/or comparing landscape values.

Landscape patterns: the patterns of the landscape and all landscape types are strongly influenced by the geology and associated topography, the natural process of water movement, and the location of shelter belts and settlement.

Landscape processes: on-going changes to the landscape, the outcome of water movements, wind, vegetation growth and indigenous regrowth, erosion and changing land use.

Landscape resilience: the ability of a landscape to adapt to change whilst retaining its particular character and values. A more complex landform and vegetated landscape has greater resilience.

Landscape sensitivity is the degree to which the character and values of a particular landscape are susceptible to the scale of external change.

Natural Landscape has been defined by the Environment Court as being something which is a 'product of nature'. It therefore includes pasture and exotic tree species but not man-made structures. A landscape with man-made structures may still have a degree of naturalness but it will be less 'natural' than an unaltered landscape or a landscape without structures.[12]

Natural Character is the expression of natural elements, patterns and processes in a landscape.

Rural Character means the distinctive combinations of qualities which make an area "rural" rather than "urban". These include the dominance in the landscape of natural vegetation and pastoral regimes and the absence or subservience of man-made structures other than those related to primary production or to activities, including rural residential living, for which provision is made in the District Plan applying to that area.[13]

[10] Definition from the RMA.

[11] All other definitions from NZILA Best Practice Note. *Landscape Assessment and Sustainable Management.*

[12] Peart, Raewyn. Landscape Planning Guide for Peri-urban and Rural Areas. EDS 2005.

[13] North Shore city District Plan.

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The Palmerston North City Council District Plan Section 17: Cultural and Natural Heritage

- Appendix17A Schedule of Buildings and Objects of Cultural Heritage Value
- Appendix17B Schedule of Objects and Sites of Cultural Heritage Value to Tangata Whenua
- Appendix17 C Schedule of Notable Trees, Groups of Trees and Areas of Significant Indigenous Vegetation

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APPENDIX 1

CONSULTATION AND FEEDBACK

Tanenuiarangi Manawatu Incorporated (TMI), the mandated iwi authority for Rangitaane o Manawatu, was provided with a copy of the draft descriptions of the landscape types and units and was encouraged to review these and comment on the cultural and historical associations listed for each landscape unit.

As a 'starting point' for establishing what values the community within the City places on its landscape, as well as what issues are confronting the management of that landscape, a public Open Day was held in 2008 to present the draft landscape descriptions and unit map. It also provided the public with the opportunity to provide feedback on the features they value within each of the landscape units identified.

There were a number of consistent themes to the feedback:

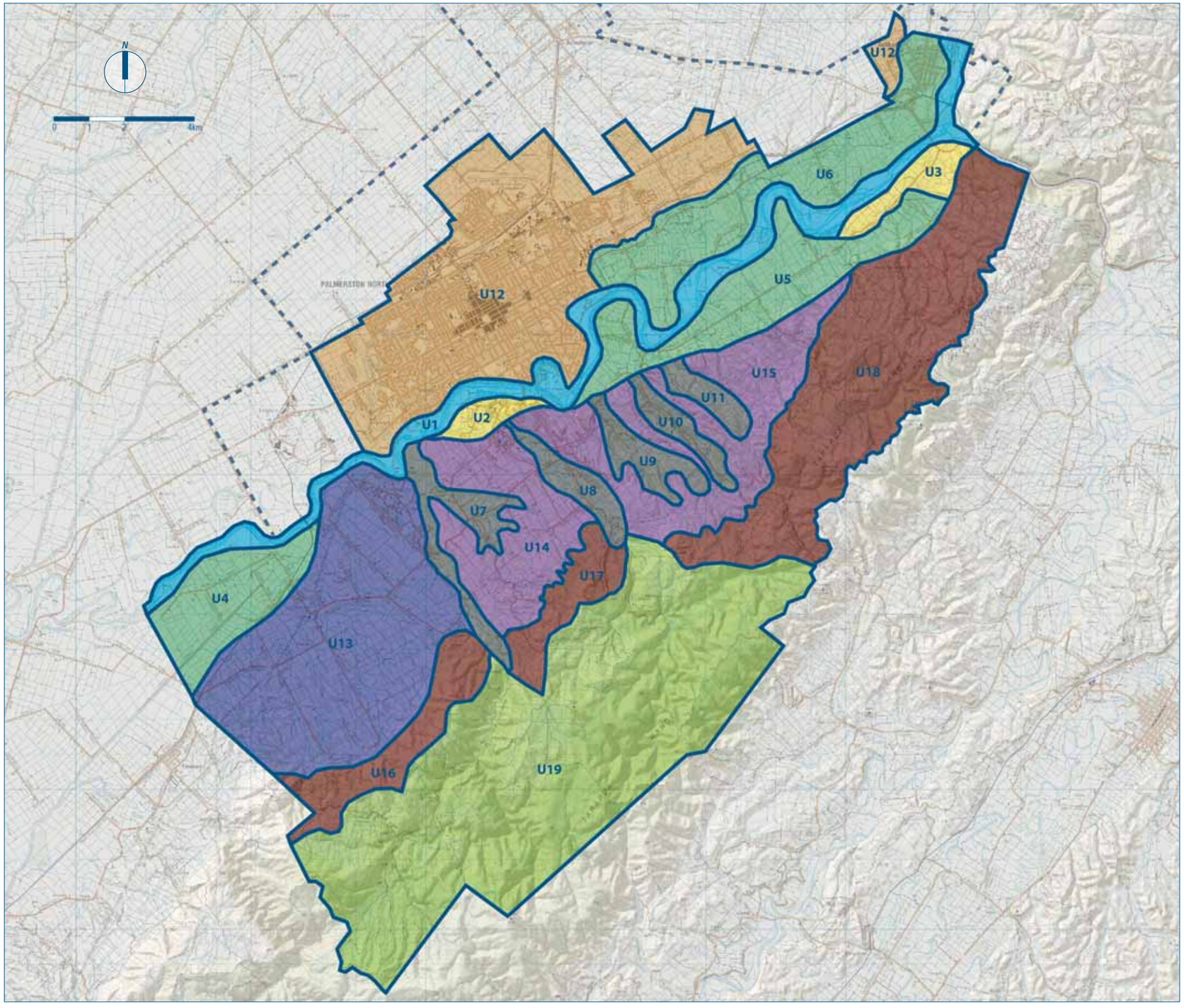
- The significance of the Tararua Ranges as a landscape feature
- The protection of high quality soils
- The need for recognition of iwi values
- The strong desire that the 'sense of place' of particular parts of the City landscape is recognised, and
- A desire to curb further wind farm development

Little comment was made about changes that are already happening in the Rural Zone, such as increasing rural-residential development or the expansion of large scale industrial activities on the edge of urban Palmerston North (North East Industrial Zone), but this may reflect the limited participation in this initial round of public consultation.

Subsequent to the Open Day in 2008, specific comment was received from TMI and incorporated into the landscape unit description sheets under the heading "Cultural & Historic Associations." Various specific suggestions and amendments (which were received in the feedback sheets from the Open Day) were also included in the data sheets, at this time.

Further information on the ways in which communities and interest groups value and enjoy the City's landscapes has been provided through submissions made on the Horizons 'One Plan' and submissions to the Board of Inquiry Hearing for Mighty River Power's Application for a Resource Consent to build the Turitea Wind Farm. In both processes, there were a large number of submissions stressing the importance of the landscape and the amenity values of the Turitea Ranges and foothills and wishing to see some statutory protection for these features, under the provisions of the Resource Management Act.

In summary, the submissions were focused at two scales, at the scale of the wider city landscape and at the more local scale where rural communities living in the Tararua Foothills enjoy particular amenity values, some of which are shared with recreational users of the Turitea and Kahuterawa Valleys.



LEGEND

U1	Manawatu River
U2	Fitzherbert Bridge
U3	Manawatu Bridge
U4	Linton Drain
U5	Fitzherbert East
U6	Te Matai Flats
U7	Lower Kahuterawa
U8	Turitea Valley
U9	Moonshine Valley
U10	Lower Pahiatua Track
U11	Aokautere Stream
U12	Palmerston North City
U13	Linton Flats
U14	Central Elevated Flats
U15	Northern Elevated Flats
U16	Te Mata Slopes
U17	Ngahere Park Slopes
U18	Forest Hill Slopes
U19	Tararua Heights

Indicative future city boundary

NOTE:
Unit boundaries are indicative only, and will be refined and clarified in Stage 2 of the Landscape Study

The Stage 1 inventory describes the landscape type, irrespective of its underlying planning zone. This map encompasses the entire area of Palmerston North City. Individual unit maps therefore do not differentiate between planning zones; the landscape character descriptions cover rural and residential areas

Palmerston North Landscape Units

PALMERSTON NORTH LANDSCAPE INVENTORY

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Attachment 5 – Submissions and responses regarding Landscape Character and Natural Character

Submitter	Submission point or relief sought and response
S37 Lew Thompson S	*I would be very much against having multistorey units or apartments or high density building such as the Woodgate subdivision - this would go against everything about our lifestyle valley. I would be open to larger sections like Titirangi or Polson Hill Road if they were built well back from the Moonshine Valley boundary line. Effects on open space, privacy and special nature of Moonshine Valley. Against multi-storey buildings. Development needs to be built well back from the Moonshine Valley boundary line.* Same response as for Submitter 41.
S83 Ben Somerton	*I support proposed changes to Adderstone Reserve to make space for more residential house. Multi-unit housing will be important for Palmerston North into the future. Supports better management of stormwater and earthwork effects. Supports walkways through the reserves but not adjacent to their property boundary.* Submitter 83 supports many of the initiatives of the Plan Change, including the need for multi-unit housing, reserve walkways, and better management of stormwater and earthwork effects. However, they do raise concerns regarding loss of privacy from public walkways near their property boundary. It is not unusual for public walkways to be adjacent private property boundaries, although I agree that specific regard should be given as to how to clearly differentiate between public and private areas, as well as maintaining privacy for residents.
S39 Anthony and Rosemary Gear	*Maintain the rural-residential zoning for the promontories D1-5 with minimum section size of 1 hectare. Setback rule of 15 metres from the boundary adjacent to the slopes.* While Submitter 39 supports the rezoning of the gullies to Conservation and Amenity, they do raise concerns regarding the visual impact on Moonshine Valley from densification and building heights on the promontories. They also consider a transition zone between the proposed development and the valley to be necessary. I consider three storey buildings as appropriate in this location, provided they meet the assessment criteria outlined in response to Submitter 41. I agree that a 15m setback is appropriate. With these requirements in place, I do not deem a transition zone to be needed.

S39 Anthony and Rosemary Gear	*We support the proposed protection of the gully network G1-G18 Map 7A.3E in the Aokautere/Summerhill region, by rezoning to Conservation and Amenity Zone.* See above submitter 39.
S58 CTS Investments Ltd, Woodgate Ltd and Terra Civil Ltd.	*The structure plan includes a connection from Abby Road to Johnstone Drive across Gully 10. That connection has already been the subject of a Notice of Requirement to designate the work and is supported in principle.* Opposition to the rezoning of several gullies to Conservation and Amenity have been raised by Submitter 58. One of the fundamental characteristics of Aokautere is its unique plateau and gully landform. Streams are also present throughout the gully network. Protection of the gullies from development is key to ensuring significant effects on landscape and natural character are avoided.
S41 Brett Guthrie	*This submission seeks application of a transition area adjacent to Moonshine Valley retaining some of the existing Rural Residential overlay.* *The Council is also obliged by the Resource Management Act 1991 (Principle 7.c) to maintain elements of the existing rural amenity such as a sense of spaciousness.* *The retention of a Rural-Residential overlay would provide a "clear gradation of development" avoiding the harsh abutment of the proposed smaller lots and multi-storied units with the Valleys 1.5 hectare minimum lot size (DP 10.6.1.1.d. p.16).* The edges of the terrace above Moonshine Valley can be seen but visibility beyond this is difficult. Elements of development may be partially visible from small areas of Moonshine Valley, including elevated parts of the multi-storey developments (if they were to proceed) at the northern end of the terraces. This will mark a change to the current rural views from these areas. While the townhouses on the ends of the promontories will experience views across the surrounding natural landscape, the visual impact of the additional height of these buildings on adjacent neighbourhoods will be mitigated in places by topography and gully vegetation, as well as distance. A new assessment criterion is proposed that can address height of promontory buildings if needed. Building height may be reduced in selected locations where detailed analysis shows a reduction is needed for reasons of visual intrusion. *Inadequate setback. Not a transition area – wants to retain some of the existing rural residential overlay. Against multi-storey housing.* *Special character of Moonshine Valley Rural Residential Area.* *Requests that visual dominance from multi-unit development is avoided.*

	Ensure semi-rural skyline is retained, rather than the Moonshine Valley rural outlook adversely dominated by the visual dominance of housing and fencing. *Avoid visually intrusive buildings into the landscape.* *Moonshine Valley interface is not carefully managed*. *Loss of amenity through loss of privacy.* *Visual impact will not be mitigated by distance and existing vegetation*. It is recommended that a 15m setback is required and specified assessment criteria is adhered to. Assessment criteria should include a requirement for buildings to be set back from the escarpment and or to reduce their height so as to reduce their visual intrusion into Moonshine Valley. With these two requirements a transition area between the promontory development and Moonshine Valley would not be necessary.
S39 Anthony and Rosemary Gear	*A setback of 15m for all buildings from the edge of the hills with a height restriction of no more than two storeys. Map 7A.4 Promontory Clusters D1-D5***.** The 15m setback and restriction of height to two storeys would help with the visual impact on Moonshine Valley. This mitigation is supported.
S36 Nathan Meyer	*I would seek the PNCC to completely scrap all multi density dwellings on the narrow fingers of land overlooking Moonshine Valley.* Refer to comments for Submitter 39 above and 41.
S74 Elizabeth Endres	*I absolutely oppose multi-unit housing in this area of Aokautere. This type of housing belongs in the inner city not in a semi-rural area.* Refer to comments for Submitter 41.
S53 Larry Harrison	*Promontories - this cluster housing has a build line too close to hill face. Minimum 15 metres from hill face to protect against erosion, visual eyesore and too much housing resulting in stormwater management issues***.** *Maximum two storey dwellings. No three storey units.* Supported with recommended residential zoning for 2 storey but 3 storey provided for where assessment criterion is satisfied. A 15m setback is supported. Refer to comments for Submitter 41.

S77 Rangitāne O Manawatū	*An additional performance standard required under a comprehensive development plan would ensure that locally sourced species are considered during consenting processes.* Submitter 77 supports the landscape-led approach of the Plan Change, which provides for the cultural landscape, including the Plan Change's restriction of development in the gullies. I agree with the Submitter's recommendation of including an additional performance standard to ensure native planting is locally sourced.
S77 Rangitāne O Manawatū	*Existing indigenous vegetation and ecosystems in gully systems should be ecologically and culturally protected from inappropriate use and development.* Supported. Future development responds to the escarpment-gully edge landforms, avoiding encroachment into the gully systems using a 5m buffer strip. This minimises earthworks requirements and maintains public view shafts. Roads that follow gully edges are retained and housing that backs onto gully edges is minimised so that the gullies are maintained as public assets
S77 Rangitāne O Manawatū	*Plan Change G knits together areas of existing and new developments in a more cohesive spatial plan. Street connectivity, open space connectivity and the recreation network is important and should be retained.* Supported.
S7 Alan Smeaton	*Submitter 7 fully supports the specific provisions which the Council has planned for the Aokautere area, including the provision of green spaces and recreation areas.* Supported
S78 Wayne Phillips	*The proposed 5m setback should be revisited* Supported. 15m setback recommended *That a 10m buffer zone at the rear of the F1 to F5 clusters be created and fully planted with native species to absorb any runoff into Moonshine Valley and a further 5m setback to the building line at the rear of those properties*. Stormwater expert to comment

	That the multi-unit proposal be changed to a single unit status to reduce the hard ground cover (and therefor runoff), on the respective plateau's. This will also reduce people movements, vehicle numbers, parking provision, traffic movement and resident safety on these no exit streets. Support option to change to Residential. Other issues are best addressed by other experts such as stormwater and traffic experts.
S9 Karen Wilton	*The tracks and gulley are a city asset and great to see their future safeguarded.* Submitter 9 is supportive of the Plan Change and they acknowledge that the tracks and gully are a city asset.
S79 Rob Campbell	*I am not in favour of extending Abby Road through to Johnstone drive. This link will affect the natural aspect of the existing gully over/through which this road will pass.* *As a general rule I would prefer that we work with the natural features in this area rather than amend them. The potential for damage to the gully.* *I accept that the proposed changes to the Adderstone Reserve (which as an aside I support)..* *Amend the proposal by removing the proposed extension of Abby Road to Johnstone Drive.* While Submitter 79 generally supports the Plan Change, they do raise concerns regarding the Abby Road/Johnstone Drive link. This is being progressed as part of a separate consent application, but retention of Abby Rd Gully (apart from the road crossing) is in line with the landscape principle of retaining the natural features. Conversion of Adderstone Park helps meet the objective of providing more housing.
S92 Tracey Yung	*I do not like the idea of removing some of the Adderstone Reserve and building homes there. This is a dangerous precedent. A reserve is a reserve and I don't agree with altering it.* Not supported. Alternative open spaces are provided. *I would like to see a set back of dwellings at least 15m from boundary…* Supported *I would like to see a transition in section size as you move further from the centre. I'd like to see subdivision of this farmland be restricted to a minimum of 1ha per lot*

	1ha to act as a transition area Not supported but residential zoning is supported *Setback and minimum 1 ha sections will help with storm water and visual impact.* Submitter 92 opposes the development of Adderstone Reserve. While it is possible under the Plan Change that part of this reserve may become a housing development area, several new reserves have been proposed throughout Aokautere which will balance this loss. The 15m setback from Moonshine boundaries on the NW promontories is supported. A specific transition area is not supported as the residential zoning will reduce effects from those that would occur with apartments. Stormwater is dealt with by other experts Refer to response to Submitter 41.
98 Sara Burgess	*That dwellings are setback at least 15m from the edge of the hill overlooking Moonshine Valley* Supported *1ha to transition* Not supported. Assessment criteria and setback are appropriate
S90 Colin Perrin	*Setback of dwellings at least 15m from boundary* Supported. Refer to response for Submitter 41.
S80 Elizabeth Fisher	*Not to build multi unit residential housing along Moonshine Valleys boundary.* *1 ha. to act as a transition* *That the dwellings be setback at least 15 meters from the boundary* Setback supported. Assessment criterion introduced. Refer to response for Submitter 41.

S65 Steve Welch	*Adoption of storm water storage tanks as a strategy to minimise changes to existing natural water flow through and across the land.* Stormwater will be dealt with by other experts. Submitter 65 opposes the proximity of housing to the gully edge of Moonshine Valley property boundaries and the development of multi-unit housing in this area. Refer to response for Submitter 41.
S54 Barry Scott	*Section boundaries should be at least 15 m back from the edge of the gullies as in the Turitea Valley not 5m. The size of sections close to the edge of the gullies is too small. Land overlooking Moonshine Valley should be retained as Rural-Residential zoning.* 15m setback of housing along western part of boundary with Moonshine Valley is supported. Retention of 5m from gullies is a stormwater matter and should be dealt with by other experts. Refer to response for Submitter 41.
S41 Brett Guthrie	*Amendments to setback distance and stormwater mitigation; exclusion of medium density multi-storey housing from promontories; inclusion of a 'Transition Area' adjacent to Moonshine Valley.* Supported Addressed above. See response to submission 41
S39 Anthony and Rosemary Gear	*Destroying the "Special Character" of Moonshine Valley. Destroying the gully system by allowing intensive multi-unit dwellings above them. No amount of mitigation will control the damage caused by the extra storm water generated from the impermeable surfaces.* Addressed above. Stormwater addressed by other experts and see response to s41 regarding other matters in this submission
S39 Anthony and Rosemary Gear	*Water soaking into the 5m setback will saturate these areas in no time and have the potential to make the instability of all the slopes actually worse.* *A setback of 15m for all buildings from the edge of the hills with a height restriction of no more than two storeys.* *A setback of 15m for all buildings from the edge of the hills with a height restriction of no more than two storeys.* *1. We have repeatedly asked for a transition area for the plateaux between the gully system in the Aokautere/Summerhil area and above the Moonshine Valley area. Map 7A.4 A minimum 1ha subdivision zoning to connect the small residential sections* *2. 15m setback supported. Assessment criterion recommended for height and visual intrusion*

	Stormwater matters addressed by others. Some matters supported. See response to s41.
S7 Inga Hunter	*It is avoidable if the plans are amended to move housing further away from the end of the slope to Moonshine Valley Road. I would like considerably more space left between housing and the edge of the hill to Moonshine Valley Road.* Supported. Setback increased to 15m Submitter 7 is Alan David Smeaton. Refer to response for Submitter 41 for the above concerns.
S98 Sara Burgess	*The proposed multi story dwellings on the skyline will visually impact the special character area of Moonshine Valley Road.* *At minimum the proposal should have dwellings setback at least 15m from the edge of the hill overlooking Moonshine* *with a minimum subdivision of 1ha to transition from residential to small lifestyle blocks found in Moonshine Valley.* Partially supported. 15m setback supported. Residential zoning supported rather than 1ha. Assessment criterion for visual intrusion supported. Refer to response for Submitter 41.
	Visual Impact....multi unit dwellings on v. small sections right along the top of our hills. Have to be at least double storey to get them in. *Setback of dwellings at least 15m from boundary as has been ruled for buildings overlooking Turitea Valley. Moonshine Valley has a Special Character designation.* *Subdivision of this farmland be restricted to a minimum of 1ha to act as a transition area from the small sections of Woodgate to the Special Character area of Moonshine Valley* Partially supported. 15m setback supported. Residential zoning supported rather than 1ha. Assessment criterion for visual intrusion supported. Refer to response for Submitter 41.
S80 Elizabeth Fisher	Refer to response for Submitter 41.
S68 Russell Poole	*The draft plan envisages the construction of multiunit housing at the very furthest reaches of the suburb, located at the far end of "necks" of land*

	With these points in mind, a better location for high-density housing would seem to be beside the main artery, Pacific Drive. The Pacific Drive portion of Adderstone Reserve... is a logical place to place multiunit housing. This submission is not rejected as their suggested location could be appropriate. However, it would need to be subject to a separate planning process as their suggestion is not the one that has been notified and therefore no chance has been given for feedback. Comment from the Urban Designer would also be appropriate.
S65 Steve Welch	*Re-design in coordination/sympathy with views of affected Moonshine Valley residents.* *I oppose proposing housing proximity to the "gully" edge of Moonshine Valley property boundaries.* *I oppose multi-unit housing positioning in "ghettos" along spurs closest to Moonshine Valley 'gully' edges.* Partially supported. 15m setback supported. Residential zoning supported as an option for promontories. Assessment criterion for visual intrusion supported.
S49 Gill Welch	*Please leave this type of housing where it belongs, Re-design in coordination/sympathy with views of affected Moonshine Valley residents* Assessment criterion for visual intrusion supported. Refer to response for Submitter 41.
S41 Brett Guthrie	*Overlooking Moonshine Valley, multi-story and multi-unit dwellings do not fit "within the character of existing neighbourhoods.* *Moonshine Valley Rural Residential Area is identified as a special character area (DP 7.3.6 explanation p.19) and, as such, is afforded some protection in the NPS-UD from such ill-placed intensification.* *This submission seeks that a broader view is taken with the proposed subdivision directly threatening the special character of Moonshine Valley Rural Residential Area. Exclude medium density multi-unit, multi- story housing from promontories* *Setback from the escarpment edge and a transition area need to be implemented to ensure the semi-rural skyline is retained,* *The Moonshine Valley "interface" is not being carefully managed* *A multi-story building of 11 metres will magnify this view greatly, severely limiting the privacy presently enjoyed and creating a very unwelcome intrusion and loss of amenity.*

	Significant setback and a transition area have been sought in submissions from Moonshine Valley residents' *the special character of Moonshine Valley Residential Area, and also avoiding visually intrusive buildings on the landscape is well provided for in DP 10; Resource Management Issues; 10.2.12, Objective 7, Turitea Valley (p.6)* *That the Plan change excludes medium density multi-storey housing from promontories.* *Setback from the escarpment edge and a transition area need to be implemented to ensure the semi-rural skyline is retained,* *Setback is now limited to a minimum of 5 metres merely because of geotechnical concerns* *This minimal setback is very clearly inadequate when locating an array of 11 metre tall buildings close to the boundary with Moonshine Valley. It certainly will not "reduce(s) visual dominance", nor will these tall buildings visual impact be "mitigated by distance and existing vegetation" (* Issues are addressed above. Also, assessment criterion for visual intrusion supported plus 15m setback recommended.
S38 Marie Thompson	*We built a new home in Moonshine Valley 28 years ago – 1994* *I am against multi storey invasive apartments on the ridge above the valley as it will compromise the nature of our valley. I would like to see single storey housing that is spaced on sections larger than the Woodgate development.* *I am against multi storey invasive apartments on the ridge above the valley as it will compromise the nature of our valley. I would like to see single storey housing that is spaced on sections larger than the Woodgate development.* Support the inclusion of visual intrusion criterion and Residential zoning. Refer to response for Submitter 41.
S64 Scott Knowles	*Worse, it might be gated and off limits to neighbours, giving the unwelcoming feel of a privileged enclave or a prison. Supportive of the Plan Change which will prevent further ad hoc development and allow gully areas to be enjoyed by everyone.* Gated areas are not proposed, except as it may apply to a Retirement Village. Support public access to gullies. Urban Design issues best addressed by other experts.
S30 Ee Kheng Ang	*My objection is linked to two specific issues. Visual impact - tall (two storey buildings) being the most likely outcomes of more housing along the top of the hill (submitter lives in Moonshine Valley).* *If the development goes ahead, the following changes should be accommodated:*

	Proposed buildings should be set back at least 15m from the boundary (as has been done for Turitea Valley). *Attention be given to the special characteristics of Moonshine Valley Road so as to minimise potential impacts in terms of aesthetic.* Supported. 15m setback recommended and inclusion of assessment criterion regarding visual intrusion. Refer to response for Submitter 41.
S22 Dennis Thomas	*I support the inclusion of areas for multi-unit housing, and think the proposed placements near open spaces and in the town centre are excellent.* Supported
S107 Prabandha Samal	*All of the gullies should be protected as they are a significant natural features to Aokautere. The gully's are the beautiful characteristics of the contour of the land, views, trees, wildlife and openness.* *Aokautere has a rural setting with a natural beauty and uniqueness that should be protected and preserved.* Significant and ongoing compliance issues have been a feature of Aokautere. This primarily relates to illegal earthworks and the filling of gullies. The Structure Plan seeks to address this through a planning framework that avoids inappropriate development and adverse effects on the gully network. It is acknowledged that the Structure Plan will lead to significant changes to the existing landscape character of Aokautere, with rural zoned land becoming residential. While rural attributes contribute to the existing character of the landscape, it is the underlying topography of plateaus and gullies which truly make this landscape unique. The Structure Plan proposes to work with the existing landscape and reinforce this landform pattern where possible.
S90 Colin Perrin	*Erosion and silt affecting our stream is awful now. Far far worse if this subdivision allowed.* *Setback of dwellings at least 15m from boundary as has been ruled for buildings overlooking Turitea Valley. Subdivision of this farmland be restricted to a minimum of 1ha to act as a transition area from the small sections of Woodgate to the Special Character area of Moonshine Valley. Setback and minimum 1 ha sections will help with storm water.* A 15m setback and residential zoning on promontories is recommended. Stormwater matters best addressed by stormwater experts

S49 Gill Welch	*Moonshine has made great strides to become predator free and to protect our bird life/wildlife. This development will bring the risk of more cats and escaped dogs endangering the nature that abounds.* *We all believed that because of the gully and the lay of the land, and the special status that Moonshine holds a subdivision such as this could not happen.* *Re-design in coordination/sympathy with views of affected Moonshine Valley residents.* Inclusion of visual intrusion criterion is recommended. Pest matters best addressed by ecologist and planner.
S107 Prabandha Samal	*Aokautere has a rural setting with a natural beauty and uniqueness that should be protected and preserved* *maintaining the rural setting, tranquility and scenic beauty of Aokautere* *The house at xx Johnstone Drive was built facing east to capture the scenic beauty of the ranges. The development of new houses with north-facing houses will lead to complete loss of privacy, apart from congestion and crowding.* Effects on traffic are addressed by others. Gully retention will contribute to retaining scenic beauty, Development of new housing will alter existing rural setting.
S77 Rangitāne O Manawatū	*Development in gully systems is avoided in all cases, except where critical infrastructure, such as road connections and the recreation network, is installed. Existing indigenous vegetation ecosystems in gully systems are protected. Gully systems will be ecologically and culturally restored. Future development responds to the escarpment-gully edge landforms, avoiding encroachment into the gully systems using a 5-m buffer strip. This minimises earthworks requirements and maintains public view shafts. Roads that follow gully edges are retained and housing that backs onto gully edges is minimised so that the gullies are maintained as public assets. The gullies are zoned conservation.* Supported
S77 Rangitāne O Manawatū	*Te Mana o te Wai: The gully systems within Aokautere have a range of ecosystem types, including intermittent, ephemeral and permanent waterways, wetlands and ponds, and terrestrial vegetation. The mauri from the whenua (lands) of Aokautere is collected in these gully ecosystems and feeds the Manawatū Awa and Turitea Stream. We have a statutory acknowledgement over these waterways within the Rangitāne o Manawatū Claims Settlement Act (2016). As part of the implementation for the National Policy Statement for Freshwater Management 2020, we have developed a statement to describe what Te Mana o te Wai means to us in our local context. Our statement applies to the Manawatū Catchment Freshwater Management Unit, which includes: - the Manawatū Awa - coastal lakes - their catchment, tributaries and connections, including groundwater,*

	wetlands and lagoons. Our statement is as follows: "The most significant quality that flows through wai is mauri. The mauri is generated throughout the catchment and is carried through the connected tributaries, groundwater, wetlands and lagoons. It is the most crucial element that binds the physical, traditional and spiritual elements of all things together, generating, nurturing and upholding all life, including that of Rangitāne o Manawatū. The health and well-being of Rangitāne is inseparable from the health and well-being of wai. The Manawatū Awa, its catchment, tributaries and connections, wetlands and lagoons are taonga and valued for the traditional abundance of mahinga kai and natural resources." Previous development has increased sedimentation rates, which has had a negative effect on water quality and aquatic ecosystem health. Supported.
S69 Karen Lyons	*Developments should avoid the "gated community" look such as there is now along Aokautere Drive. Much better to encourage tree planting to screen traffic and its attendant noise.* *Together open spaces, recreational paths, vegetated gullies, amenity street planting and WSD will ensure Aokautere is a desirable place to live. As a result, the residents of Aokautere will be able to feel connected to the surrounding landscape.* *A strong urban design, high amenity focus has been taken, including the provision for different residential densities and street typologies to increase streetscape amenity.* *Street planting will complement Aokautere's natural ecology, while providing a high-quality urban environment. The planting will add diversity by reinforcing the character of the different street types found throughout the subdivision.* Supported
S64 Scott Knowles	*I hope that the original design of 'Gully Edge Streets' is retained. The natural areas of gullies, slopes and streams should be enjoyed by everyone, not just homeowners with fortunate backyard views.* Supported
S47 Pasifika Reference Group	*We think that the Adderstone Reserve has the potential for a purpose-built Pacific Centre.* *Adderstone Reserve could provide the opportunity to have purpose-built facilities and also to create the opportunity for other businesses to be in close proximity to the centre. This would also create a multicultural hub in Aokautere with IPU being close by.* Support an alternative use for Adderstone Park. Whether it is for Pacific Centre is better considered by others

S23 Daniel Carrick	*To leave the reserve as a reserve to keep Palmy Green* Not supported. Best addressed by other experts.
S4 Audrey Shepherd	*I am happy about the overall plan regarding the Aokautere urban growth and the repurposing of parts of Adderstone Reserve* Supported
S2 Mark Currin	*My family and I am opposed to any widespread development in Aokautere and in particular, the proposed changes to the Adderstone area/Pacific drive. There is already traffic congestion in the Summerhill area, it will ruin the rural/semi-rural feel of the area, the housing density is already high, there is a lack of shops and amenities, and current spaces will be destroyed for ever.* Not supported. Rural land use may change but gullies will be preserved and gullies can be used for recreation. Other matters such as traffic and urban design to be dealt with by other experts
S29 Charles Chua	*Drop the whole proposal and turn it into a park where native trees are planted and residents are free to come and enjoy it!* Not supported. Best addressed by other experts.
S41 Brett Guthrie **Support in part .**	Submission: summary. This submission supports the introduction of an integrated plan in principle. However, significant amendment is required, seeking greater consideration given to the special character of Moonshine Valley Rural Residential Area. Inconsistencies and contradictions between the District Plan, Plan Change G and the Aokautere Structure Plan are highlighted. The submitter considers that overall the Masterplan 2022 has done little to allay the concerns of Moonshine Valley residents and again highlights substantial planning inconsistencies between developments and areas. In addition, the documents supporting the plan seem more a justification of the status quo Decision requested This submission seeks that a broader view is taken with the proposed subdivision directly threatening the special character of Moonshine Valley Rural Residential Area. In particular the incongruous presence and close proximity of ill-placed multi-unit, multistory housing. Addressed above.

S48 Bruce and Marilyn Bulloch	*In principle we support Plan Change G for the following reasons: - Having a comprehensive plan is far more desirable than piecemeal development driven by individual developers who may be tempted by short-term expediencies. - Taking the gullies into Council ownership and managing them as a coherent Not supported system will enable them to be exploited as landscape features. - The range of documentation provided in support of the Plan Change indicates an overall vision, the foreseeing of many of the contingencies, and the District Planning Rules that desirable outcomes will entail.* Submitter 48 is in support of the overall vision of the Plan Change, opposed to the current "piecemeal" development. The Submitter also supports the gullies being owned and managed by Council.
S54 Barry Scott	*Reduction in number and size of sections in this subdivision.* Best addressed by Planner and Urban Designer. Reducing the number would not meet the objective of providing more housing.
S2 Mark Currin	*My family and I am opposed to any widespread development in Aokautere and in particular, the proposed changes to the Adderstone area/Pacific drive. There is already traffic congestion in the Summerhill area, it will ruin the rural/semi-rural feel of the area, the housing density is already high, there is a lack of shops and amenities, and current spaces will be destroyed for ever.* The existing rural appearance has been lost already by virtue of the Immediate Effect of the Plan Provisions. Gullies will be preserved as Conservation areas. The streetscape is designed to be high amenity. More housing will be provided. Traffic and other topics addressed by others.
S4 Audrey Shepherd	*I am happy about the overall plan regarding the Aokautere urban growth and the repurposing of parts of Adderstone Reserve.* Supported.
S58 CTS Investments Ltd, Woodgate Ltd and Terra Civil Ltd.	*The submitters oppose the change from residential zoning to Conservation and Amenity Zone of the area of land immediately south of the gully crossing [connection from Abby Road to Johnstone Drive across Gully 10]. This area of land has been previously partly filled and has no particular natural or amenity values.* The landscape value comes from the gully form, which is still a gully and representative of the whole Aokautere landscape character, of terraces and gullies, and retains this character. Further filling of this gully would not do that. This submission is not supported

S61 Ngawai Farms Limited	*The Rural Residential Overlay which once covered the entirety of the property would be severely limited to the central portion of the site. The reduced Rural Residential Overlay would limit the development potential for Mr Waters. Council's requirements would be more stringent regarding subdivision potential and overall development of the property.* A 0.5 ha subdivision plan was developed by council for Mr Waters for the entire original Rural Residential area of the Waters land. Subsequent to that, noise restrictions were mapped due to the gun club and Geo-Tech were mapped over the entire rural residential part of the site. Noise restrictions prevented about 1/3 of the original rural-residential land being eligible for subdivision and Geo Tech prevented any permitted housing (specifically designed housing may be appropriate) over the rest of the site. Site visits indicated the presence of areas in the main valley system that could potentially be wetlands. After all these restrictions were considered, the rural residential overlay was removed and *a* conservation/amenity zone was introduced. If Rural Residential development was to be re-introduced, it would need to be limited to specific design due to GeoTech. Also addressed by other expert such as planner, Geo Tech, Ecologist.
S61 Ngawai Farms Limited S	*In accordance with Appendix 2, the western portion of the site that has road frontage to Turitea Road would contain an area that does not have a zone. It is currently zoned Rural with the Rural Residential Overlay.* Retain the rural zoning of this land and confirm the zoning of the western portion of the site that has road frontage to Turitea Road This is best addressed by other experts including Planner, Urban Designer