BEFORE THE PALMERSTON NORTH CITY COUNCIL INDEPENDENT HEARING PANEL

UNDER The Resource Management Act 1991

IN THE MATTER OF Plan Change E: Roxburgh Residential Area

FOR **Palmerston North City Council**

EVIDENCE OF CHRISTOPHER MURRAY MCDONALD ON BEHALF OF PALMERSTON NORTH CITY COUNCIL

URBAN DESIGN

23 April 2025

INTRODUCTION

1 My full name is Christopher Murray McDonald. I am an Associate Director at McIndoe Urban Limited.

2 I am authorised by Palmerston North City Council to give this statement of evidence on their behalf.

Qualifications and experience

3 I hold a Bachelor of Building Science and a Bachelor of Architecture from Victoria University of Wellington. I hold a Master of Architecture and a Master of City Planning from the University of California [Berkeley]. I hold a PhD in Planning History from the University of New South Wales.

4 I have more than 30 years' experience as a Lecturer and Senior Lecturer in the Architecture Programme at Victoria University, where I taught Architectural Design, Urban Design and Urban History. In 2000 and 2001, during leave of absence from the University, I was a Senior Urban Designer for the City of Melbourne. I was a member of the Ministry for the Environment's Urban Design Advisory Group, which oversaw preparation of the *New Zealand Urban Design Protocol*. For many years, I was a member of Wellington City Council's Technical Advisory Group, which provides design advice on waterfront development. I joined McIndoe Urban in 2016 and became an Associate Director in 2018. At McIndoe Urban, my work consists largely of brief writing, master planning and design review. Although I retired from my academic role in 2022, I continue to practise as an Urban Designer.

5 I have contributed to masterplans, structure plans and district plan changes for greenfield residential communities at the following locations:

(a) Aokautere Urban Growth Area (Plan Change G);
(b) Kākātangiata Urban Growth Area;
(c) Mātangi Private Plan Change;
(d) Providence Pont, Drury;
(e) Te Orokohanga Hōu, Riverbend Road, Napier; and,
(f) 3 Roberts Street, Martinborough.

6 I have reviewed designs for residential subdivisions and / or multi-unit developments at the following locations:

(a) 8 Stevensons Street, Albany.
(b) 457 Adelaide Road, Wellington.
(c) 420 Tremain Avenue, Palmerston North.
(d) Summerset Kelvin Grove, Palmerston North.
(e) Metlifecare Karori Village, Wellington.

Role undertaken on behalf of Palmerston North City Council

7 In 2018 McIndoe Urban Limited (MUL) was engaged by PNCC to assist with plan change preparation for the re-zoning of industrial land at Roxburgh Crescent. In this early phase of the project, MUL facilitated workshops with Council officers and produced a draft structure plan.

8 My involvement with Roxburgh Crescent commenced in 2020, when I co-authored MUL's Roxburgh Crescent Urban Design Report. My contribution included a site history and an extensive analysis of existing residential fabric in the Ruahine Street area. The Urban Design Report has been revised several times – most recently in 2024. Since 2021, I have been responsible for making these revisions.

9 During 2020-22, I contributed to the evolution of the Roxburgh Crescent Structure Plan (Structure Plan). I also helped to produce a series of indicative masterplans, which accompanied each iteration of the Structure Plan. As well as illustrating likely development outcomes, the accurately dimensioned masterplan drawings tested the viability of the Structure Plan and associated planning provisions.

10 In June 2022, I participated in a PNCC workshop attended by Council officers, property owners and other external stakeholders. At this event, I presented the 2022 version of the Draft Structure Plan along with its underlying design principles and strategies.

11 During 2023-24, I provided feedback on draft policies and provisions, which had been prepared by PNCC officers and external planning consultants.

12 Early in 2025, I was asked by the Council to prepare Urban Design evidence for Plan Change E. I was asked to focus my evidence on six Urban Design topics raised in the submissions. These are identified in paragraph 32.

13 In preparing my evidence, I have examined the Urban Design Report dated 1 January 2024. The contents of this document generally remain accurate and relevant. Its key findings are summarised in paragraphs 21 to 26 of my evidence. The proposed Structure Plan is described in paragraphs 27 to 30.

14 I understand the Hearing Panel has access to the Urban Design Report. I am happy to answer any questions the Panel may have regarding this document.

Expert Witness Code of Conduct

15 I have read the Code of Conduct for Expert Witnesses set out in the Environment Court's Practice Note 2023. I have complied with the Code of Conduct in preparing my evidence and will continue to comply with it while giving oral evidence before the Hearing Panel. My qualifications as an expert are set out above. Except where I state I rely on the evidence of another person, I confirm that the issues addressed in this statement of evidence are within my area of expertise, and I have not omitted to consider material facts known to me that might alter or detract from my expressed opinions.

Scope of evidence

16 My evidence addresses the following subjects:

(a) Key content from the Urban Design Report.

(b) Roxburgh Crescent Structure Plan.

(c) Comments on urban design matters raised in submissions.

(d) Conclusions and recommendations.

17 In preparing my evidence, I have referred to the following documents:

(a) Urban Design Report dated 11 January 2024.

(b) PCE Section 32 Evaluation Report (undated).

(c) Proposed provisions to be inserted into the Palmerston North City Council District Plan (undated).

(d) Submissions S1-S23.

(e) Further Submissions FS1-FS5.

(f) PNCC Summary of Decisions Requested from Original Submissions & Copies of Original Submissions dated 4 December 2024.

18 As well as making my own observations, I have referred to Mr Charnley's depictions of riverfront development when assessing the impact of height on the river corridor. These depictions are recorded as Viewpoints 1-7 and described in Mr Charnley's evidence regarding 'Visual Modelling – Bulk & Form'.

19 My evidence does not address potential shading effects on existing residential properties.

Summary of evidence

20 In summary, my evidence is as follows:

(a) PCE adequately addresses the need for site planning and subdivision layout to support efficient energy use.

(b) PCE allows as many as one-third more dwellings compared with standard Residential Zone provisions. Increased density is justified by exceptional open space and the benefits of comprehensive design.

(c) 250m^2 is a realistic minimum lot size that delivers an acceptable degree of amenity. By enabling compact lots, PCE reflects a shift towards smaller households and a need for more diverse housing stock.

(d) There is no justification for increasing maximum lot size to 600m2. Existing residential-scale lots readily subdivide into parcels measuring less than 500m^2. In geometrically complex parts of the RRA – where subdivision design is more challenging – large parcels allow lot size to be managed over a wide area. In this case, over-size lots can be avoided by distributing the land area equitably among a larger number of parcels.

(e) The 9m height limit recognises that the RRA has an extensive interface with existing residential areas, which are principally composed of one-storey dwellings. Extending the 11m height limit (beyond the Riverfront area) is unlikely to increase yield.

(f) Within the Riverfront area, the 11m height limit encourages developers to build up rather than out. The height limit enables an efficient 'townhouse' format that engages with the river corridor.

(g) Within the Riverfront area, three-storey dwellings will create a more definite built edge. This is consistent with an urban landscape and the city's increasing orientation towards the Manawatū River.

(h) Over time, the removal of industrial activities will substantially improve the wider context of Tilbury Avenue properties. However, modifications to Waterloo Reserve may justify increasing separation distance along the RRA's southern boundary.

KEY CONTENT FROM THE URBAN DESIGN REPORT

21 Roxburgh Crescent's existing industrial activities are anomalous in an established residential area with exceptional open space amenity along with good access to public transport and other services (see Urban Design Report pages 5-9 & 19).

22 Currently, the 300m long Higgins site blocks physical and visual connections to the river corridor (see Urban Design Report pages 11 & 20).

23 A single cadastral grid unites Roxburgh Crescent with Ruahine Street and adjacent residential areas (see Urban Design Report page 21).

24 Eight design principles inform the Structure Plan (see Urban Design Report pages 24-29). These principles can be summarised as follows:

(a) New and existing thoroughfares combine to form a path network (see 3.3.1).

(b) The path network provides good internal and external connectivity (see 3.3.2).

(c) The plan improves physical and visual links to the river corridor (see 3.3.3).

(d) Public open space and river access are co-located at the plan's centre (see 3.3.4).

(e) A high-quality public realm adds value to residential properties (see 3.3.5).

(f) A prescribed street layout supports compact street-facing lots (see 3.3.6).

(g) Planning provisions enable higher yield and a range of dwelling types (see 3.3.7).

(h) Positive relationships exist between the public and private realms (see 3.3.8).

25 Distance from Hokowhitu local centre means that the RRA does not qualify for inclusion within the Medium Density Residential Zone (MDRZ) proposed under Plan Change I. However, some Operative District Plan (ODP) Subdivision and Residential Zone provisions are varied to enable smaller lots with two and three-storey dwellings (see Urban Design Report page 35).

26 Specifically, PCE enables smaller lots and greater site coverage. The plan change also introduces more generous HRTB controls especially within the Riverfront Area. These new provisions work in concert with existing Residential Zone rules for maximum building height (outside the Riverfront Area) and minimum separation distances. For compact lots, the provisions encourage taller volumes to be located within the forward portion of each parcel. This arrangement acknowledges that residents' visual amenity is enhanced by streetscape.

The forward placement of bulk also recognises that privacy issues are less acute along street frontages and more acute in mid-block locations (see Urban Design Report ages 37-38).

ROXBURGH CRESCENT STRUCTURE PLAN

27 The Structure Plan responds to the unique attributes of existing industrial land within the Roxburgh Crescent area. These attributes and their planning implications can be summarised as follows:

(a) An irregular shape limits the options for subdivision layouts that offer good connectivity and favourable conditions for compact lots.

(b) A poorly developed path network requires new public thoroughfares to substitute for existing on-site circulation routes within the extensive Higgins property.

(c) A river corridor interface offers exceptional amenity if existing physical and visual barriers can be overcome.

(d) An existing thoroughfare (Roxburgh Crescent) prescribes locations for a north-south spine and connections to Ruahine Street.

(e) An existing open space reserve offers few public benefits but an equivalent area in a more central location could enhance river access.

28 The Structure Plan evolved from a masterplanning exercise involving four different development scenarios. Various combinations of streets, lanes and cul-de-sacs were evaluated against criteria such as path legibility, connectivity and the quality of public open space. Assessments were also based on the masterplans' ability to efficiently accommodate a range of lot sizes and dwelling types. The proposed Structure Plan is a modified version of the preferred masterplan, which contains five main spatial components:

(a) A southern extension of Roxburgh Crescent continues the street's existing north-south alignment. Indicated A on the Structure Plan diagram, the extension

establishes Roxburgh Crescent as a spine that supports fine-grained subdivision into east-west lots.

(b) A new local street traverses the area between Roxburgh Crescent and the river corridor. Indicated B on the Structure Plan diagram, this route provides a street address and a public frontage to new residential lots. Conceptually, Local Street B runs parallel to Roxburgh Crescent and supports subdivision into compact east-west oriented lots.

(c) The centre of the plan contains a public open space with river access, which is an easy walk from every dwelling within the RRA. Indicated C on the Structure Plan diagram, the new reserve replaces an inaccessible and awkwardly shaped arm of Waterloo Reserve.

(d) A new east-west street is co-located with the central open space and aligned with an existing link to Ruahine Street. Indicated D on the Structure Plan diagram, the new route provides uninterrupted physical and visual connections to the river corridor.

(e) A new pathway links the southern end of Roxburgh Crescent to Ruahine Street. Shown as a dotted line on the Structure Plan diagram, the path increases permeability in the southern portion of the plan. It offers pedestrians and cyclists a short-cut to Winchester Store and the bus stop on Ruahine Street. It also provides a convenient route to Pahiatua Street and Hokowhitu village.

29 Most planning provisions apply uniformly across the Roxburgh Residential Area (RRA). However, maximum building height and HRTB standards are more permissive within the Riverfront Area. Here, three-storey houses are enabled in order to facilitate engagement with the river corridor. The Riverfront Area has no interface with the existing Residential Zone, so the additional height has little if any effect on established residential properties.

30 In terms of content and complexity, the Roxburgh Crescent Structure Plan resembles other ODP structure plans e.g., those for Kikiwhenua and Mātangi / Whiskey Creek. However, one distinguishing feature of the RRA plan is the inclusion of dimensionally accurate street

corridors. Sized to match the existing width of Roxburgh Crescent, these 13m wide thoroughfares respect existing property boundaries and provide greater certainty about the scale and character of future residential streets. Being relatively narrow, 13m wide thoroughfares deliver more net developable area than an equally permeable network of broader streets would do. This efficiency is particularly important in the Structure Plan's central rectangular block where back-to-back compact lots are enabled (see paragraph 61).

COMMENTS ON URBAN DESIGN MATTERS RAISED IN SUBMISSIONS

31 I have read all 23 Original Submissions and all five Further Submissions.

32 I have grouped submissions under the following Urban Design topics:

(a) Energy Efficiency

(b) Open Space Strategy

(c) Lot Size / Density

(d) Building Height Strategy

(e) Maximum Building Height on Riverfront Lots

(f) Residential Interfaces

33 Each topic begins with a concise summary of the relevant points made by submitters. I address each of these points sequentially and offer recommendations regarding their acceptance or rejection.

34 I have used scaled plans and sections to test indicative development outcomes. Some of these drawings are included in my evidence.

Energy Efficiency

SUBMISSION

35 S22 (Horizons Regional Council) draws attention to the need for site planning and subdivision layout to support efficient energy use. This includes facilitating sustainable transport options and encouraging energy-efficient house design with access to solar energy (S22-5).

RESPONSE

36 Plan Change E enables the development of compact housing in a high-amenity location where future residents are close to public transport and have good active-mode options for accessing schools and recreation opportunities. Although distance from a local centre prevents inclusion in the new MDRZ, proposed RRA provisions support higher yield by facilitating the construction of two and three-storey dwellings on smaller lots.

37 The Structure Plan prescribes a joined-up movement network with good permeability and built-in resilience. New streets connect with existing thoroughfares, ensuring that the re-zoned area is fully integrated with its host suburb. A new river access point is introduced mid-way between existing connections at Ruahine Street and Waterloo Reserve. This arrangement optimises residents' access to recreation opportunities and off-road pathways. In the southern portion of the plan, a new pedestrian / cycle accessway provides a convenient link to Pahiatua Street and a more direct route to Hokowhitu Village.

38 Together with proposed RRA provisions, the Structure Plan facilitates subdivision into compact east-west oriented lots i.e., narrow 250m^2 (approx.) parcels with east or west-facing street frontages (see also paragraph 61). This east-west 'grain' allows compact dwellings – including attached units – with good front and rear sun. As density increases, favourable front and rear aspect becomes important because houses are closely spaced and side elevations have less sun access. The east-west orientation also favours long north-facing roof planes that are suitable for solar panels.

39 Taking the above factors into account (see paragraphs 36 to 38), I suggest that PCE adequately addresses the need for site planning and subdivision layout to support efficient energy use. Therefore, I do not recommend any changes to the proposed provisions.

Open Space Strategy

SUBMISSION

40 S23 states that Plan Change E allows housing to be 'crammed in' to the re-zoned area and that insufficient consideration has been given to 'the value of green space & landscaping' (S23-1).

RESPONSE

41 In broadbrush terms, the RRA's 250m^2 minimum site area permits one third more lots than would be the case with standard Residential Zone provisions. Applied to a net developable area of approximately 3.3ha, this translates into 30 additional dwellings within a total yield of 120 housing units. These numbers assume an intensive development scenario in which 80% of the area is divided into 250m^2 lots and the remaining 20% is divided into 350m^2 lots.

42 The increment in yield is justified by:

a) Large parcels allowing comprehensively designed subdivision (see paragraph 56).

b) Proximity to a range of existing amenities (see paragraph 55).

c) PNCC's Future Development Strategy (see paragraph 53).

43 No matter how compact the design, every dwelling and its site must meet ODP minimum requirements for outdoor living areas and outlook spaces. Therefore, an acceptable level of private amenity is guaranteed.

44 Private amenity is augmented by three types of open space, which are located within or adjacent to the RRA:

a) River corridor.

b) Central open space reserve.

c) Landscaped streets.

45 The Manawatū River is the RRA's principal recreational amenity. The re-zoned area is immediately adjacent to extensive open spaces within the river corridor. These are made available by the inclusion of public access point at the centre of the Structure Plan. As a result, no RRA resident will be further than 270m from the corridor. For most people, this represents a convenient walking distance.

46 In an exchange of land between PNCC and Frances Holdings, the northern arm of Waterloo Reserve is replaced with an equivalent open space at the centre of the Structure Plan. The new reserve is more accessible than its predecessor having frontages to all three RRA thoroughfares and being co-located with a new river access point. Improved proportions and better visibility facilitate a range of recreational uses e.g., passive recreation, children's play, half court. Because the reserve is in two parts, activities and age groups can be separated. As a landscaped open space, the new reserve also contributes to visual amenity at the centre of the RRA.

47 Landscaped streets supply a third category of public open space to the RRA. Streetscapes include specimen trees, rain gardens and planted berms, which augment gardens at the front of private lots. In most locations, 6m front setbacks combine with a 13m wide street corridor to produce at least 25m separation between house fronts. If three-storey (11m) dwellings are introduced to the street corridor, the ratio of horizontal to vertical dimensions exceeds 2:1 (see paragraph 105). If two-storey (9m) dwellings are introduced, the street's cross section approaches a 3:1 ratio. Both proportions provide an appropriate combination of spatial containment and openness.

48 Taking the above factors into account (see paragraphs 41 to 47), I disagree with S23's argument that density is excessive and open space is insufficient. Therefore, I do not recommend any changes to the proposed provisions.

Lot Size / Density

SUBMISSIONS

49 S10 seeks an unspecified increase in minimum lot size in order to (see S10-2):

- Avoid excessive density;
- Achieve a better fit with existing residential areas; and,
- Provide more private outdoor space.

Similarly, S15 seeks an increase in minimum lot size to 350m ^{2}in order to achieve less intensive development (S15-1).

50 S11 seeks an increase in maximum lot size to 600m2 because 'site planning is showing that in a few cases a larger lot may be necessary' (S11-3).

51 More generally, S15 seeks flexibility in the Structure Plan in order to accommodate change (SO15-1, 15-2).

RESPONSE

52 In response to these submissions, I offer a series of arguments in support of the proposed constraints on lot size. These arguments are summarised here and addressed in greater detail in paragraphs 53 to 80:

(a) <u>Arguments supporting 250m^2 minimum lot size</u>

52.a.1 Palmerston North needs a wider variety of housing including compact dwellings on small lots.

52.a.2 Comprehensive development of the extensive Higgins property can deliver high levels of amenity on smaller lots.

52.a.3 Because existing properties vary greatly in size, stipulating average lot size is less useful than imposing minimum and maximum areas.

52.a.4 Much of the RRA is suitable for subdivision into small lots.

52.a.5 Whereas large lots favour free-standing houses, small lots are suitable for a range of dwelling types.

(b) Arguments supporting 500m^2 maximum lot size

52.b.1 In the northern portion of the RRA, all but one of the existing parcels can be split into two compliant lots.

52.b.2 Elsewhere within the RRA, comprehensive development allows the shapes and sizes of parcels to be managed over a wide area.

52.b.3 Over-size rear lots can be avoided if a proposed pedestrian / cycle path becomes a shared accessway.

52.b.4 Increasing maximum lot size can lead to reduced yield and a narrower range of dwelling types.

Arguments supporting 250m^2 minimum lot size

53 Brownfield development is a key component of PNCC's Future Development Strategy. The strategy identifies pockets of industrial land – including Roxburgh Crescent – as a means for accommodating population growth within existing built-up areas. When brownfield sites occupy high-amenity locations like Roxburgh Crescent, it is important to maximise yield by enabling higher-density development. Allowing two and three-storey houses on compact lots also encourages a broader range of dwellings to be produced. This approach is endorsed by the Future Development Strategy. Describing opportunities for housing growth, the strategy identifies a need to increase both the number and variety of dwellings. Smaller homes are part of the mix:

> Smaller sites and smaller homes represent an opportunity to provide for housing demand more efficiently than large homes on large sections. Smaller sections are

also likely to be more affordable. Enabling smaller homes and property sizes would increase our capacity for housing growth. (*Future Development Strategy*, 2024, p.36)

54 The Council's emphasis on compact dwellings reflects a shift towards smaller households along with a desire for greater affordability and a need to correct the predominance of large free-standing family homes in Palmerston North's existing housing stock. Subject to acceptable levels of amenity and a sympathetic relationship to context, planning provisions for re-zoned areas aim to accommodate future housing needs rather than replicate existing residential fabric. Accordingly, recent plan changes encourage compact development by allowing smaller lots and – in some cases – limiting the size and / or prevalence of large lots. At Aokautere (PCG), lots as small as 150m^2 are permitted in high-amenity locations. Within Mātangi's Multi-Unit Housing Area, there is no minimum lot size and the average area of parcels must be less than 300m^2.

55 Proposals for Roxburgh Crescent are consistent with these practices. The RRA does not qualify for inclusion in MDRZ (where no minimum lot size applies) because the nearest shopping village is more than a kilometre away at Hokowhitu. Nevertheless, the plan change area benefits from proximity to schools, public transport and – most importantly – extensive open space reserves along the river corridor.

56 Furthermore, as a large brownfield site – much of which is in single ownership – the RRA is a candidate for comprehensively planned development where relationships between dwellings can be managed and where landscaped streets and reserves complement private outdoor areas. The proposed Structure Plan helps to achieve these outcomes.

57 Abundant amenity and the opportunity for comprehensive planning therefore justify more intensive development than would normally occur within the Residential Zone.

58 Higher density could be achieved by stipulating an average lot size as applies at Kikiwhenua. However, averages can be difficult to calculate particularly where existing land parcels vary greatly in size. This situation exists within the RRA. Although the Higgins property accounts for the majority of the plan change area, the western side of Roxburgh Cresent is subdivided into parcels that are no larger than house lots. Under these circumstances, minimum and maximum lot sizes provide a more appropriate mechanism for increasing yield.

59 250m^2 lots deliver an acceptable level of amenity for the residents of smaller dwellings (see paragraph 62).

60 As lots decrease in size, a regular subdivision layout becomes more important. Usually this takes the form of an orthogonal cadastral grid. A rectangular array sets up common alignments that help closely spaced dwellings to pack together efficiently and cohere visually. As dimensions reduce, simple shapes mean building interiors and outdoor areas are easier to occupy. Conversely, large lots are more tolerant of irregular geometry.

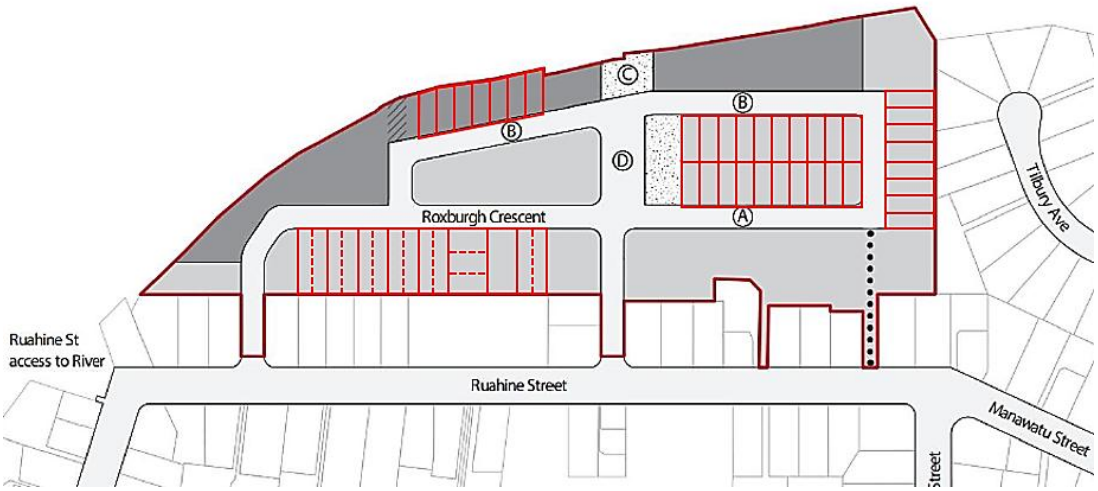

Figure 1: RRA areas receptive to compact dwellings on small lots.

61 The most regular part of the Structure Plan is the rectangular block on the eastern side of the Roxburgh Crescent extension. This area is receptive to compact dwellings on small lots. Measuring 50m in width, the block accommodates 25m deep back-to-back lots with east-west orientations. At the minimum area of 250m^2, these lots would be 10m wide and have a width-to-depth ratio of 1:2.5 (see Fig.1).

62 Figure 2 shows how a 10m x 25m lot accommodates a range of dwelling types including detached, semi-detached and fully attached units. Although the plans are illustrative, they demonstrate that 250m^2 lots can deliver efficient residential development with good levels of amenity.

63 The diagrams also show how a 250m^2 minimum lot size interacts effectively with other RRA planning provisions to enable two-storey construction on the forward portion of the lot with reduced bulk (one storey) at the rear of the property.

Figure 2: Indicative plans for a range of dwelling types on a 250m^2 lot.

64 Excluding the proposed open space reserve, the central rectangular block measures approximately 105m in length and accommodates twenty 250m^2 lots. If minimum lot size increases to 350m^2 (the residential zone standard) lot width increases to at least 14m and the number of central lots reduces to fourteen. The loss of six lots represents a 30% reduction in yield for this part of the RRA.

65 A section of the riverbank is also suitable for subdivision into 25m deep (approx.) lots (see Fig.1). If the 250m^2 minimum is applied here, the area can accommodate as many as seven lots. A 350m^2 minimum yields just five lots.

66 In the southern portion of the RRA, land between Local Street B and Tilbury Avenue properties can be subdivide into eight compact lots each measuring 258m^2 in area (see Fig.1).

67 In many of these locations, streets and existing property boundaries fix lot depth at around 25-27m. In this case, a 350m^2 minimum area would require each parcel to be at least 13-14m wide. Lots of this width could accommodate generously scaled semi-detached houses. However, such parcels are ill-suited for fully attached dwellings. So, introducing a larger minimum lot area potentially reduces both the number of dwellings and the range of housing types.

68 The RRA contains a fourth geometrically regular area (see Fig.1). Properties along the western side of existing Roxburgh Crescent have a uniform depth of 36m and many lots are 16m wide (approx.). If the minimum site area is 250m^2, these 580m^2 parcels can be split in two using either longitudinal or front-and-rear subdivision. The parcels do not divide efficiently into lots measuring 350m^2 or more. To achieve the larger minimum, two or more adjacent parcels would need to be amalgamated and re-subdivided. The complexity of this process reduces the likelihood of residential development.

69 Taking the above factors into account (see paragraphs 53 to 68), I disagree with the submitters' arguments, and I suggest that no change is made to minimum lot size.

Arguments supporting 500m^2 maximum lot size

70 Seeking an increase in maximum lot size to 600m^2, S11 states that 'site planning is showing that in a few cases a larger lot may be necessary' (S11-3). The submission does not identify which parts of the RRA might require lots larger than 500m^2. Following a pre-hearing meeting, the submitter provided an indicative subdivision layout entitled "Conceptual Plan", which includes several over-sized lots (see Fig.3). In my view, this layout fails to demonstrate that larger lots are necessary (see paragraphs 76 to 78).

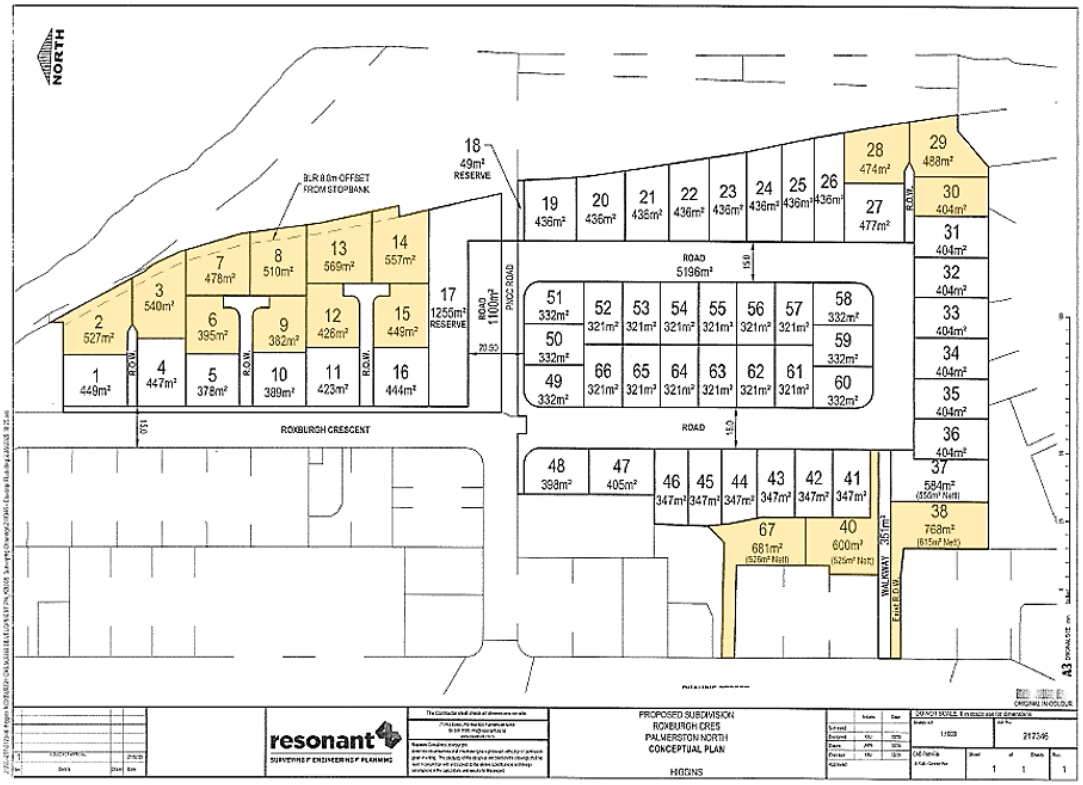

Figure 3: Indicative subdivision layout for FHL land (rear lots identified in yellow).

71 As a generalisation, irregularly shaped areas are more suited for subdivision into larger lots. Geometry is least regular at the northern end of Roxburgh Crescent where the RRA tapers. Here, existing lots range in size from 370m^2 (approx.) to 1,050m^2 (approx.). If the largest property is subdivided into front and rear lots, at least one of the new parcels would exceed 500m2. Elsewhere, it is possible to split existing lots in two without contravening the proposed maximum area.

72 Further south, irregularity diminishes and is fully contained within the extensive Higgins property. Here, the developable land is constrained to east and west. However, there is ample scope to adjust lot boundaries in the north-south direction. As a result, these seems to be no impediment to ensuring that all lots meet the proposed 500m^2 maximum.

73 Larger lots will likely occur in the south-west corner of the plan change area where some rear lots are required and where the indented perimeter of the RRA is a complicating factor. Also part of the Higgins landholding, this location will logically be included in a

comprehensive subdivision plan that allows lot sizes to be managed over a wide area. This flexibility is conducive to meeting the proposed 500m^2 maximum.

74 If the proposed pedestrian / cycle pathway is treated as a multi-modal lane, few – if any – rear lots need the lengthy private driveways that inflate parcel size. So, the opportunity for shared access assists subdivision planners to meet the proposed 500m^2 standard.

75 It is impossible to predict the effect a 600m2 maximum would have on yield. Certainly, a handful of extra-large lots would have little impact on overall density. However, increasing maximum lot size in order to accommodate a few exceptions raises the possibility than much of the Higgins property is redeveloped as large free-standing houses on expansive lots. This outcome would contradict PNCC's compact growth goals by reducing yield and restricting the range of dwelling types.

76 The submitter's indicative layout places 67 lots on FHL land (see Fig.3). The layout's smallest lots measure 321m^2 and occupy the RRA's rectangular central block. Nine over-size lots range in size from 510m^2 to 768m^2.

77 Five of the over-size parcels are riverfront lots at northern end of the RRA. Here, each over-size lot is associated with one or two undersized parcels. As a result, there is scope to adjust individual lot areas up and down so that the whole layout complies with the 500m2 maximum (see also paragraph 72).

78 The other over-size lots are located in the south-west corner of the RRA. The largest of these parcels – numbered 38, 40 and 67 on the 'Conceptual Plan' – are rear lots that owe much of their size to lengthy driveways. In these cases, areas might be reduced if the proposed walkway is modified to serve as an access lane (see paragraph 74). Areas could be also reduced by making small increments to adjacent lots – numbered 41 to 45 – which are all significantly below the 500m^2 maximum.

79 More generally, I note that the submitter's indicative layout results in a much lower yield than that which is possible under PCE. This is unfortunate because – as the RRA's largest landholding – the FHL property offers the best opportunity for intensive development. Elsewhere in the RRA, I estimate that subdivision of existing parcels will result in

approximately 35 mostly compact lots. When these are added to the 67 parcels in the submitter's indicative layout, the RRA's total yield is 102 lots i.e., significantly fewer than the 120 lots forecast in my broadbrush intensive development scenario (see paragraph 41).

80 Finally, I note that almost one quarter of the indicative layout's parcels are rear lots (see Fig.3). The majority of these are caused by truncating Road B and substituting a series of private rights-of-way. There are three reasons why this represents a poor urban design outcome. First, rear lots have little if any contact with the public realm. Second, the taller dwellings permitted on riverfront lots are no longer associated with spacious streetscape (see paragraphs 47 and 105). Third, connectivity is reduced because a public through street is replaced by a collection of private cul-de-sacs.

81 Taking the above factors into account (see paragraphs 70 to 80), I see no justification for increasing the maximum lot area to 600m^2. Therefore, I do not recommend any changes to the proposed provisions.

Building Height Strategy

SUBMISSION

82 S3 seeks to enable three-storey housing throughout the plan change area. According to this submission, extra height is justified because Palmerston North needs more housing and the RRA is well served by amenities and existing infrastructure.

RESPONSE

83 RRA provisions constitute a 'middle ground' between standard Residential Zone rules and the more permissive development controls contained within the MDRZ. This approach is justified because the re-zoned area possesses some – but not all – of the attributes associated with designated medium-density housing areas. Accordingly, some RRA provisions – including maximum building height – match those of the Residential Zone, while other provisions – minimum site area, maximum site coverage, HRTB – are more generous than their Residential Zone counterparts.

84 Housing yield is not determined by maximum building height alone. Rather, development intensity is shaped by the combined effect of the various provisions. Minimum site area and maximum site coverage have a strong correlation with yield. So, introducing 45% coverage on 250m^2 lots is a strong enabler of housing intensification – more so than increasing height. On small narrow lots HTRB controls are more likely to constrain building volume than the overall height limit. For this reason, PCE proposes a stepped HRTB surface that facilitates two-storey construction on compact lots.

85 As noted above (see paragraphs 41, 64 and 65), the aggregated effect of RRA provisions is a potential one-third increase in housing yield compared to what is possible elsewhere in the Residential Zone. This represents a significant contribution to Palmerston North's future housing needs.

86 It is not clear that an area-wide 11m height limit would facilitate the production of additional dwelling units. A more likely outcome is large three-storey houses on wider lots, because even the more generous HRTB surface (5m plus 45^o) requires at least 12m site width to achieve three floors of accommodation. In comparison, a two-storey house fits easily onto a 10m wide lot.

87 Large three-storey houses are anticipated within the Riverfront area, where views justify building up on premium properties. In this location, the additional floor facilitates a first-floor living area with bedrooms above and garaging beneath. This townhouse format is well suited to sites at the edge of the river corridor (see paragraphs 96 to 101).

88 The two-storey (9m) maximum building height also recognises that the RRA has an extensive interface with existing residential areas, where most dwellings are single-storey.

89 Taking the above factors into account (see paragraphs 83 to 88), I disagree with S3's suggestion that three-storey construction should be enabled throughout the RRA. Therefore, I do not recommend any changes to the proposed provisions.

Maximum Building Height on Riverfront Lots

SUBMISSIONS

90 S17, S18, S19 and S20 raise concerns about the visual impact of three-storey (11m) dwellings along the riverfront. For these submitters, the principal issue is the appearance of such housing from within the river corridor. In summary, they claim that a visible built edge will dominate the open space and detract from its character, which is variously described as offering 'ambience and tranquillity' (S17-2), resembling a 'semi-rural park-like setting' (S18-2) and giving the impression of 'urban wilderness' (S19-6).

91 S19 argues that there is no need for buildings to provide spatial definition of the river corridor because the stop bank already produces this effect (S19-6). The submission also states that buildings have not been used to define space elsewhere within the 'River Park' (S19-6).

92 S19 argues that two-storey houses are tall enough to provide passive surveillance of the 'River Park' area. As a result, this submission dismisses CPTED outcomes as a justification for additional building height (S19-6).

93 Two submissions (S17 and S20) also criticise a lack of 'fit' (S17-2) between taller riverbank housing and two-storey dwellings elsewhere in the RRA. For S20, a row of three-storey houses would 'dominate' the plan change area (S20-2). All four submissions seek a two-storey (9m) maximum building height along the RRA's eastern perimeter.

94 Uniquely, S3 seeks to apply an 11m height limit to the whole RRA. In support of this request, the submitter points to the need for more housing (S3-2) and the fact that plan change area is a high-amenity location that is 'well-served by existing infrastructure' (S3-1/2). (Note: This submission is addressed in paragraphs 82 to 89.)

RESPONSE

95 In response to these submissions, I offer a series of arguments in support of the proposed 11m maximum building height within the Riverfront area. These arguments are summarised here and addressed in greater detail in paragraphs 96 to 115:

(a) Benefits of three-storey construction

95.a.1 By permitting three-storey construction, the 11m height limit accommodates a nationally well-established townhouse format.

95.a.2 Additional height permits greater density and allows more residents to enjoy a high-amenity location.

95.a.3 Three-storey construction permits more engagement between housing and the river.

(b) Positive scale relationship with existing and proposed housing

95.b.1 The Riverfront area has no direct interface with existing housing.

95.b.2 Three-storey houses can have a positive scale relationship with one and two-storey dwellings elsewhere in the RRA.

95.b.3 Three-storey riverfront houses are consistent with good streetscape.

(c) Appropriate contribution to the river corridor

95.c.1 Existing industrial and commercial buildings create a visible built edge along the river corridor.

95.c.2 The river corridor is a highly modified landscape where natural and constructed features interact.

95.c.3 As the city 'turns to face the river', buildings are likely to have a stronger presence elsewhere along the river corridor.

(d) CPTED benefits associated with taller houses

95.d.1 Three-storey construction improves oversight of the river corridor.

95.d.2 Increased height correlates with higher density and more inhabitants.

95.d.3 The stop bank prevents private appropriation of public space.

Benefits of three-storey construction

96 An 11m maximum building height enables compact three-storey dwellings, which are an increasingly common feature of New Zealand's urban areas. Regardless of dwelling type (detached, semi-detached or fully attached), three floors permits the familiar 'townhouse' format of ground-floor garage, first-floor main living space and second-floor bedrooms.

97 It is good urban design practice to locate higher-density housing in high-amenity locations. This allows more people to live in close proximity to parks and reserves, local centres, transport infrastructure, etc. Ready access to these public assets offsets the reduction in private amenity that can occur with smaller living spaces.

98 The RRA's riverfront properties occupy a high-amenity location. They benefit from the exceptional views and recreational opportunities offered by the Manawatū River. These advantages are guaranteed because the river corridor limits urban development in an absolute and lasting fashion.

99 Such locations should be used to full advantage as a city expands or intensifies. Coupled with a smaller minimum lot size and more permissive HRTB controls, the 11m height limit is a mechanism for enabling greater residential intensity along the RRA's interface with the river.

100 The proposed provisions do not guarantee a supply of compact dwellings. Rather, they enable the three-storey townhouse format described above (see paragraph 96). Situated on the riverfront, three storey construction allows each dwelling's main living area and at least one bedroom to link visually with the river. East-facing first-floor decks or balconies afford a similar connectivity to outdoor living areas.

101 On the other hand, ground-floor views are blocked by the stop bank. This fact combined with availability of both first and second floor views provides an incentive to build up rather than out. The 500m^2 maximum lot size supports this outcome by precluding the development of a small number of very large three-storey dwellings on exceptionally wide lots. As previously noted, lots measuring 500m2 or less are feasible within the 'Riverfront area' (see paragraphs 72 and 77).

Positive scale relationship with existing and proposed housing

102 The 11m height area has no direct interface with existing residential fabric. To the north, the 'Riverfront area' terminates 23m (approx.) from Ruahine Street properties. To the south, the area ends 40m away from the RRA's boundary with Tilbury Avenue housing. In each case, the intervening open space – along with existing or proposed buildings – reduces the impact of additional height.

103 Within the RRA, a one-storey increment in maximum height permits good scale relationships to be established between adjacent dwellings. Even if much of the RRA redevelops as single-storey construction, three-storey Riverfront homes can be made commensurate with their smaller neighbours through the use of secondary volumes and intermediate visual modules. If most new RRA housing has two-storeys, the increased stature of Riverfront housing is less – in relative terms – than that which occurs when a two-storey house is introduced to a neighbourhood of one-storey dwellings. The latter situation exists on Ruahine Street and is commonly found in other established suburbs.

104 Throughout much of the RRA, three-storey Riverfront housing will be screened by one and two-storey structures within the more extensive 9m height area. Taller structures will be evident at the northern end of Roxburgh Crescent, and some of these dwellings will be distantly visible from the Ruahine Street intersection. However, three-storey construction

will have its strongest presence along the eastern side of the new local street, which is labelled 'B' on the Structure Plan. Here, the difference in maximum building height – three storeys to the east, two storeys to the west – reinforces the asymmetrical streetscape and expresses the edge condition that occurs at a wider landscape scale.

105 If 6m setbacks occur on both sides of the 13m wide thoroughfare, the whole channel of open space measures 25m across. In this situation, 11m tall riverfront houses create a street cross-section in which the ratio of horizontal to vertical dimensions exceeds 2:1. This is a favourable proportion that ensures the street corridor is pleasantly contained but also open to the sky.

106 Taking the above factors into account (see paragraphs 102 to 105), I disagree with the submitter's argument that three-storey riverfront development has a poor fit with neighbouring two-storey dwellings (S17-2). I also disagree with the suggestion that the taller structures will 'dominate' the RRA (S20-2).

Appropriate contribution to the river corridor

107 Submitters' broader objection to the 11m height limit stems from the visual impact of taller dwellings on the river corridor.

108 Existing Roxburgh Crescent buildings are clearly visible from recreational trails and other vantage points along the river. Roofs and upper elevations appear to crest the stop bank dispelling any notion of a natural edge. At the same time, because only fragments of the buildings are revealed, the viewer has little appreciation of overall built form, function or architectural character.

109 In my opinion, a more definite built edge creates a more explicit relationship between the city and the river corridor. In making this assessment, I note that the Manawatū River and its curtilage do not constitute a 'wilderness' environment (S19-6). Rather, they comprise a highly modified landscape with constant interactions between natural and constructed features. In these circumstances, it is neither necessary nor desirable to hide the urban component of this landscape.

110 S19 may be correct in stating that buildings have not been used to define space elsewhere within the 'River Park' (S19-6). However, structures are visible periodically along the Manawatū River. As the city 'turns to face the river', these episodes are likely to become more frequent and more evident. Acting as markers, these structures measure the river's progress through the city and record the proximity of particular streets or neighbourhoods.

111 The RRA's built-up river frontage operates in this manner. It contributes to the episodic presence of buildings along the edge of the Manawatū River. To a modest extent, it improves legibility by locating Waterloo Reserve and the river access points on Ruahine Street.

112 Taking the above factors into account (see paragraphs 108 to 111), I disagree with submitters' argument that three-storey dwellings will have an unacceptable visual impact on the river corridor. Therefore, I do not recommend any changes to proposed provisions.

CPTED benefits associated with taller houses

113 According to S19, CPTED outcomes do not justify additional building height because two-storey houses provide adequate passive surveillance of the 'River Park' area (S19-6). I agree that two-storey dwellings can provide a custodial presence at the edge of the river corridor. However, this effect requires the conventional relationship of domestic accommodation to be inverted i.e., first-floor living areas are placed above ground-floor bedrooms. I note that three-storey construction is more conducive to achieving first-floor living areas in a seemly relationship with other habitable rooms (see paragraph 96). Second-floor openings also provide better oversight of the area beyond the stop bank.

114 A second height-related factor has a bearing on CPTED outcomes. The 11m height limit combines with other RRA provisions to facilitate intensive residential development along the river edge. Specifically, the proposed rules encourage developers to build up rather than out. If these opportunities are exploited, riverfront homes will be tall and narrow, and – in consequence - a greater number of households will occupy the edge of the river corridor. The increased yield correlates with increased passive surveillance.

115 Finally, I note that conditions on the RRA's eastern boundary prevent three-storey dwellings appropriating public space to any significant degree. The stop bank distances proposed housing physically and visually from most recreational open spaces within the river corridor. A recreational path atop the stop bank has a more immediate relationship with Riverfront homes. However, a 5m (approx.) embankment combines with an 8m no-build zone to separate residents and trail users by some 13m i.e., the equivalent of a street width.

116 Taking the above factors into account (see paragraphs 113 to 115), I disagree with S19's argument that no CPTED benefits are associated with three-storey riverfront dwellings. Therefore, I do not recommend any changes to the proposed provisions.

Residential Interfaces

SUBMISSIONS

117 S18 and S19 claim that some Tilbury Avenue properties will suffer from shading and loss of privacy if the northern arm of Waterloo Reserve is occupied by housing. Privacy issues are said to be caused by the potential for overlooking from the upper-level windows of two-storey dwellings. S19 also attributes visual dominance effects ('oppressive physical mass') to development on narrow lots with only 1.5m required rear setbacks. According to this submitter, even single-storey houses will produce 'intrusive' bulk.

118 According to these submitters, interface issues are exacerbated by the fact that Tilbury Avenue properties have north-facing indoor and outdoor living spaces, which directly face future RRA development. Submitters point out that Tilbury Avenue residents have to date enjoyed the benefit of reserved open space along their northern boundary.

119 S21 claims that shading and loss of privacy will also occur on some Ruahine Street properties. As at Tilbury Avenue, the potential loss of amenity is attributed to planning provisions that allow two-storey (9m high) dwellings on small lots. Commenting on S21, FS3 acknowledges the potential for shading and loss of privacy for one Ruahine Street property that has a northern as well as eastern boundary with the RRA.

120 All three submitters state that existing residents' amenity will be protected if new housing is limited to a single storey along the two interfaces. S18 and S19 also offer a range of additional or alternative remedies including larger lots, increased setbacks and restrictions on upper-level openings.

121 S19 states that 'an early schematic of the site layout' shows larger lots with single-storey houses along the southern perimeter of the RRA. The submission supports the application of "bespoke" rules to this interface.

RESPONSE

122 In response to these submissions, I address a series of issues related to RRA interfaces with existing residential areas. Comments are summarised here and expanded in paragraphs 123 to 149:

(a) <u>Bespoke provisions at the interface with Tilbury Avenue properties</u>

122.a.1 An early draft of the Urban Design Report proposed 'Transition' zones at the northern and southern ends of the plan change area.

122.a.2 These transition zones were removed in order to simplify development controls and bring them into line with existing ODP provisions.

122.a.3 During this process, no change was made to maximum building height along the RRA's southern boundary.

(b) <u>Effectiveness of proposed development controls at Tilbury Avenue interface</u>

122.b.1 'Stepped' HRTB controls effectively deliver a single-storey condition within the rear third of narrow compact lots.

122.b.2 On broader lots, development is subject to Residential Zone rules governing separation distances, HRTB and maximum height.

122.b.3 Although adjacent open space is lost, Tilbury Avenue's wider context improves with the progressive removal of industrial activities.

(c) Suggested revision to rear separation distance at Tilbury Avenue interface

122.c.1 A one-storey height limit on adjoining lots would be excessively restrictive.

122.c.2 Increasing rear separation distance to 5m offers an acceptable alternative to submitters' requests.

122.c.3 A 5m rear setback improves visual relationships and provides ample room for screening vegetation.

122.c.4 Controls on bulk and location are preferable to prescriptions for the design and location openings.

(d) RRA interface with Ruahine Street properties

Bespoke provisions at the interface with Tilbury Avenue properties

123 S19 is correct in stating that early proposals for the Roxburgh Crescent area anticipated less intensive development along the plan's southern boundary. An earlier version of the Urban Design Report dated 15 July 2021 depicted 'Transition' zones at the northern and southern extremities of the plan. Within these zones, a 350m^2 minimum net site area and a 9m maximum building height facilitated detached one and two-storey houses (see Fig.4). The two Transition zones were excluded from a Multi-Unit Housing Area that applied to the RRA's remaining developable land.

124 The Transition zones were part of a granular approach to development control, which matched lot size and dwelling type to individual streets and open spaces. In this regard, the controls resembled the 'form-based codes' associated with New Urbanism. The Urban Design Report identified six different house types on lots as small as 150m^2. An 11m height limit applied not just to riverfront lots but also to properties fronting a broad east-west

corridor through the centre of the plan. A more permissive HRTB control was proposed (4m plus 60^{O}) [Note: S19 contains an illustration of a 3D model that depicts a variation of McIndoe Urban's 2021 masterplan (see page 19-9). In this depiction, single-storey houses occupy the two Transition zones.]

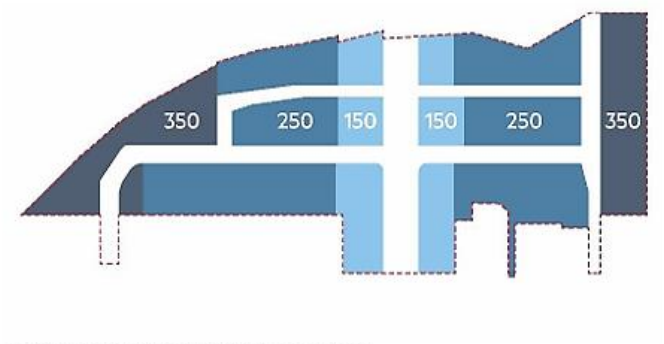

Fig.30 Proposed minimum net site areas (m²).

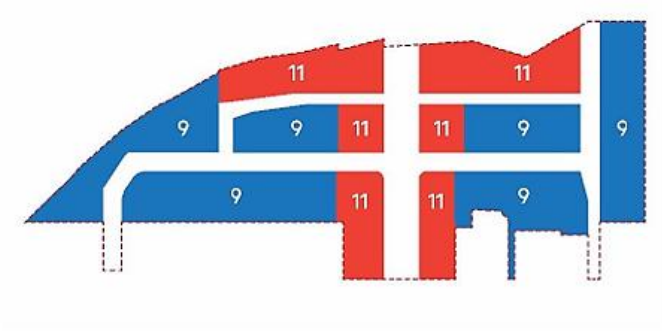

Fig.32 Proposed maximum building heights (m).

Figure 4: Minimum net site areas and maximum building height diagrams from 2021 draft of the Urban Design Report.

125 By early 2023, the Structure Plan and associated planning provisions had been simplified. A uniform minimum lot size (still 150m^2) was introduced. The 11m maximum building height was restricted to riverfront lots, and a 9m maximum applied elsewhere. The currently proposed stepped HRTB controls were also introduced. The Transition zones disappeared along with other prescribed lot / dwelling types. While some of the changes were more permissive, other changes placed greater restrictions on development. The changes were prompted by the need to streamline the implementation of controls and by a desire to align RRA provisions more closely with rules and standards in the ODP and the emerging MDRZ. Plan simplification also reflected a less hierarchical street layout.

126 From an urban design perspective, the RRA remains receptive to special outcomes at its northern and southern extremities. To the north, where the plan tapers, existing lots are irregular in size and shape. So, new residential development is less constrained by formal and spatial patterns within the core of the RRA. To the south, a probable subdivision layout includes north-south oriented lots backing onto Tilbury Avenue properties. The north-south orientation departs from the underlying east-west 'grain' found elsewhere in the RRA. Once again, from a design perspective there is less obligation for perimeter lots to conform to patterns within the core of the plan. The likely re-orientation of lots – from east-west to north-south – might well be accompanied by changes in other built-form attributes such as lot size and building height.

Effectiveness of proposed development controls at Tilbury Avenue interface

127 For detached houses on narrow lots (e.g. 10m wide), proposed 'stepped' HRTB controls confine two-storey volumes to the front two-thirds of each parcel. Single-storey volumes are achievable on the remainder of the lot subject to 1.5m setbacks from side and rear boundaries. Therefore, on small parcels with narrow frontages, proposed HTRB controls effectively deliver a single-storey condition at the rear of the lot.

128 In the proposed Structure Plan, Local Street B is some 27m from the interface with Tilbury Avenue properties. Here, an RRA lot could be as narrow as 9.3m if it has both a street frontage and a shared boundary with existing residential properties to the south. (Note: A 27m by 9.3m lot measures 251m^2.) On such a lot, any south-facing first-floor windows will be at least 9m from the boundary with Tilbury Avenue properties i.e., one-third of 27m (see Fig.5). Projecting balconies and decks are unlikely on a south elevation.

129 Under these circumstances, direct sightlines can occur between new and existing housing. However, the 9m upper-level setback mitigates any privacy or visual dominance effects.

130 As noted in paragraph 127, single-storey construction can occur 1.5m from the Tilbury Avenue interface. The possibility of raised ground-floor datums means that this accommodation could provide views into Tilbury Avenue dwellings. This relationship is deemed appropriate within the Residential Zone. Existing residents' privacy and outlook

need not be compromised because relevant sightlines can be blocked by modestly-scaled (2.2m high) vegetation along the shared boundary (see Fig.5).

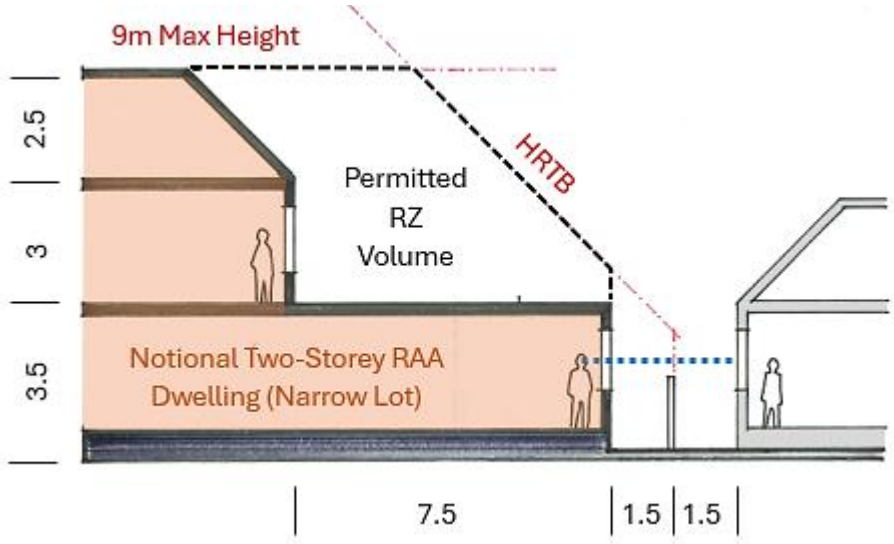

Figure 5: Tilbury Avenue interface – notional two-storey RRA dwelling on narrow lot.

131 Although the roofs and upper elevations of rear single-storey volumes will be visible above fences and perimeter planting, this condition is normal in residential areas and is neither 'oppressive' nor visually dominant.

132 Accordingly, I reject S19's claim that rear single-storey construction will be an 'intrusive' presence for the affected Tilbury Avenue properties. This assessment is made in the context of a need for residential intensification.

133 On broader lots – those 14.5m or more across – HRTB controls at side boundaries are less constraining, and a usefully large two-storey volume becomes possible at the rear of a parcel. In this situation, the HRTB surface along the rear boundary becomes the key determinant of bulk. Within the RRA, this surface allows a two-storey (6.5m) volume to be located 3.7m from a rear boundary. The same HTRB standard applies throughout the Residential Zone.

134 Figure 6 describes a wide-lot scenario with a hypothetical Tilbury Avenue dwelling located close to the shared boundary. The cross section shows a potential sightline between an upper-level window on the new dwelling and the rear elevation of the adjoining property.

The separation distance is 5.2m i.e., 3.7m within RRA parcel and 1.5m on the Tilbury Avenue side of the boundary. The elevated sightline is approximately 7m long. This relationship is deemed appropriate within the Residential Zone. Existing residents' privacy and outlook can be safeguarded by introducing medium-height (3.5m) vegetation along the shared boundary. Figure 6 depicts a worst-case scenario because most Tilbury Avenue houses are further from the RRA boundary.

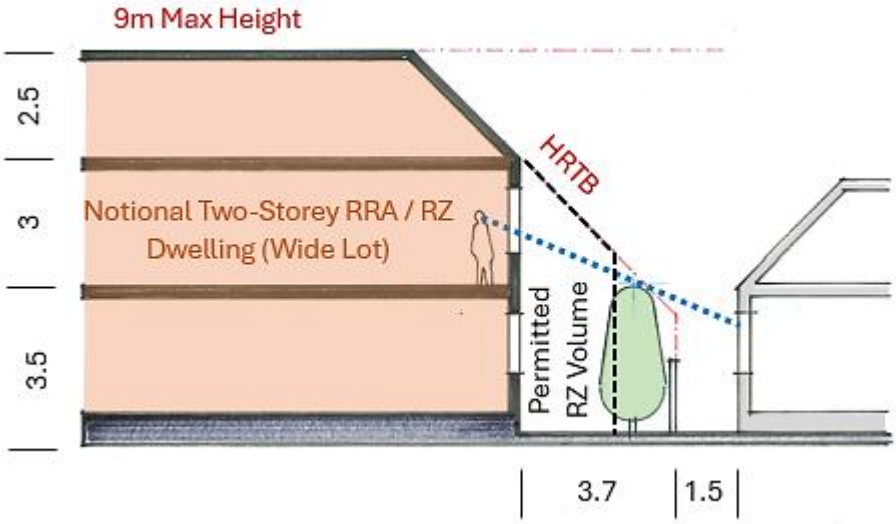

Figure 6: Tilbury Avenue interface – notional two-storey RZ / RAA dwelling on wide lot.

135 At the Tilbury Avenue interface, any lot wide enough to accommodate a two-storey rear volume will likely have an area of at least 390m^2 i.e., 14.5m multiplied by 27m. This exceeds the 350m^2 minimum area that generally applies to lots within the Residential Zone. Therefore, in a probable subdivision outcome – a row of lots fronting Local Street B and backing onto Tilbury Avenue properties – HTRB rules effectively prevent the most impactful type of development i.e., small parcels (less than 350m2) with two-storey building volumes close to the rear boundary. This underscores the point made in paragraph 127.

136 If PCE is adopted, Tilbury Avenue's overall context will substantially improve as industrial activities – particularly those on the Higgins site – are replaced by housing. However, the avenue's close context includes Waterloo Reserve, and – as S18 and S19 observe – this open space provides some existing residents with greater privacy and a better outlook than would normally occur at mid-block locations in residential areas. According to these submitters, re-zoning the reserve for residential use will cause a loss of amenity that should be offset by

more stringent development control i.e., a level of protection beyond that generally offered within the Residential Zone.

Suggested revision to rear separation distance at Tilbury Avenue interface

137 This argument has some merit. However, I consider that a uniform one-storey limit for all adjoining lots – as sought by S18 and S19 – would be excessively restrictive. Provided they sit forward on their lots, two-storey volumes are an acceptable form of residential development. Allowing double-height construction helps to facilitate higher yield as well as a broader range of dwelling types. Although Tilbury Avenue houses have a single floor, two-storey dwellings can be found nearby on Waterloo Crescent, Manawatu Street and Ruahine Street. Indeed, two-storey construction is a feature of many Palmerston North suburbs.

138 A blanket one-storey limit would far exceed the protection afforded to most other residential properties. Within Palmerston North, I am aware of only one instance of single-storey residential height limit being adopted. This is the Mātangi (Whiskey Creek) Private Plan Change panel decision which introduced a 5m maximum height on lots that adjoin existing residential boundaries [see Panel Decision Appendix 2: Annotated version of Plan Change provisions R10.6.1.5 b) iii]. A variant of this provision appears in Section 7A of the ODP where Policy 2.8 states that a one-storey height limit shall apply to lots adjoining Meadowbank Drive. However, the 5m height limit is yet to be expressed as a rule in the ODP.

139 As an alternative, I suggest that a 5m setback could be introduced along the RRA's southern boundary. This provision would augment the stepped HRTB controls by reducing rear bulk on wide lots as well as narrow ones. Figure 7 shows how a 5m setback improves the relationship between neighbouring dwellings. In a worst case scenario, the combined separation distance increases from 5.2m to 6.5m, and an upper level sightline measures approximately 8m in length. These dimensions exceed those deemed appropriate within the Residential Zone. Existing residents' privacy and outlook can be safeguarded by medium-height (3.2m) vegetation along the shared boundary. The deeper setback provides ample space for this scale of planting.

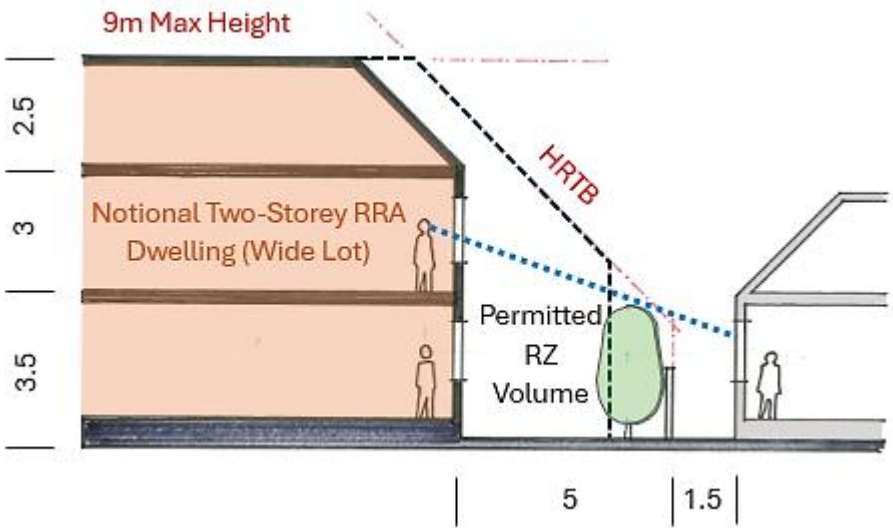

Figure 7: Tilbury Avenue interface – notional two-storey RRA dwelling with 5m setback.

140 A 5m rear setback retains the viability of compact detached and semi-detached dwellings on 27m deep lots. When combined with a 6m front setback, the increased separation distance allows a 16m deep building footprint, which can accommodate a variety of residential floorplans.

141 A greater rear setback is possible. As a rule of thumb, I use 12.5m as the minimum depth for a compact two-storey dwelling on a narrow lot. Assuming a 6m front setback, this depth correlates with an 8.5m rear setback on notional 27m deep lots bordering Tilbury Avenue properties. However, each increment in the rear setback limits the design of the dwelling to some degree. For this reason, I favour the minimum setback necessary to achieve an acceptable level of privacy. As noted above (paragraph 139), 5m will deliver this outcome for Tilbury Avenue residents.

142 A 5m setback reduces the viability of rear lots along the RRA's southern boundary. From an urban design perspective, rear lots are undesirable because they reduce contact between public and private domains (see also paragraph 80). As a result, the constraint on rear-lot development is a beneficial side-effect of increasing the rear separation distance.

143 Existing ODP controls for multi-unit housing provide additional safeguards for existing residents. Development of three or more conjoined dwellings almost certainly constitutes a Restricted Discretionary Activity. If conjoined dwellings are proposed for the RRA's southern

boundary, their design will be evaluated using a range of Assessment Criteria. These include the following references to the composition of local urban fabric and the amenity of neighbouring properties (see ODP R10.6.3.3 p.45):

1(b) new development relates to common and defining patterns of the height and width of primary building forms, and predominant roof types and pitches.

2(d) new buildings retain reasonable visual privacy and daylighting for all adjacent residential units and properties

3(f) new buildings retain reasonable visual privacy and daylighting for adjacent residential properties.

144 S19 proposes restricting the design of south-facing openings within the RRA's Tilbury-adjacent dwellings. Specifically, the submission calls for clerestory windows in south elevations – potentially at both ground and first-floor levels (see S19-2). Clerestory windows are one of several ways in which openings can be modified to reduce or prevent visual connectivity. The simplest approach is to apply an opaque finish to sections of glazing. More elaborate responses include louvres, hoods and side-glazed window boxes which block problematic sightlines.

145 To some extent, all these devices detract from the habitability of new dwellings. Unless carefully designed, window boxes, hoods and louvres can obstruct all views – not just offending sightlines between neighbours. In the worst examples of obscured glazing, the occupants of a room have daylight but no meaningful contact with the outside world.

146 Palmerston North's ODP generally avoids prescribing architectural outcomes at this level of detail. I am not aware of any local planning provisions that require a specific window design. Typically, the relationship between neighbours is managed at a more abstract level by controlling the bulk and location of buildings. In my view, proposed HRTB rules and separation distances – including the suggested 5m rear setback (see paragraph 139) – adequately serve this purpose. If there is to be any further design control, this might apply to landscape rather than architecture e.g., a prescription for vegetation of a certain scale along the RRA's southern boundary.

147 I note that window location and design are a useful means for satisfying the privacy-related Assessment Criteria applied to multi-unit housing developments (see paragraph 143).

RRA interface with Ruahine Street properties

148 Privacy and visual impact issues are quite different for Ruahine Street residents who border the RRA. Existing industrial buildings are typically single-storey. However, many of the older structures are built to the rear boundary of adjacent Ruahine Street properties. Overlooking does not occur, because the rear elevations of the industrial buildings lack openings. Nevertheless, residents are subject to the visual impact of blank walls and long unbroken parapets or rooflines. So, the present interface between industrial and residential zones is quite harsh and bears no resemblance to that between Waterloo Reserve and Tilbury Avenue.

149 Some overlooking may occur, as residential development replaces industrial / commercial activities along the Ruahine Street interface. However, future visual relationships between new and existing dwellings are no different from those deemed acceptable elsewhere in the Residential Zone. Moreover, the rezoning means that any visual contact between neighbours is accompanied by the consolidation of residential character.

150 Taking the above factors into account (see paragraphs 148 and 149), I disagree with S21's argument that Ruahine Street properties will be negatively impacted by PCE. Therefore, I do not recommend any changes to the proposed provisions.

CONCLUSIONS AND RECOMMENDATIONS

151 While I disagree with other revisions sought by submitters, I believe there is merit in adding further development control along the RRA's southern boundary. Separation distance could be increased from 1.5m to 5m. This would provide additional protection from overlooking for Tilbury Avenue properties and allow space for medium-size planting at the boundary. A 5m setback need not compromise yield nor would it unduly restrict the design of compact dwellings on narrow lots.

Christopher Murray McDonald

Associate Director, McIndoe Urban Ltd, 23 April 2025