

**Proposed Plan Change I: Increasing
housing supply and choice**

Landscape Report

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Executive Summary

This landscape report provides guidance on landscape provisions for a proposed Medium Density Residential Zone (MRZ) in Palmerston North as part of Plan Change I: Increasing housing supply and choice (PC: I) as required under NPS-UD 2020,

As a Tier 2 local authority, Palmerston North is not required to incorporate Medium Density Residential Standards (MDRS) ¹, though this report does evaluate their appropriateness for maintaining landscape amenity and character while enabling increased housing and a well-functioning urban environment.

The most important landscape attributes to address within any proposed MRZ for Palmerston North are the retention of permeable open space, vegetation loss and frontage quality.

To assess landscape impacts from medium-density residential development, a combination of desktop analysis and site observations related to infill and medium-density residential development within Palmerston North has been carried out. This methodology comprises the following:

- defining landscape,
- establishing residential landscape character,
- site sampling of current infill and multi-unit development within the city to better understand impacts on current of permeable open space, vegetation loss and quality of frontage.
- other general landscape-related observations of current infill and multi-unit development within the city.
- review relevant policy, including the appropriateness of proposed MDRS standards.

These steps help to understand adverse effects on residential landscape character and amenity such as increased building height, mass and scale, reduced privacy and overlooking, increased site coverage and reduced permeable open space, and loss of vegetation and views. Landscape provisions are then refined to ensure that enabling medium-density residential growth is balanced with maintaining residential character and visual quality.

Landscape is defined as the intersection or overlap of the physical, perceptual and associative dimensions of landscape². That being the physical composition of elements, how the landscape is perceived, and associations applied to that landscape.

The landscape character of the proposed MRZ has evolved from its natural origins into a low-density and variable urban environment. Initially shaped by flat, terraced landforms and dense podocarp forests, the area has transitioned into the highly modified residential

¹ Resource Management (Enabling Housing Supply and Other Matters) Amendment Act 2021: Schedule 3A Part 2 Density Standards

² Te Tangi a te Manu: Aotearoa New Zealand Landscape Assessment Guidelines, Tuia Pito Ora New Zealand Institute of Landscape Architects, July 2022 Pgs 71-100

neighbourhoods we see today. Early development was characterised by large lots with mature trees, gardens, and open spaces, which continue to define many older inner neighbourhoods surrounding the city centre. As the city has grown, changes in land development and infill subdivision practices have led to increased smaller lots. This has resulted in the removal of established vegetation, reduced permeable open spaces and increased hard surfacing, and variable frontage quality. While some neighbourhoods maintain a more consistent landscape character, others are more varied due to ongoing incremental subdivision, infill, and higher-density residential development.

The proposed MRZ anticipates an increase in building bulk and density, smaller lot sizes, reduced permeable open space, and continual reduction and loss of mature vegetation over time. These changes have the potential for increased adverse landscape character and amenity effects for some residents, though they also have the potential to improve amenity effects for others, a key policy of NPS-UD 2020. Such change also reflects historical growth patterns of the broader residential zone and the continuous, incremental change of development practices and housing needs of the community. Ensuring an appropriate balance of common patterns of landscape character and amenity within increased spatial constraints will be key to reconciling and balancing the degree of change in landscape character and amenity anticipated.

Sampling of selected sites indicates that current residential infill and some multi-unit housing development practices occurring in the city are contributing to negative landscape effects such as reduced permeable open space, loss of vegetation, and increased high fencing and frontage quality at the street interface (refer to Appendix A). Most lots are often cleared of all existing vegetation prior to development – a common pattern of development practice, with no current requirements as a permitted activity to reinstate any vegetation onsite (Figures 9 & 11). Aside from building coverage, no other permitted activity provisions manage the extent of other 'hard' landscaping elements that further contribute to impervious site coverage of open spaces such as pathways, onsite parking areas or living courts. Potential, therefore, exists for current permitted residential development to result in lots completely covered by impervious hard surfacing. High fences along street edges contribute to reduced visibility and physical interaction between the lot and street, though some sections of low fencing that maintain visibility at the street interface are present, often due to vehicle visibility splay requirements. Consolidated development of lots exacerbates these issues (Figure 3), especially along streets with no presence of street trees. Cumulatively, this current approach to housing has the potential to reduce overall residential landscape character and amenity as much as that proposed by MDRS.

Current Multi-unit residential development (MURD), defined within the Operative District Plan as three or more self-contained dwelling units located on one site, is currently provided for as a restricted discretionary activity across a good proportion of the proposed MRZ. Discretion relating to landscape is limited to effects on the surrounding residential environment and streetscape, site density and layout, and on-site landscaping, and assessed against landscape-related criteria under themes of character, site planning, open space design and infrastructure. Much like current permitted activity residential development, clearing sites of vegetation and provision for onsite car parking remains a common development practice of multi-unit residential development. This limits permeable open space, such as vegetated and permeable paving areas, to aid onsite stormwater management and support soil hydrological processes and health. However, vegetation is often reinstated and spread across the site, and this provides a degree of permeable surface and enhanced onsite and

streetscape landscape amenity, particularly around outdoor living spaces where outdoor living is physically connected to internal living, outlook and privacy and along street edges when supported by a high degree of low fencing and overall active frontage along the street interface (Figures 4-6) The degree to which enhanced landscape outcomes are achieved is dependent on the typology, density and extent of impervious onsite car parking space of these developments. Although multi-unit residential development is not currently a permitted activity as anticipated as a result of this plan change, completed developments to date do demonstrate that increased residential density can positively contribute to residential landscape character and amenity through development controls by reinstating vegetation, maintaining permeable surfaces, and enhancing street frontage quality.

The proposed MDRS ³ related to landscape include building coverage, setbacks, outdoor living space, and landscaped areas. While these standards allow for increased building coverage beyond current Operative District Plan permitted activity and MURD site coverage provisions, there is potential to lead to nearly 100% full site coverage of hard surfacing (Figure 17) along with reducing size and distribution of vegetation across a site from restricted space associated with setbacks and outdoor living spaces. Consequently, any vegetation established may result in being located to the rear of a site, hidden from public and private view, particularly along the street interface and within outdoor living spaces. The proposed MDRS 20% landscaped area is supported and more than that currently required under the Operative District Plan though additional landscape-related provisions to manage effects on landscape character and amenity from medium-density housing are required.

Recommendations have been made to address further address permeable surface area, specimen tree planting, and distribution of landscape areas to the street interface and outdoor living spaces. That being:

- Review Section 4 Definitions and ensure existing or new definitions for landscape terms related to MRZ are updated, added and fit for purpose where appropriate. Suggested definitions to review and consider are Permeable Open Space, Landscape Areas, and Service Areas.
- Consider MRZ subdivision provisions for managing subdivision changes, including site lot design and layout, access, and street tree retention.
- Ensure MRZ objectives and policies address the impact of vegetation clearance on character and amenity, soil health and hydrological function, and species biodiversity.
- Implement landscape-related performance standards requiring 30% site coverage with permeable open space to support soil health and hydrological processes. This can include permeable surfaces such as loose aggregates, permeable paving, porous concrete and landscape plantings.
- Define specific locations for landscaped areas to ensure street frontages and outdoor living spaces are vegetated, and vegetation is spread across a site. Require a minimum of 20% of the developed site to be landscaped, with 30% of this area to be located along the street front and 10% to be located within an outdoor living

³ Resource Management (Enabling Housing Supply and Other Matters) Amendment Act 2021: Schedule 3A Part 2 Density Standards

space. The remaining 70% of the required landscape area can be located anywhere else across the site.

- Require a minimum of one specimen tree per ground floor unit, capable of growing to 4m high within 10 years, to enhance site landscape amenity and visual interest. Locations can be anywhere across the site unless providing either an outdoor living space or a street-facing onsite carpark along the street frontage.
- Where an outdoor living space or street-facing onsite carpark is proposed along a street frontage, a specimen tree must be located within the street frontage, adjacent to the outdoor living space or carpark, so as to enhance landscape amenity and visual interest at the street interface.
- Retain outdoor living space to a functional size, retaining a minimum area of 30m² with a 4m diameter circle. Ensure 10% of the total landscaped area is located within each ground floor unit's outdoor living space.
- Avoid placing service areas, storage sheds and above-ground SW attenuation tanks within street frontages and outdoor living spaces. Above-ground SW attenuation tanks could be placed along the boundary between the outdoor living spaces of units to provide privacy. Screen service areas, storage sheds and above-ground SW attenuation tanks from public views at the street interface and views from adjacent shared accessways and onsite carparking.

1 Introduction & Methodology

This landscape report provides guidance on landscape provisions for a proposed Medium Density Residential Zone (MRZ) in Palmerston North as part of Plan Change I: Increasing housing supply and choice (PC: I) and required under NPS-UD 2020.

The report focuses on that part of Palmerston North's current residential zone that has been proposed to be zoned for medium-density housing⁴ (Figure 1), and essentially addresses whether or not current landscape-related provisions of the Operative District Plan, and proposed Medium Density Residential Standards (MDRS)⁵ are applicable to a proposed Medium Density Residential Zone (MRZ).

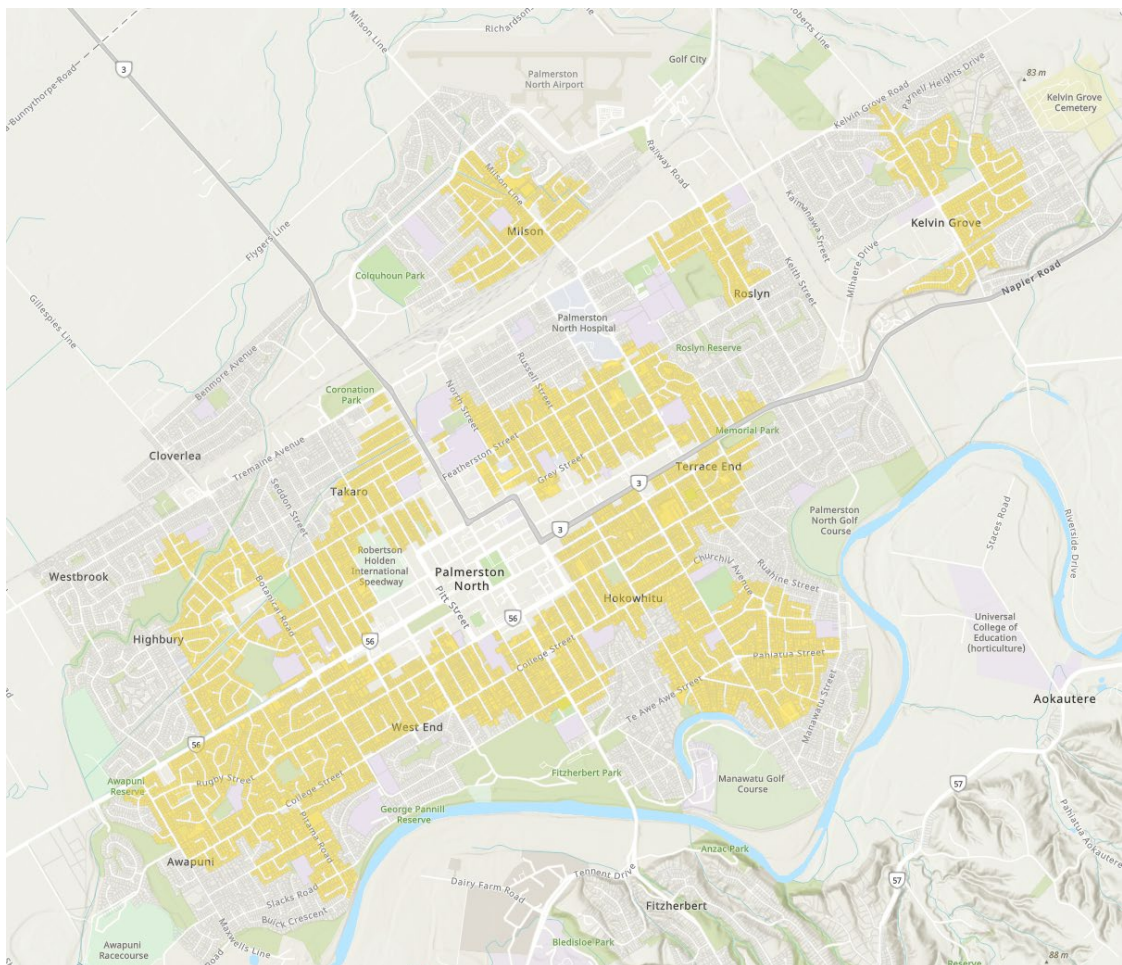


Figure 1: Proposed Medium Density Zone

To assess impacts on landscape from medium-density residential development we need to understand the actual landscape effects from increased residential development density under the current Operative District Plan and the potential landscape effects of proposed MDRS. A combination of desktop analysis and site observations has been carried out to inform this report, and the following methodology has been applied:

⁴ <https://www.pncc.govt.nz/Participate-Palmy/Have-your-say/Proposed-Plan-Change-I>

⁵ Resource Management (Enabling Housing Supply and Other Matters) Amendment Act 2021: Schedule 3A Part 2 Density Standards

- Establish a definition of landscape and residential landscape character as it applies to the proposed MRZ.
- Undertake sampling of a range of residential development sites located within the proposed MRZ to better understand any changes in landscape patterns and potential issues from infill residential subdivision and intensification. This includes sampling
 - traditional ¼ acre sites,
 - current permitted 350m² sites (baseline)
 - a range of multi-unit housing typologies of varying density delivered under current multi-unit residential development (MURD) rules.
- Assessment of the policy framework, including the proposed Part 2 Density Standards⁶ relating to landscape.
- Other general observations of residential development landscape practices and outcomes across the Residential Zone.

2 Definition of Landscape

Landscape embodies the relationship between people and place. It is the character of an area, how the area is experienced and perceived, and the meanings associated with it. Landscape, as it relates to this report at a residential scale can be considered and understood to be the overlap or intersection of three dimensions of landscape at the residential scale – the physical, perceptive and associative⁷. Regarding the proposed MRZ, landscape dimensions are defined as:

Physical:

- Landform – natural or modified
- Landcover – streets, buildings, open spaces, vegetation, and other 'hard' landscape elements (e.g. fences, pathways, decks etc).
- Variation in landcover through changing residential development practices over time
- Climatic conditions

Perceptual:

- Change in residential landscape character and amenity over time through incremental residential land development practices including variation between residential neighbourhoods

⁶ Resource Management (Enabling Housing Supply and Other Matters) Amendment Act 2021: Schedule 3A Part 2 Density Standards

⁷ Te Tangi a te Manu: Aotearoa New Zealand Landscape Assessment Guidelines, Tuia Pito Ora New Zealand Institute of Landscape Architects, July 2022 Pgs 71-100

- Quality of streetscape and residential interface with the street edge, in particular visibility and outlook, openness and enclosure, and the contribution of vegetation including street trees.
- Provision of functional onsite open space for private or shared recreation, views and visual relief.
- Experiences and memories – seasonal, sensory, social, emotional and cognitive

Associative:

- Evolving community housing needs and development practices through changes in residential typology and density.
- Other cultural landscape values associated with historical growth, development practices and changes in residential urban form over time.

3 Landscape Character

To assess proposed landscape-related policy or landscape provisions, we start by understanding the current residential zone's character. This provides the contextual baseline by which these new provisions can be applied to decide what actions are needed to maintain or enhance the proposed MRZ.

The Residential Zone of Palmerston North is the city's largest land zone and is generally identifiable by its primary function as a place where a large proportion of the city lives. The natural landscape of Palmerston North originally comprised of flat, terraced, and rolling landforms along the margins of the Manawatū River with a land cover of open clearings, tributaries and oxbows, surrounded by extensive and dense lowland podocarp forests. As the city grew, this natural land cover was rapidly cleared for productive purposes and gradually developed into the highly modified residential neighbourhoods we experience today.

Early residential neighbourhoods to emerge around the town centre, expanding out over the flat landform now forms many of the older, inner-city residential neighbourhoods surrounding the city centre. These neighbourhoods typically featured large lots, spacious setbacks, low fencing, a high degree of permeable open space, and room for a diverse array of trees and gardens. Many of the existing large, mature trees present today within these established residential suburbs are a result of this early residential development pattern and contribute significantly to the landscape character and amenity within these areas.

Increased outward growth and land planning changes have led to subdivision of the many original larger lots and the creation of new greenfield lots, resulting in smaller land parcels that accommodate more dwellings, though still at a relatively low density and scale⁸ (refer to Appendix A). These developments tend to feature less variation in vegetation type and species, increased impervious surfaces, and high, solid fencing along street edges interface, reducing visibility and outlook onto the street. Despite these changes, many neighbourhoods retain a moderate level of vegetation along street edges, particularly on larger lots where

⁸ Marriage G, Medium: A technical design guide for creating better medium density housing in Aotearoa New Zealand, 2022. Pgs 7-10

there is available open space at the street frontage. This frontage vegetation helps to mitigate continual incremental changes in landscape character at the street level as lots have been developed, particularly along streets lacking and street trees or other vegetation (Figures 2, 4 & 5). Where large, adjoining lots have been consolidated, subdivided down into smaller lots and developed, the change in landscape character is more pronounced, particularly along the street interface, as large portions of vegetation are removed to make way for new lots and dwellings (Figure 3).

In recent years, multi-unit housing has become more prevalent across the residential zone, contributing to the evolving landscape character through increasing building density, bulk and form. Depending on the typology, density and overall site planning, these developments (assessed under stricter regulation) are able to maintain or enhance residential landscape character, by preserving some existing vegetation and creating active, open frontage at the street interface with thoughtful architectural design, low fencing, pathways and other landscape plantings (Figures 4 - 6).



Figure 2: Example of Existing vegetation at frontages of residential lots along Pirie Street
Existing older lots and dwellings along Pirie Street demonstrate a moderate level of established onsite vegetation along the street edge interface. This contributes to streetscape and wider neighbourhood amenity, particularly in the absence of any street trees or other vegetation within the street. Image: PNCC.



Figure 3: Consolidated permitted infill residential development – Ward Street
An example of consolidated residential infill development along Ward St. Established vegetation associated with the older, larger lots consolidated and subdivided has been

removed, and high, solid fencing has been installed along a high proportion of the street edge. Image: PNCC



Figure 4: Multi-unit residential development (MURD) – North Street

An example of infill multi-unit housing residential development (MURD) along North St. Established vegetation along the frontages of adjacent and surrounding lots is a common and defining landscape attribute of the streetscape and supports the streetscape amenity in the absence of street trees. Image: PNCC



Figure 5: Multi-unit residential development (MURD) – North Street

Most existing vegetation along the street edge is located in larger, older lots on either side of the current infill multi-unit residential development (MURD). This vegetation assists in mitigating any perceived negative effects on the streetscape from increased density, though there is the potential for this established vegetation to be lost if adjoining lots are also intensified. Image: PNCC



Figure 6: Multi-unit residential development (MURD) – North Street

At the site level, this infill multi-unit residential development (MURD) demonstrates an open and active street with retained, established vegetation, new vegetation, low fencing and pedestrian pathways to entries. The internal shared access demonstrates variation in hard landscaping (pathway, driveway, fencing) and new plantings. Open visibility of dwellings from the street is possible. Image: PNCC

At the broadest scale existing landscape character of the residential zone can be understood as highly modified with moderate to high consistency of building form and scale, functional open space, established vegetation, and visual interest. At this scale landscape character has the potential to be understood as relatively constant and slowly evolving.

At the neighbourhood or street scale, landscape character tends to be more variable, ranging between homogenous and constant along some streets with less infill development (Figure 7) to highly variable along others (Figure 8), where infill subdivision and development that has occurred within localised areas over time. Neighbourhoods and streets expressing a more homogenous or constant character, changes in density are noticeable but are often mitigated by open frontages and established vegetation on adjoining lots (Figure 5). This is further mitigated with the presence of established street trees, which assist in containing views, regulating changes in architectural scale, and adding increased consistency to streetscape character (Figure 7). In more varied neighbourhoods and streets, reduced vegetation, open spaces, and variable portions of fencing are more common, particularly at the street interface. This visually reveals a greater degree of variation in the density, scale, form and materiality of dwellings (Figure 8). Street trees when present, tend to visually contain and mitigate the level variation.



Figure 7: Example of constant landscape character along Milverton Ave

Constant landscape character along Milverton Ave. Predominantly similar form, scale and typology of dwellings, low open fencing and established vegetation along frontages. Street trees provided containment and added consistency of landscape character to the streetscape. Image: PNCC.



Figure 8: Example of variable landscape character along Linton Street

Variable landscape character along Linton Street. Reduction of vegetation and open space at the street interface revealing variation in dwelling typology, form and scale. The lack of street trees further visually highlights the variable landscape character of residential lots along the street. Image: PNCC

At the site level, changes in landscape character associated with infill and higher-density housing typologies are most pronounced where previously larger lots are cleared of vegetation to create an open void along the street and then filled by an increase in building bulk and form, reduced open space, increased hard surfacing, fencing, and smaller, younger landscape plantings (Figures 9 & 10). Again, where street trees are not present, this change in density and form is more visually noticeable. Such sites, cleared of all established vegetation, can remain in such a state for a period of years (Figure 11).



Figure 9: Example of noticeable residential site clearance practices on Roy St

Figure 10: Example of noticeable residential density change on Roy Street

A recent multi-unit residential development (MURD) at the corner of Roy & Featherston Streets. The site is fully cleared and replaced by increased density, bulk and form. Some smaller plantings are located along the interface with the street edge. Development change in scale and form is visually prominent due to the corner position and lack of any established taller on-site vegetation or street trees. Image: PNCC



Figure 11: Example of larger lot full site clearance on Roy Street

A traditional large residential lot in Roy Street, cleared of all buildings and vegetation in 2021 and awaiting development. This site is yet to still be developed as of August 2024. Image: PNCC

Overall, the landscape character of the residential zone where the proposed MRZ is located has evolved from its natural beginnings into a highly modified and ever-changing environment. Over a flat and terraced landform, land cover has been continually shaped by ongoing changes in land development practices and housing needs. Broadly, the character of this residential landscape can appear consistent and stable, with a mix of relatively low-density building forms, open spaces, and established vegetation. However, at the neighbourhood or street level, the landscape can vary more significantly. Areas with less subdivision and infill development tend to maintain a consistent and homogenous landscape character, while neighbourhoods that demonstrate a history of more intensive development display greater diversity in building forms and materials, creating a more variable and evolving landscape character. The most noticeable changes occur in streets with no street trees and at the site level, where larger lots are generally cleared of established vegetation and subdivided, leading to increased building bulk, increased hard

surfacing, reduced open space, and sparse new landscape plantings, particularly at the street interface.

4 Sampling

A selection of residential sites developed at different levels of intensification were sampled to better understand landscape effects associated with increased residential density development (Figure 12 and Appendix A).

All sites are located at the edge or within the proposed MRZ and cover a range of residential development typologies typical of the Residential Zone, Multi-unit Residential Housing Areas (MURD), and proposed MRZ. They are traditional ¼ Acre, Baseline (Permitted Activity), and T1-T4 (Various Multi-unit Housing). All sites sampled are described in further detail in Appendix A.

Each site was assessed to better understand the extent of landscape effects on permeable open space, existing vegetation and quality of frontage.

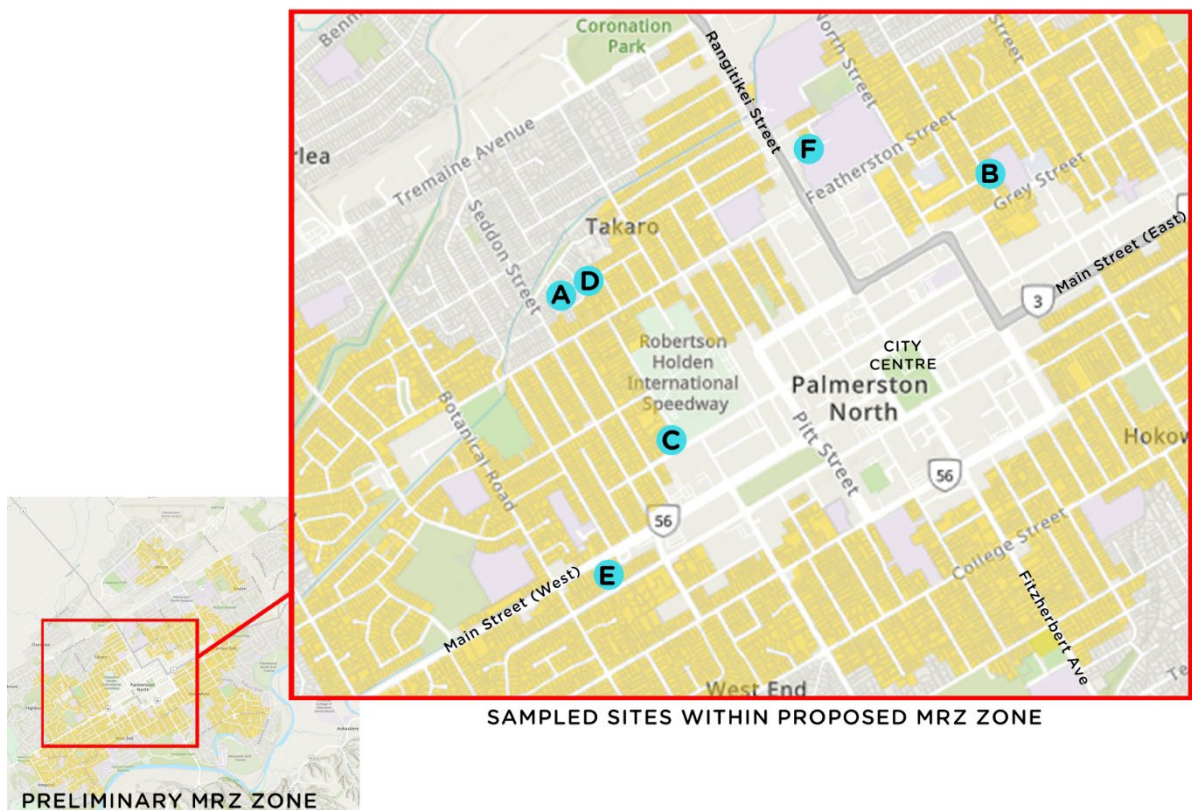


Figure 12: Locations of sampled residential sites A-F within the proposed MRZ Zone.

4.1 Permeable Open Space

Permeable open space is an open area or group of open areas within a site that contains 'soft' ground surfaces such as vegetation, turfed grass or other soil media or aggregates that allow moisture (and air) to pass through to the subsurface soils. It is the opposite of 'hard' or impervious ground surfaces such as concrete, unit paving, and asphalt. Permeable open spaces play a crucial role in supporting ongoing soil hydrological processes and plant health

and can provide positive site and neighbourhood landscape and visual amenity as private recreational space between buildings such as socialising, recreating and growing vegetation. Landscape plantings are most often located within these spaces and are dependent on subsoil moisture to maintain healthy, long-term growth and provide other positive landscape outcomes – shade and cooling, improved air quality, absorbing rainfall and stormwater, providing food and biodiversity.

To understand the effects on permeable open space from different residential development patterns over time, each sampled site was assessed to determine the percentages of building coverage, impervious surface coverage and permeable open space (Figure 13 & Appendix A).

A summary of different residential site typologies shows how building coverage and permeable open space vary with density. Traditional ¼ acre sites have the lowest building coverage (25%) and the most permeable open space (50%). As sites are subdivided as a permitted activity down to 350m² (Baseline), building coverage increases to 36%, reducing permeable space to 30%, largely due to more impervious surfaces associated with carparking, storage areas and outdoor patios. Multi-unit typologies (T1-T3) show a slight similar building coverage (average 33%) but a significant decrease in permeable space (average 25%), again mainly due to added impervious surfaces from on-site car parking. When car parks in T3a are replaced with permeable surface, permeable open space improves (37%). T4, with no on-site parking, has the highest building coverage (41%) but still offers a similar proportion of permeable open space (27%) as current permitted 350m² sites, despite the increased density.

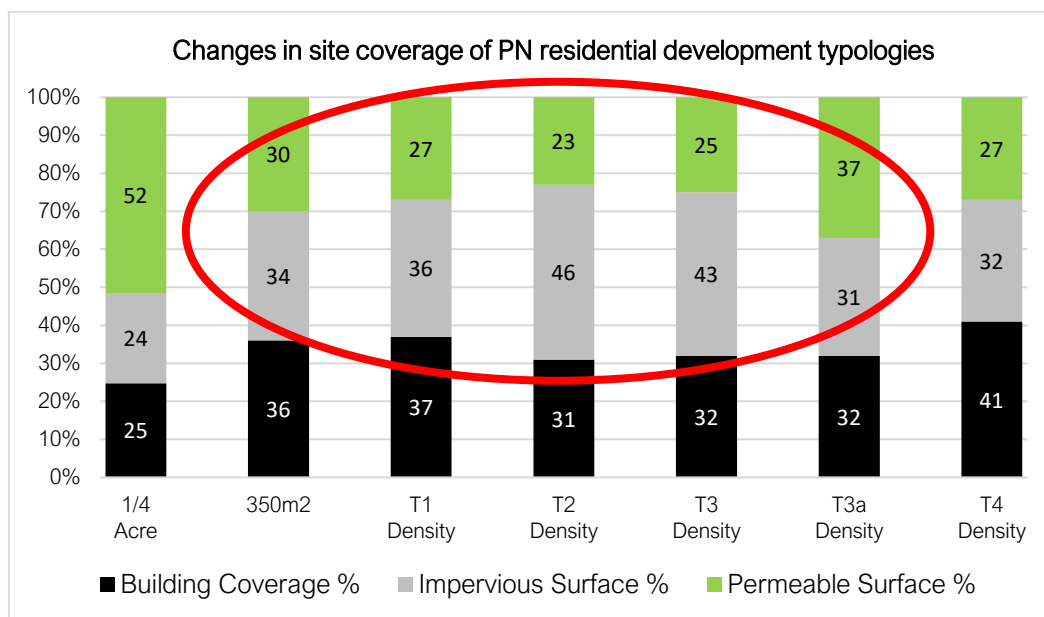


Figure 13: Changes in site coverage in relation to residential development typologies in Palmerston North

The red circle indicates the extent of surface permeability is influenced by typology. Current multi-unit development (T1, T2, T3) is leading to increased hard surfacing. Integrating permeable paving systems into onsite carpark areas (T3a) has the potential to improve site surface permeability to be higher than that of current permitted activity (350m²) while greatly increasing density.

4.2 Vegetation Loss

Vegetation loss refers to the reduction of existing landscape plantings on a site, which can be significant as residential lots are subdivided and intensified. Established and large vegetation, particularly trees, are most at risk and their removal can negatively impact both the on-site and neighbourhood landscape amenity. The removal of smaller shrubs and groundcovers can often be less noticeable, due to the presence and scale of larger trees being most pronounced within private and public views.

Vegetation contributes positively to residential landscape character and visual amenity. All types of vegetation including trees, palms, shrubs, groundcovers, and climbers support maintaining permeable open space, providing shade and cooling, improving air, soil and water quality, enhancing biodiversity, supplying food and adding visual interest.

To understand the impact on established vegetation from residential development patterns over time, and determine if any landscape preservation is required, each site sampled was visually assessed through aerial imagery to determine the approach and extent of any vegetation change (Figure 14 and Appendix A).

Across all development types, the full removal of onsite vegetation is a common practice. This clearance is permitted under current regulations, with little oversight beyond the allowance of up to 500m² of vegetation removal per year under Section 6 of the Operative District Plan, or protection for certain scheduled trees under Section 17 of the Operative District Plan. This is anticipated to also apply to the MRZ. Vegetation is often cleared before seeking consent, driven in part by site geotechnical, contamination and structural land development and other regulatory requirements⁹.

While aerial imagery confirms widespread vegetation clearance, it has limitations in tracking the type of vegetation loss and any replacement of vegetation post-development. Although new plantings are evident post-development, the extent varies depending on the consenting pathway. 350m² Baseline development (Permitted) has no requirement for new vegetation, while T1-T4 Multi-unit Residential Development (MURD) is assessed for the extent of both existing and new plantings. Despite this, and also considering the decrease in permeable open space, both development patterns show a significant reduction in site vegetation overall, suggesting that current practices have the potential to contribute to cumulative negative effects on landscape amenities, both on the site and within the broader neighbourhood.

⁹ C12 Urban Ground Truths: Valuing soil and subsoils in urban development, Parliamentary Commissioner for the Environment Te kaitiaki Taiao a Te Whare Pāremata, March 2024 Pgs 6,7,8,11 & 16



Figure 14: Site development practices with regard to loss of vegetation

T3 Multi Unit development. Pre-development 2019 (left), during development 2021 (centre) and Post development 2022 (right). Source PNCC LandAdmin Aerial Images 2019-2022.

4.3 Frontage Quality

In residential areas, frontage refers to buildings and spaces that face public spaces like streets or shared areas. Frontage is crucial for creating active edges, which enhance community connectivity and safety by clearly defining the public-private threshold and promoting visibility for passive surveillance¹⁰. It ensures a well-defined public entry and connection while generally avoiding the placement of private outdoor living spaces along the street. When this isn't possible, landscape plantings and screening are used to maintain privacy and storage. Vegetation, when located within this part of a site, supports greater streetscape character and amenity, especially along streets with few or no street trees.

As residential development intensifies and smaller lots are created, the quality of frontage between private and public or shared spaces has the potential to be eroded to accommodate dwellings and other ancillary site uses—storage, vehicle access and on-site parking. Removal of established vegetation and establishment of tall, solid fencing at the street interface can diminish positive characteristics of residential areas including openness, greenery, shade and visual interest and erode the quality of streetscape and neighbourhood landscape amenity and character.

To understand the effects of residential development on streetscape and neighbourhood amenity and character over time, each sampled site was assessed to determine the extent and type of landscape vegetation and fencing along street edges, as well as the degree of visibility and connectivity between dwelling and street (Figure 15, Figure 16 and Appendix A).

Traditional quarter-acre sites typically demonstrate a high degree of open frontage with a deep setback between the building and the street. Fencing associated with the age of the dwelling is typically low or open with a good degree of established, mature vegetation at the street edge. Direct pedestrian access between the street and dwelling is mixed, with some demonstrating a direct pedestrian pathway, while others, by way of onsite vehicle access. Few demonstrate private outdoor living presented at the street front.

¹⁰ Kāinga Ora. Toane Ora Urban Design Guidelines V1.0 Mar 2023 pg 16 & 17

Baseline results show that dwellings have a shallower setback, placing them closer to the street, with an increase in solid, high fencing along the street edge. Some sections have lower fencing that slightly improves visibility. This is likely attributed to visibility splay requirements for vehicle access as any private outdoor living presented to street is screened by high fencing as permitted. fencing performance standards encourage higher fencing. The most noticeable change in landscape character is the complete removal of existing tall vegetation, with new plantings being sparse, less varied. Any trees present are typically confined to the street edge where deeper setbacks are used for on-site parking. Pedestrian connection between street and dwelling is all via vehicle access and parking.

T1-T4 density developments under current multi-unit rules often remove existing street-edge vegetation but replace it with a moderate level of new vegetation, including trees. Low, visually permeable fencing assists in maintaining a good level of visibility between the street and the dwelling, with clear pedestrian pathways to entry established. Where private outdoor areas do front the street, open screening with landscape plantings including specimen trees are used to enhance visual interest while preserving onsite privacy.



Figure 15: Pre-development frontage (T4 MURD)

T4 (MURD) frontage quality pre-development Oct 2022. While the site demonstrates a deep building setback, some positive frontage attributes exist - low fencing at the street maintains openness and views. Existing landscape plantings provide visual interest to site and street. Dwelling demonstrates a clear entry, though pedestrian connection to street is indirect via the vehicle access to the left. Source Google Street View 2022.



Figure 16: Post development frontage quality T4 (MURD)

T4 (MURD) Frontage quality post-development Jan 2024. The developed site demonstrates a reduced building setback to the street (3m). Low fencing across a good portion of site frontage is retain for open visibility, stepping up in height to screen a private outdoor living court. Front unit dwelling demonstrates a clear entry with direct pedestrian connection to street. Pedestrian access to rear units is via pathway along left boundary. Although difficult to detect, young plantings are installed across the frontage for visual interest, including a specimen tree and shrubs inside the screened outdoor living court for outlook and shade.. No onsite car parking is provided. Source PNCC

5 Policy Framework

5.1 The Resource Management Act 1991 (RMA) & NPS UD 2020

The RMA provides the overall policy framework within which the use of land and water and other activities that may impact landscape are managed. This report is restricted to addressing landscape matters in relation to the establishment of a Medium Density Residential Zone (MRZ) as directed by higher-order national policy (NPS-UD 2020) .

No definition for landscape is provided within the RMA. For the purpose of this report, landscape shall be broadly understood and assessed as the intersection or point of overlap of the following interconnected and non-hierarchical dimensions¹¹

- a) the natural and physical resources of the landscape (physical);
- b) how the attributes of those resources and their values can be perceived (perceptual);
- c) the association that people and communities make with and among the resources and their attributes and values (associative).

¹¹ Te Tangi a te Manu: Aotearoa New Zealand Landscape Assessment Guidelines, Tuia Pito Ora New Zealand Institute of Landscape Architects, July 2022 Pgs 71-100

The proposed MRZ is primarily urban in character, located within Unit 12 of the Palmerston North Landscape Inventory 2011¹² and is not located within any identified outstanding natural feature or landscape.

Section 7 of the RMA requires those managing natural and physical resources to have particular regard to the maintenance and enhancement of amenity values (Section 7c) and maintenance and enhancement of the quality of the environment (Section 7f). Landscape is relevant to both.

NPS-UD 2020 emphasises increasing housing supply within existing accessible urban environments to create compact, sustainable environments while balancing amenity values and improving accessibility. It acknowledges that as urban areas grow, intensify and change over time to meet the needs of people and communities the landscape character and amenity of those areas will also alter and evolve. Physically, new buildings, infrastructure and landscaping will potentially change the look and feel of such neighbourhoods and, with it, people's experiences and connections with these areas. While some may find the potential change in residential landscape character and amenity appealing through the greater provision of housing options, others may not, and so the meaning, identity and values attached to these areas are likely to change and reflect the diverse and changing needs of the community.

5.2 Future Development Strategy (FDS)

The Palmerston North Future Development Strategy (FDS), jointly prepared by PNCC and Horizons Regional Council as a requirement of NPS-UD 2020, sets out the high-level vision for long-term urban growth and must be had regard to when undertaking plan changes, including housing. The FDS defines a well-functioning urban environment for the city¹³ and reflects iwi aspirations, growth constraints and opportunities, proposed growth areas, and infrastructure needs. Key landscape-related qualities of a well-functioning urban environment identified within this FDS include varied living options, a compact and connected urban form, low environmental impact, a strong sense of place, climate resilience, and the expression of cultural norms and traditions (Table 1).

5.3 Rangitāne o Manawatū Environmental Management Plan 2021

Rangitāne o Manawatū (RoM) holds mana whenua status over Palmerston North and are Te Tiriti partners with the Palmerston North City Council (PNCC). RoM has an Environmental Management Plan (EMP) lodged with PNCC, which the Council must consider in its planning and decision-making processes. The EMP underscores RoM's deep connection to the land and waters of the Manawatū, emphasising their responsibility to protect, enhance, and restore the mauri (life force) of these natural resources for future generations.

A key focus of the EMP is Te Mana o te Wai, which identifies the Manawatū Catchment as a taonga (treasure) essential for mahinga kai (traditional food gathering) and other natural resources. The plan outlines RoM's objectives to manage land and freshwater in a way that

¹² <https://www.pncc.govt.nz/Council/Document-library/Research/Landscape-Inventory> Pg 17

¹³ Palmerston North Future Development Strategy 2024. Pg 19

protects and restores the health and natural rhythms of the Manawatū Awa and other water bodies including groundwater, ensuring that these environments continue to sustain all life.

With regard to landscape and in particular vegetation, the retention of an acceptable level of open space permeability across the MRZ to ensure water can replenish soil moisture and sustain functioning soil health and vegetation growth needs to be considered.

Table 1: A well-functioning urban environment for Palmerston North¹⁴

Well-functioning urban environments in our city

The policy statement requires us to set out how we intend to achieve well-functioning urban environments in our city both now and in the future.

In Palmerston North our urban environments will be well-functioning when:

A variety of options for living and business needs are available	Housing and business land is affordable	Moving between home, work, and recreation is straightforward and safe	Our environmental footprint is light and community resilience is high	Our urban spaces demonstrate quality urban design features	The aspirations of Rangitāne o Manawatū for the future growth and development of the city are realised
There are different housing options in terms of type, location and cost	We support a healthy and competitive land and development market by making sure the right amount of land is ready and available at the right time, in the right places	Our urban spaces are compact, orderly, safe and connected	We support reductions in greenhouse gas emissions	Buildings and public spaces incorporate and demonstrate urban design to enhance our communities' quality of life and experience of the urban environment	A city with minimal environmental impact
Māori, Pasifika, and other cultures have the ability to express their cultural norms and traditions			The impact of urban growth on highly productive land is minimised		A city with a strong identity based on its own story
A range of suitable sites are available for different business sectors, in terms of site size and location		Our urban spaces have good accessibility for all people between housing, jobs, community services, natural spaces, and open spaces	We plan and design for resilience to the impacts of climate change		A city that embodies Te Tiriti partnership
		Public and active transport options are safe, easy and efficient	We work with, not against, the natural characteristics of our location to promote community and environmental wellbeing		A city that prioritises the mauri and health of waterbodies and connections to them
					Affordable, healthy and accessible housing options
					Māori development (including papakāinga, cultural hubs and new marae) is a readily available option

5.4 Palmerston North District Plan (Operative)

Section 2 City View Objectives focus on managing Palmerston North's landscape in a sustainable way. This includes maintaining a compact urban form, protecting the Manawatū River, supporting native biodiversity, and improving people's mobility. The goal is to design neighbourhoods that are well-connected, safe, and appealing while also preserving the community's natural and cultural heritage.

No specific definition for landscape or landscaping exists with Section 4 Definitions, though some landscape-related exist, which tend to be defined either as a specific or broad element of landscape - Living Court, Scheduled Tree, Permeable Surface or Environmental Design. These mention landscape attributes for protecting and enhancing amenity - plantings, trees, paving, screens, walls and fencing. In medium-density housing, landscaping can include both 'hard' landscape elements like driveways, pathways, fences, screens, tanks, sheds and walls, and 'soft' landscape elements like permeable surfaces, water, soil, plants and vegetation. Combined these are the landscape attributes that contribute to on-site and surrounding landscape character and amenity. While current definitions provide some direction, there appears a lack of definition on landscape attributes, particularly

¹⁴ Future Development Strategy (2024).

vegetation. The inclusion of any new MRZ performance standards relating to landscape may warrant further definition on hard and soft landscape elements.

Earthworks are crucial for land development and construction but can lead to negative landscape and amenity effects through disturbance of healthy soils and removal of established vegetation (Figure 11). Section 6 aims to address negative landscape effects by ensuring earthworks avoid, remedy, or mitigate adverse effects on neighbouring properties, landscapes, and natural features. In residential areas, earthworks are allowed if they do not exceed 500m² and do not alter ground level by more than 1.5m in any calendar year. Smaller lot sizes have potential to increase permanent removal of vegetation and supporting soil function and so it is important to include provisions in the proposed Medium Density Residential Zone (MRZ), that seek to manage and reinstate vegetation and supporting soil health and function.

Subdivision for residential areas often involves earthwork activities like removing vegetation, reshaping land, and adding infrastructure. While this can help create a more compact city and protect valuable soils, it can also lead to negative landscape effects such as land re-contouring, soil disturbance, loss of permeable open spaces, and increased hard surfacing. Within the proposed MRZ, permitted lot size is anticipated to be reduced. Along with provisions within the proposed MRZ, it is important that Section 7 Subdivision also manages MRZ subdivision design and layout, access, and retention of street trees.

The primary function of the residential zone is to provide residents with a place to live. As the residential zone has grown to accommodate the needs of residents, landscape character has evolved to changing density and need. Current permitted activity development and multi-unit housing development with smaller lot sizes and increased density continues to reflect this evolving landscape character. The proposed MRZ in order to meet changing housing needs of the community is anticipated to be the next evolution in potential change in landscape character and amenity and it should evolve in a way that it preserves as much as possible the attributes that contribute to positive landscape character and amenity. That being usable, visually interesting and active open street interface, usable and visually interesting private outdoor living, permeable surfacing, and variation of vegetation including specimen and street trees.

5.5 Medium Density Residential Standards (MDRS)

Palmerston North is identified as a Tier 2 local authority¹⁵ and as such is not required to incorporate the Medium Density Residential Standards (MDRS). However, it is useful to review these standards to determine their appropriateness to incorporate into the proposed MRZ with or without modification. The proposed MDRS that directly relate to landscape are building coverage, setbacks, outdoor living space, outlook space and landscaped area.

5.5.1 Building Coverage

This performance standard enables 50% building site coverage across a nominal lot net site area, representing a 10% increase over current permitted activity and MURD building coverage. Tied to this, the provision for a minimum 20% landscaped area of grass or plantings

¹⁵ National Policy Statement on Urban Development 2020, NZ Government Te Kāwanatanga o Aotearoa, Ministry for the Environment, May 2022, Pg 22.

for a residential unit at the ground floor level (refer to 5.5.4) appears on the surface to protect a portion of the site from being completely covered by hard surfacing – up to 80%. Analysed a little closer, and there appears to be potential for overall site coverage of hard surfacing to be almost 100% as a result of misinterpretation of the standard or utilising canopy cover only to achieve the standard (refer 6.5.4 and Fig 14). If a 50% building coverage standard is adopted, it will be imperative to develop permeable area standards that ensure areas of surface permeability across a site – including vegetation – align to that currently achieved through permitted and MURD development outcomes of approximately 30%.

5.5.2 Setbacks

Buildings are required to be setback 1.5m from the street boundary and 1.0m from all other boundaries. Given that proposed units can be up to 3 storey in height along these setbacks, practical growing space for taller vegetation, such as specimen trees or shrubs, will be severely restricted along such boundaries, especially along the street front interface. If employed, it is anticipated lower, smaller plantings will be utilised if providing a landscape area within these spaces. While smaller, lower vegetation will likely grow in a restricted space and contribute to onsite landscape amenity, their contribution as an attribute to wider streetscape and neighbourhood landscape character amenity will be severely reduced with any potential taller trees or shrubs most likely located to the rear of units, visually hidden away from broader public views.

Taller vegetation, including specimen trees along the street edge, is a common residential landscape attribute that contributes positively to neighbourhood and street landscape amenity and character. Further MRZ landscape provisions are therefore required to encourage the establishment of taller specimen trees and shrubs across the site, particularly along the site front interface with any public road, and could be achieved through linking a tall planting landscape provision with other provisions such as outdoor living spaces or onsite car parks that direct a deeper building setback when placed within the frontage interface with a public road.

5.5.3 Outdoor Living Space

Ground floor units must provide min 20m² outdoor living space, and where delivered at ground level, shall have no dimension less than 3m, be accessible from the residential unit, and may be grouped in a communally accessible location, or located adjacent to the unit, free of buildings, parking spaces, service areas and manoeuvring areas. Current Multi-unit housing performance standards require min 4m diameter outdoor living circle located in an East, North or West position directly connected to a living area. This ensures the location of open spaces are orientated to solar gain, ensuring they are functional and practical, i.e. they can comfortably accommodate a small table and chairs with room to move around the edges. There is potential for the proposed Outdoor Living Space to be all hard surfacing and no landscape plantings be located to a south position at the ground floor.

The proposed standard has potential to result in a low-quality, cold, hard surfaced outdoor area with little onsite landscape planting and low visual amenity. Increasing dimension size and location to be at least aligned with existing Multi-unit Housing provisions will enhance open space function and access to solar gain. Linking additional landscape provisions for a percentage of permeable surface and landscape plantings within these outdoor living

spaces will be required to encourage surface permeability, regulate heat, replenish soil moisture, increase visual amenity and enhance external outlook.

5.5.4 Landscaped Area

Ensuring a degree of landscape plantings installed within a notional site is supported in principle and the intent of this standard to achieve a minimum 20% landscape area is also supported as this ensures a degree of onsite landscape amenity in the MRZ currently not provided through permitted activity provisions within the Residential Zone. However, these standards, while well intended, raise concern with regard to utilising canopy cover only to meet min 20% site coverage (presumably from retained, existing vegetation), and the ability to locate landscaped areas anywhere on the site, including away from each residential unit.

Testing of this provision in conjunction with the 50% building coverage and setback provisions has been carried out and determines that there is potential for the minimum overall site impervious surface coverage to be almost, if not 100% and any landscaped area at ground level to often be located to the rear of a site. Firstly, some units, particularly split-level units, are likely to have only garaging, laundry and entry at the ground floor, and so may apply the provision as it is written as not requiring a landscaped area to be established on the developed site, and so 100% site coverage is feasible. Secondly, the 20% landscaped area achieved by canopy cover alone, which in theory has the potential to result in taller vegetation across a site - most likely to the rear or within driveway or parking spaces - in practice has potential to result in almost 100% site coverage when hard surfacing is directly underneath (Figure 17). The canopy cover provision also brings into question how canopy cover is measured and applied to determine compliance, especially when vegetation as a living organism will grow at different rates and sizes depending on other biophysical factors. For example, a *Prunus x yeodensis* 'Awanui' (Flowering Ornamental Cherry) may grow 1m higher and wider than the same species located on another adjacent site due to soil quality, moisture, aspect to sun and protection from prevailing wind.

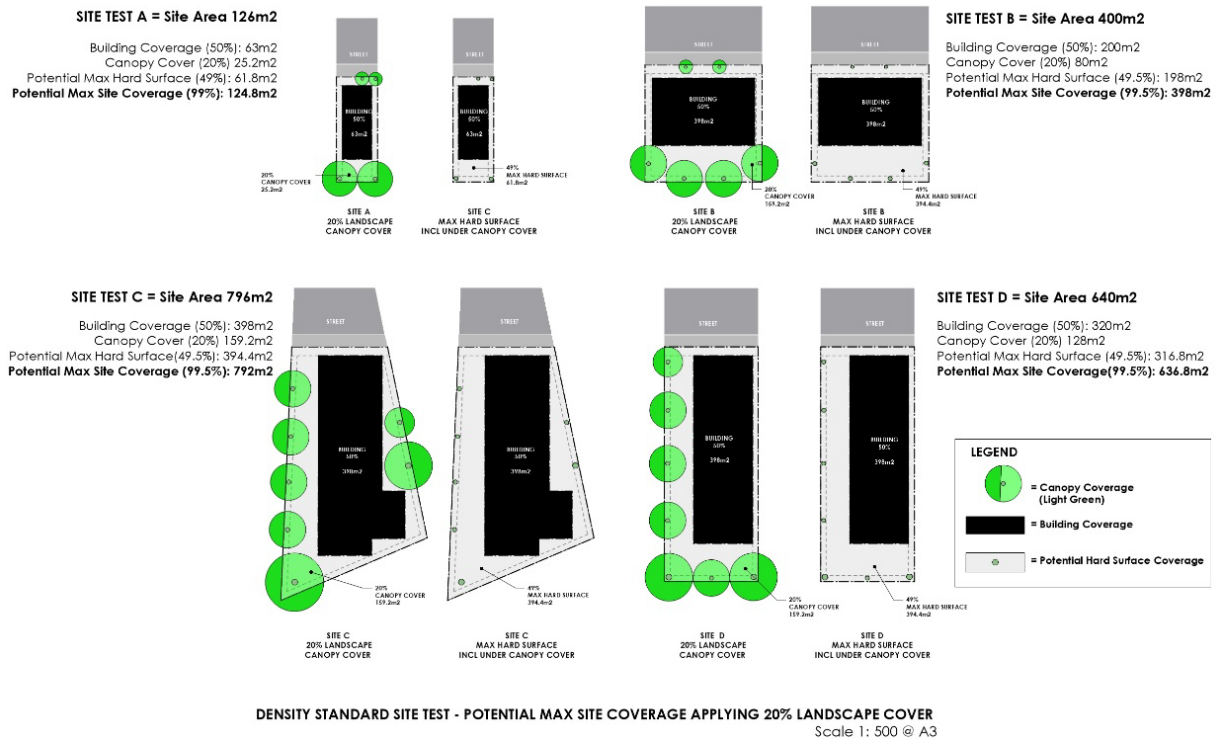


Figure 17: Site testing of MDRS

20% landscape canopy cover standard in relation to 50% building site coverage demonstrates potential of overall site having a site coverage of almost 100%.

Thirdly, the location of the 20% landscaped area anywhere across a site raises concern that a landscaped area, constrained by a reduction in boundary setback or outdoor living space, may often be achieved to the rear of a site where there is room, away from a public street edge, or any outdoor living space directly connected with a ground floor unit. Coupled with the requirement that the 20% could be achieved through grass or plants, a landscape area located away from such views could result in low and monotonous grass or plantings, adding to the reduced visibility of vegetative greenery.

While well intended, the landscaped area standard generally only manages vegetation to a low standard. The potential of the standard to contribute to a high degree of site hard surfacing, reduced views and low visual amenity signals that further landscape provisions are required to address these landscape-related matters. The standard does not address 'hard' landscape elements such as pathways, screens, fences, retaining walls, service areas, storage sheds or stormwater attenuation devices. Pathways provide a direct connection between street and dwelling and can be a landscape element that contributes to overall landscape amenity. Storage sheds and above-ground stormwater attenuation tanks are common on smaller sites. Most are located to the side or rear of a dwelling, though there is potential for such elements to be located within the street frontage or outdoor living spaces and further impact internal and streetscape landscape character and amenity.

Including landscape provisions to direct a percentage distribution of the 20% landscaped area to key locations across a site, such as frontage and outdoor living spaces adjoining ground floor residential units, will be required to ensure site vegetation contributes positively to internal landscape amenities as well as surrounding neighbourhood and streetscape

landscape character and amenity. Setting a minimum height on landscape vegetation, particularly along the front of the site will assist in ensuring variation in scale and visual interest. Including a provision for an area of permeable open space will ensure site coverage is better managed, which the 20% landscape area could contribute to achieving. A minimum of 30% of the site area is a starting point for permeable open space, as this generally aligns with what is delivered under current permitted activity and multi-unit development across the residential zone (Figure 13 & Appendix A). Ensuring a provision to manage the location of sheds, service areas and above-ground stormwater attenuation tanks away from within the frontage interface or within an outdoor living space is encouraged.

6 Conclusion and Recommendations

The landscape character of the proposed Medium Density Residential Zone (MRZ) in Palmerston North has evolved significantly from its natural beginnings of flat land and dense forest into a highly modified residential urban land cover. Incrementally changing over time through land development practices, including subdivision of smaller lots and infill development, landscape character has evolved to demonstrate a degree of variability at the neighbourhood scale. This variation in character is most pronounced at the street and site level, particularly where infill development outcomes result in increased building form and hard materials alongside decreased established vegetation, permeable open space and street frontage visual interest and quality.

Multi-unit housing is already occurring, and medium-density typologies and forms are incrementally emerging and changing residential landscape character. Development practices demonstrate site being intensified are often fully clear of established vegetation and growing soils. Multi-unit provisions in place are demonstrating positive contributions to landscape character and amenity of existing urban areas are possible with increased residential intensification, in particular through provision of permeable open space, onsite reinstatement of a range of vegetation, and open, frontage interface with a high degree of landscape and visual amenity.

The proposed Medium Density Residential Zone (MRZ) in Palmerston North represents yet a further shift in residential density, form and character from the area's historical low-density and vegetated development form and pattern. This change reflects historical development patterns and the changing housing needs of the community and is required to be understood in this light as further evolution and change in residential character and amenities to meet changing needs. This particular aspect is acknowledged in high order and directs us to account for this. The challenge, then, is in how positive, common, and defining residential landscape attributes can be maintained within this changing context to form a well-functioning urban environment.

Potential negative landscape effects will likely be most experienced in streets lacking street trees and a broader residential street tree policy by PNCC is required to address this. Development practices of wholesale vegetation clearance and supporting soils are likely to continue with any balance of developed lots comprising a high proportion of hard surfacing. Ensuring adequate vegetation reinstatement, protection of permeable areas and quality of outdoor living spaces and street front interface are landscape areas to focus on. Medium Density Standards attempt to address some of these landscape matters though when

scrutinised building site coverage, outdoor living spaces and landscaped areas, reveal the potential for increased negative landscape amenity and visual effects with regard to location, extent and variation of landscaped areas, increased degree of hard surfacing and quality of outdoor living spaces and street frontage.

Additional landscape-related provisions are required to manage potential adverse landscape effects on character and amenity associated with the proposed MRZ to ensure adequate landscape character and amenity is maintained at the street and site level within the developing zone and are reflective of broader common and defining residential landscape character attributes. Several key recommendations are made:

7 Recommendations

7.1 Other District Plan Policy

7.1.1 Definitions

Review and ensure any new landscape-related terms related to MRZ are clearly defined and included into Section 4 Definitions

For example:

- Permeable Open Space – Review current Permeable Surface definition to determine if an adequate range of both 'hard' landscaping elements and 'soft' landscaping elements are defined that can provide an area of permeable surface across a site, free from covered buildings or structures. Examples being:
 - hard landscaping elements - e.g. decks with drainage, loose aggregates, permeable paving, porous concrete etc,
 - soft landscaping elements - e.g. trees, palms, shrubs, climbers and groundcovers including turfed grass
- Landscape Areas – Landscape can be interpreted to be 'hard' landscape elements also. Ensure 'landscape' means any area of a site that is planted in vegetation cover only, free of any other permeable or impervious hard surfaces or covered structures.
- Service Area – Service Areas are 'hard' landscape areas of impervious surface for performing external tasks and can include other elements – storage sheds, waste systems, external clotheslines, HVAC and increasingly above-ground SW attenuation tanks. Review if a definition is needed for Services Areas or if other definitions better manage such an area within outdoor living spaces or within the street interface.

7.1.2 Subdivision

Ensure subdivision provides provisions to manage MRZ subdivision change in lot size including control over subdivision design and layout, access, and retention of street trees

7.1.3 Medium Density Residential Zone -Objectives and Policies

Ensure MRZ considers the impact of site vegetation removal and soil disturbance on residential landscape character and amenity from medium-density housing development and encourages retention of existing vegetation and permeable open space, reinstatement of vegetation and permeable open space across all MRZ sites.

7.2 Additional Medium Density Standards

7.2.1 Permeable Open Space

The addition of a permeable open space performance standard of 30% site coverage is required to maintain the permeability of the site surface and support soil health and

hydrological processes. 30% aligns to the approximate average available permeable open space of T1-T4 density sites sampled.

Suggested provision:

- Regardless of ground floor use, all units must provide a permeable open space area of a minimum of 30% anywhere across the developed site. This can be within a single area or across multiple areas such as pedestrian pathways, outdoor living courts or onsite car park area.
- Each 30% permeable open space area can be comprised of any of the following:
 - Permeable surfaces including permeable paving, decking or fine stone aggregates
 - Landscape plantings including grass, groundcovers, shrubs or specimen trees
 - Canopy cover with full landscape planting area or permeable surfacing below

7.2.2 Specimen Trees

Trees are a common attribute of wider landscape character, contribute highly to site and street amenity and contribute to constant loss of mature vegetation.

Suggested provision:

- A minimum of 1 specimen tree per ground floor unit, capable of growing min 4m high after 10 years must be installed onsite within a minimum open area of 3m wide x 3m deep free of any building façade
- Where an onsite carpark is to be provided between the street edge and the building and results in a building setback from the street greater than 5m deep, a specimen tree capable of growing 4m high after 10 years must be located within this setback adjacent to the carpark and toward the street edge.
- Where a street-facing outdoor living space is to be provided between the street edge and building and results in a building set back greater than 4m deep from the street boundary, a specimen tree capable of growing to a minimum of 4m high after 10 years must be located within the outdoor living space, adjacent to the street edge.
- All specimen trees installed on each site shall equate to 9m² of canopy coverage to meet the required 20% landscaped area.

7.2.3 Service Areas, Storage Sheds, HVAC and SW Attenuation tanks

The location of these 'hard' landscape elements have the potential to increase negative onsite and streetscape landscape amenity effects through their positioning on a site, particularly within private living areas and public frontages. However, planned well, they can be utilised to the edge of living courts and contribute to privacy between internal neighbours. Avoiding placement of these elements within outdoor living space and street frontages can assist to mitigate this.

Suggested additional provisions:

- Must avoid locating above-ground stormwater attenuation tanks within the Outdoor Living Space, except where any above-ground SW attenuation tanks forms part of the edge of an Outdoor Living Space, but only where this acts as a visual screen for privacy between the Outdoor Living Space of other internal units.
- Service areas, Storage Sheds and HVAC can be located to the edges of an Outdoor Living Space and must avoid covering any window or access door that has outlook onto the Outdoor Living Space.
- Avoid locating any service areas, storage sheds, HVAC or above-ground stormwater attenuation tanks within the frontage setback between the street and the building.
- All service areas, storage sheds and above-ground stormwater attenuation tanks must be screened from public views at the street interface and views from any adjacent shared internal accessway and onsite carpark.

7.2.4 Outdoor Living Space

Outdoor living space should be increased to be in line with MURD so as to be of a functional size, capable of accommodating small tables and chairs, AC units, outdoor washing, and vegetation to enhance outlook and landscape visual amenity. Suggest retaining MURD min 30m² area and 4m diameter outdoor living circle.

Suggested additional provisions:

- 10% of the required total of 20% landscaped area per site must be located within each ground floor unit outdoor living space
- Landscape plantings and permeable surfacing can contribute to meeting the overall 30% permeable surface requirement.
- Must avoid locating any service area including SW attenuation tanks within the Outdoor Living Space
- SW attenuation tanks can form the edge of an Outdoor Living Space but only where this acts as a visual screen for privacy between units.

7.2.5 Landscaped area

The locations of the landscaped areas are too general and encourage taller vegetation away from the street. Specific locations should be more defined to ensure street frontages and outdoor living areas are vegetated to enhance on-site landscape amenities and surrounding landscape character and visual interest.

Suggested provision:

- Regardless of ground floor use, all units must have a landscaped area of a minimum of 20% of the developed site with grass or plantings, and.

- Of this 20% landscaped area, 30% must be located across the site frontage adjoining any public street or open space and 10% within each ground floor unit outdoor living court.
- Each required 20% landscaped area comprising of grass or plantings across a developed site shall contribute towards the overall 30% permeable open space with any shortfall comprised from other permeable surfacing identified in the Permeable Open Space provision above.

Appendix A. Sampled Sites

Table 2: Description and Location of existing residential sites sampled

Typology	Sites	Location	Description	Lot Size	Du/ha ¹⁶
¼ Acre	A & B Pre-development	44 – 58 Exeter Crescent 2A - 2B Massey St & 27A-39B Ward St	Traditional, larger residential lots with single dwelling	800m ² - 1200m ²	10.2 Low
Baseline (Permitted)	A & B Post-development	44 – 58 Exeter Crescent 2A - 2B Massey St & 27A-39B Ward St	Permitted Activity under R10.6.1. Lot Single storey, detached.	Between 350m ² - 400m ²	25.5 Low
T1 (MURD)	Site C Post-development	49 Cuba St /80-82 Pascal St/ 1-11 Arena Ct	Multi-Unit Housing under R10.6.3.3, varying lot size, single storey, detached and semi-detached with onsite carparking,	Between 300m ² - 350m ²	26.3 Low
T2 (MURD)	Site D Post-development	9A - 23B Exeter Crescent	Multi-Unit Housing under R10.6.3.3, varying lot size, 1 & 2 storey, detached and semi-detached with onsite carparking,	Between 59m ² - 91m ²	40.5 Low
T3 (MURD)	Site E Post-development	724 - 732 Main St & 121-123 Church St	Multi-Unit Housing under R10.6.3.3, varying lot size, 1, 2 & 3 storey, semi-detached and walk-up apartments with	Between 77m ² - 162.5m ²	101.3 Medium

* Density rates based on UK Standards. That is low density is considered 90du/ha or below, Medium Density 90du/ha – 250du/ha

¹⁶ Marriage G, Medium: A technical design guide for creating better medium density housing in Aotearoa New Zealand, 2022. Pgs 7-10

			onsite carparking,		
T3a (MURD)	Site E Post-development	724 - 732 Main St & 121-123 Church St	Same as T3, testing permeable carparking as proposed	Between 77m ² - 162.5m ²	101.3 Medium
T4 (MURD)	Site F Post-development	9A- 9F Wellesbourne St	Multi-Unit Housing under R10.6.3.3, varying lot sizes, 2 storey, semi-detached. No onsite carparking,	Between 73m ² - 96m ² ,	112.2 Medium

Table 3: Percentage of building coverage, impervious surfaces and permeable open space of sampled sites.

Typology	Building %	Impervious %	Permeable %
1/4 Acre	25	24	52
Baseline (Permitted)	36	34	30
T1 (MURD)	37	36	27
T2 (MURD)	31	46	23
T3 (MURD)	32	43	25
T3a (MURD)	32	31	37
T4 (MURD)	41	32	27

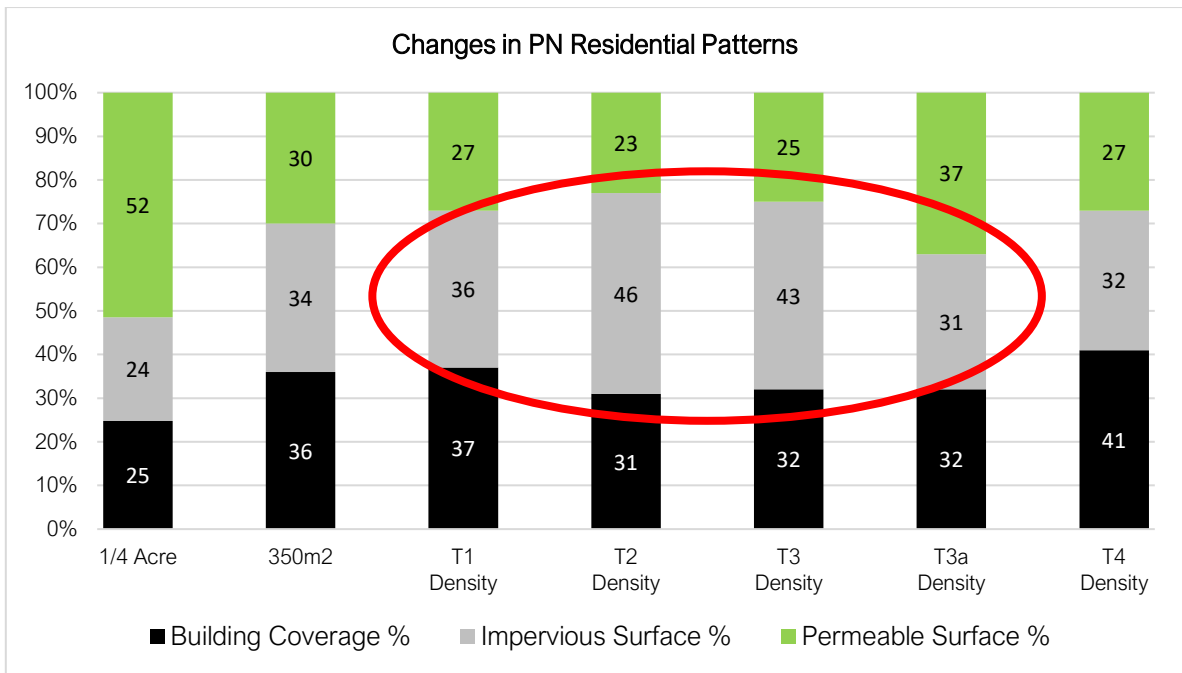

















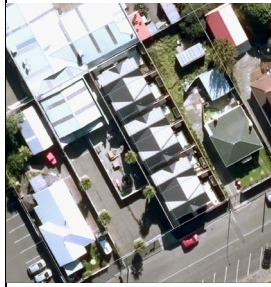


Figure 18: Percentage of building coverage, impervious surfaces and permeable open space of sampled sites

Table 4: Approach and extent of vegetation change of sampled sites during the redevelopment

Typology	Site		Pre-development		Vegetation Change		Post-development
Baseline (Permitted)	Site A	2013		2015		2022	
Baseline(Permitted)	Site B	2017		2019		2022	
T1 (MURD)	Site C	2015		2017		2022	

T2 (MURD)	Site D	2013		2019		2022	
T3 (MURD)	Site E	2019		2021		2022	
T4 (MURD)	Site F	2021		2022		2023	

All images courtesy of PNCC LandAdmin Aerial Images 2013 – 2023

Table 5: Change in frontage quality of sampled sites pre-development and post-development

Typology	Site		Pre-development		Post -development
Baseline (Permitted)	Site A	2009		2022	
Baseline (Permitted)	Site B	2017		2022	
T1 (MURD)	Site C	2009		2022	

T2 (MURD)	Site D	2008		2022	
T2 (MURD)	Site E	2009		2022	
T4 (MURD)	Site F	2022		2024	

Images source PNCC and Google Street View 2009 – 2023 July 2024.

Appendix B. Assessment of Residential Landscape-related Performance Standards¹⁷

¹⁷ Resource Management (Enabling Housing Supply and Other Matters) Amendment Act 2021: Schedule 3A Part 2 Density Standards.

Element	Performance Standard R10.6.1.1	Performance Standard (MDRS)	Performance Standard R10.6.3.3	Comment
Lot size	Min 350m ²	No minimum	Areas A/C - No minimum Areas B/D/G/H - Min 50m ²	<ul style="list-style-type: none"> MDRS & R10.6.3.3 enable a range of smaller lot sizes below 350m²
Units	2	Up to 3	3 or more	<ul style="list-style-type: none"> MDRS and R10.6.3.3 enables greater density of dwellings/units per lot
Site Coverage	40% < 500m ² 35% > 572m ²	Max 50%	Max 40%	<ul style="list-style-type: none"> Similar across all permitted and proposed regardless of lot size. Provides potential for landscape-related outcomes for remaining site area R10.6.1.1 and MDRS have potential for nearly 100% hard surface outcomes Investigate acceptable permeable surface area to achieve on a medium -density residential site Potential for MRZ standards to address % of permeable area that could include both 'hard' permeable paving and 'soft' landscape planting to achieve % per site.
Permeable Area	N/A	20% landscape area	Discretion Assessment Criteria 3h, 4d, 5a	<ul style="list-style-type: none"> R10.6.1.1 does not control additional hard surfacing. Potential for 100% hard surface outcome. MDRS landscape standard ensures min 20% permeable space per site. Potential for 30% balance to be hard surface. Canopy cover metric has potential for near 100% hard surface cover. R10.6.3.3 variable. Requires estimation to understand an acceptable average m² across a site. Potential for adverse landscape amenity effects - increased surface water, reduced soil moisture for plant growth and heat. Potential for 'hard' and 'soft' landscape standards and linked with MDRS permeable area standard to mitigate surface water, soil moisture and heat landscape effects
Outdoor Living	Min 36m ² Min 4.5m ø circle Position to E,N,W Gradient < 1:20 Min 2m direct contact to living at ground	Min 20m ² Min 3m dimension Min 8m ² above ground Min 1m dimension	Min 30m ² Min 4m ø circle Position to E,N,W Min 2m direct contact to living at ground Min 8m ² above ground Discretion Assessment Criteria 2a, 4a	<ul style="list-style-type: none"> Both R10.6.1.1 & R10.6.3.3 ensure adequate m², position to solar gain and direct connection between principal and outdoor living space MDRS outdoor dimension potential for being shallow and inadequate for functional outdoor living MDRS does not require direct connection between principal and outdoor living MDRS does not require position of outdoor living to solar gain Potential to directly connect MDRS principal outlook and outdoor living standards to better support functional outdoor living Potential to incorporate R10.6.3.3 outdoor living area standard to increase usable functional area Potential for R10.6.1.1/ R10.6.3.3 E,N,W position standard to ensure location of outdoor living space to solar gain Potential for locating a proportional area of 20% landscape planting standard within outdoor living space to spread vegetation through site and enhance linking principal living/principal outlook to outdoor living space standard Potential to link with MDRS permeable area standard to be meet within outdoor living space
Outlook	N/A	Principal living 4m w x 4m d Other habitable 1m w x 1m d	Discretion Assessment Criteria 2a, 2g, 4a, 4c, 4d, 4h	<ul style="list-style-type: none"> R10.6.1.1 No outlook standard. Separation distance, HRP and outdoor living position and size control this R10.6.3.3 matter of discretion, though separation distance, HRP and outdoor living support to control this Potential to directly connect MDRS principal outlook and outdoor living standards to ensure views onto and functional outdoor living Potential to link R10.6.3.1/ R10.6.3.3 E,N,W position standard to ensure principal outlook location to solar gain/daylight
Retention of Existing Planting	N/A	N/A	Discretion Assessment Criteria	<ul style="list-style-type: none"> R10.6.1.1 & MDRS. No requirement to retain any existing plantings. R10.6.3.3 Assesses any retention. Potential negative effects on landscape character and amenity.

			1a	<ul style="list-style-type: none"> Explore additional landscape planting standard to retain certain amount, sized trees located within a distance from street or open space boundary. Potentially difficult to form a practical and measurable provision?
New Plantings	N/A	Min 20% Planted Landscape Area at ground floor unit, per site, anywhere on the site – grass or plants. Can be achieved by 20% canopy cover alone regardless of surface under.	Discretion Assessment Criteria 1a, 1d, 2a, 2b, 2g, 4a, 4e, 4g, 4i, 5a	<ul style="list-style-type: none"> R10.6.1.1 No landscape planting standard. Separation distance encourages utilising available space for planting, though not directive R10.6.3.3 matter of discretion. Separation distance encourages use for planting Enables new landscape plantings or variable type and size across lots MDRS ensures 20% site is vegetated. The term 'plants' is broad and technically covers indigenous plant species and specimen trees. This has potential for negligible positive landscape amenity effects as all plants could be turfed 'grass'. No MDRS standard to direct location of plantings across a site. Potential to result in lower height species, minimal specimen trees or taller shrubs all located away from private outdoor living spaces or any interface with public road. Potential for additional landscape planting standards to ensure spread of location and variation in plant species variety and size including - specimen trees and shrubs. Directing position of landscape planting areas to spread across a site at outdoor living space, frontage interface and shared open spaces. Investigate acceptable locations, planting ratios and additional standards to locate specimen trees and spread planting across a site.
Fencing	Vehicle Visibility Splay required	N/A	Vehicle Visibility Splay required Discretion Assessment Criteria, 1d, 2b, 2f, 2g, 4a, 4c, 4d, 4e, 4h,	<ul style="list-style-type: none"> R10.6.1.1 results in high, solid fencing at the street interface, with reduced passive surveillance and low visual interest. Visibility splay provides some open visibility, though no max height set. R10.6.3.3 matter of discretion results in a high degree of low fencing along street interface, low degree of solid fencing along street fronting courtyards. Both often delivered in combination with landscape plantings to increase street interface visual interest. MDRS no fence high standard along street frontages. Potential for similar fencing outcomes and landscape amenity effects to R10.6.1.1 Potential for low fencing standard along high proportion of street front interface and internal unit frontages. Potential for % of open construction fencing standard (visually permeable) along street front interface and internal unit frontages.

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